

Industrial  
Hydraulics

Electric Drives  
and Controls

Linear Motion and  
Assembly Technologies

Pneumatics

Service  
Automation

Mobile  
Hydraulics

**Rexroth**  
Bosch Group

# Linear Bushings and Shafts

Supplement (includes miniature versions)

The Drive and Control Company



# Linear Motion Technology

## Ball Rail Systems

Standard Ball Rail Systems  
Ball Rail Systems with Aluminum Runner Blocks  
Super Ball Rail Systems  
Wide Ball Rail Systems  
Accessories

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Miniature Ball Rail Systems  
Cam Roller Guides

## Roller Rail Systems

## Linear Bushings and Shafts

### Linear Bushings

Linear-Sets  
Shafts  
Shaft Support Rails  
Shaft Support Blocks

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Ball Transfer Units  
Other Engineering Components

## Screw Drives

## Linear Motion Systems

Linear Motion Slides

- Precision Ball Screw Assemblies
- Toothed Belt Drive

Linear Modules

- Precision Ball Screw Assemblies
- Toothed Belt Drive
- Rack and Pinion Drive
- Linear Actuator
- Pneumatic Drive

Compact Modules

- Precision Ball Screw Assemblies

Precision Modules

- Precision Ball Screw Assemblies

Ball Rail Tables

- Precision Ball Screw Assemblies
- Linear Motor

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Controllers, Motors, Electrical Accessories  
Linear Actuators

## Linear Bushings and Shafts, Supplement

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For additional Information see catalog RE 83 100 "Linear Bushings and Shafts"

# Linear Bushings and Shafts, Supplement

## Standard Linear Bushings

**Standard Linear Bushings, 0600-closed type, without seals**

**Standard Linear Bushings, 0602-closed type, with seals**

### Design

- Hardened and ground outer sleeve
- Steel ball retainer (plastic ball retainer in sizes 3 to 10)
- Balls made of anti-friction bearing steel
- Steel holding rings or seals
- Closed type for unsupported shafts



### Ordering data

	shaft Ø d [mm]	Part numbers		Gewichte [kg]
		without seals	with two seals	
NEW	3	0600-303-00	–	0,001
NEW	4	0600-304-00	–	0,002
	5	0600-305-00	0602-305-10	0,010
	8	0600-308-00	0602-308-10	0,020
NEW	10	0600-310-00	0602-310-10	0,030
	12	0600-012-00	0602-012-10	0,040
	16	0600-016-00	0602-016-10	0,050
	20	0600-020-00	0602-020-10	0,100
	25	0600-025-00	0602-025-10	0,190
	30	0600-030-00	0602-030-10	0,320
	40	0600-040-00	0602-040-10	0,620
	50	0600-050-00	0602-050-10	1,140
	60	0600-060-00	0602-060-10	2,110
	80	0600-080-00	0602-080-10	4,700

Adjustable and open type Standard Lin. Bushings see catalog RE 83 100 "STAR – Linear Bushings and Shafts"

The values for dynamic-load capacity are based on a nominal travel of 100,000 m. For a nominal travel of 50,000 m the values must be multiplied by the factor 1.26.

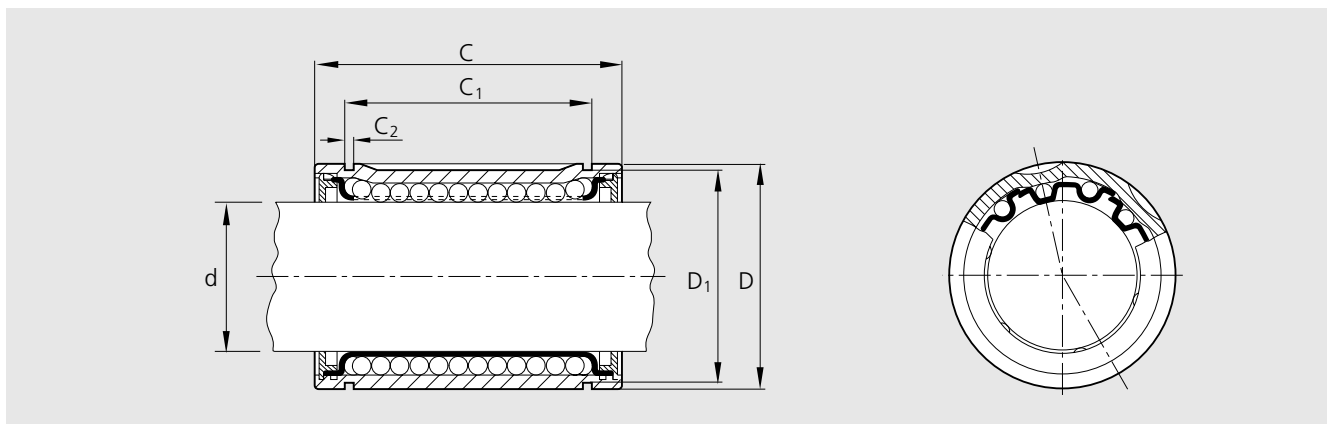
### Solid shafts miniature type

Shaft Ø d [mm] h6	heat treatable steel	Part numbers		Length [mm]
		corrosion resistant steel X90CrMOV18	corrosion resistant steel X46Cr13	
3	1007-603-00	1007-603-20		400
4	1007-404-00		1007-404-30	600
5	1007-005-00		1007-005-30	1000

For shafts Ø 5 mm and larger see catalog RE 83 100 "STAR – Linear Bushings and Shafts"

Corrosion resistant steels to ISO 683-17 resp. EN 10088.

## Dimensions



Ø d	Dimensions [mm]					ball circuits	bore tolerance [µm]	Radial clearance <sup>1)</sup> [µm]		Load capacities			
	D h5	C h12	C <sub>1</sub> H13	C <sub>2</sub>	D <sub>1</sub>			h6	h7	dyn. C [N]		stat. C <sub>0</sub> [N]	
										min	max	min	max
3 <sup>2)</sup>	7 <sup>3)</sup>	10	–	–	–	4	+8 0	+12 +2	+15 +3	55	65	45	65
4 <sup>2)</sup>	8 <sup>3)</sup>	12	–	–	–	4	+8 0	+14 +2	+17 +3	70	80	60	85
5 <sup>2)</sup>	12	22	14,2	1,1	11,1	4	+11 +1	+16 +4	+20 +4	180	210	140	200
8 <sup>2)</sup>	16	25	16,2	1,1	14,7	4	+12 +2	+18 +5	+24 +5	320	370	240	330
10 <sup>2)</sup>	19	29	21,6	1,3	18	4	+8 0	+18 +5	+24 +5	300	350	260	370
12	22	32	22,6	1,3	20,5	4	+12 +2	+20 +5	+26 +6	420	480	280	400
16	26	36	24,6	1,3	24,9	4	+14 +2	+22 +5	+28 +6	580	670	440	620
20	32	45	31,2	1,6	30,5	5	+14 +2	+23 +6	+31 +6	1170	1390	860	1250
25	40	58	43,7	1,85	38,5	5	+16 +2	+25 +6	+32 +7	2080	2480	1560	2280
30	47	68	51,7	1,85	44,5	6	+16 +2	+25 +6	+32 +7	2820	2980	2230	2860
40	62	80	60,3	2,15	58	6	+19 +2	+30 +7	+38 +8	5170	5480	3810	4880
50	75	100	77,3	2,65	71	6	+19 +2	+30 +7	+38 +8	8260	8740	6470	8280
60	90	125	101,3	3,15	85	6	+19 +2	+33 +7	+43 +8	11500	12100	9160	11730
80	120	165	133,3	4,15	114	6	+24 +2	+37 +8	+47 +9	21000	22200	16300	20850

<sup>1)</sup> Statistically determined. Recommended housing bore tolerance: H6 or H7.

<sup>2)</sup> Sizes 3, 4, 5, 8 and 10 with plastic retainer.

<sup>3)</sup> tolerance h6

# Linear Bushings and Shafts, Supplement

## Standard Linear Ball Bushing, corrosion - resistant type

**Standard**  
**Linear Bushing, 0600-**  
 closed type, without seals

**Standard**  
**Linear Bushing, 0602-**  
 closed type, with seals

### Design

- Hardened and ground outer sleeve made of corrosion resistant steel
- Ball retainer of corrosion resistant steel
- Balls of corrosion resistant steel
- Integrated steel holding rings or seals
- Closed type for unsupported shafts



### Ordering data

Shaft Ø d [mm]	Part numbers		mass [kg]
	without seals	with two seals	
3	0600-003-30	–	0,001
4	0600-004-30	–	0,002
5	0600-005-30	0602-005-30	0,011
8	0600-008-30	0602-008-30	0,022
10	0600-010-30	0602-010-30	0,036
12	0600-012-30	0602-012-30	0,045
16	0600-016-30	0602-016-30	0,06
20	0600-020-30	0602-020-30	0,10
25	0600-025-30	0602-025-30	0,235
30	0600-030-30	0602-030-30	0,360
40	0600-040-30	0602-040-30	0,770

The values for dynamic-load capacity are based on a nominal travel of 100,000 m.  
 For a nominal travel of 50,000 m the values must be multiplied by the factor 1.26.

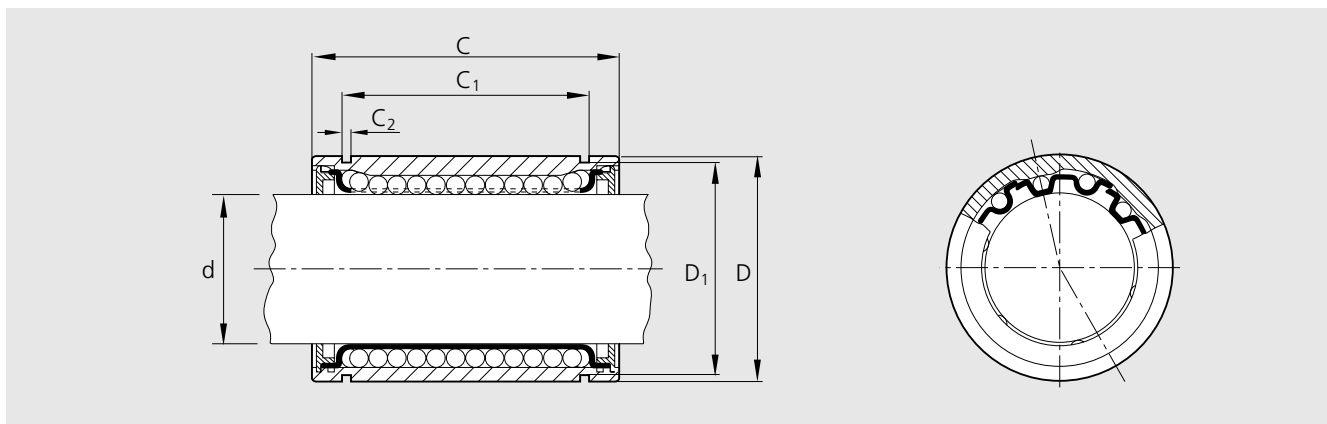
### Solid shafts miniature type

Shaft Ø d [mm] h6	heat treatable steel	Part numbers		Length [mm]
		corrosion resistant steel		
		X90CrMOV18	X46Cr13	
3	1007-603-00	1007-603-20		400
4	1007-404-00		1007-404-30	600
5	1007-005-00		1007-005-30	1000

For shafts Ø 5 mm and larger see catalog RE 83 100 "STAR – Linear Bushings and Shafts"

Corrosion resistant steels to ISO 683-17 resp. EN 10088.

## Dimensions



Ø d	Dimensions [mm]					ball circuits	bore tolerance [µm]	radial clearance <sup>1)</sup> [µm]		load capacity			
	D h5	C h12	C <sub>1</sub> H13	C <sub>2</sub>	D <sub>1</sub>			h6	h7	dyn. C [N]		stat. C <sub>0</sub> [N]	
										min	max	min	max
<b>3</b>	7 <sup>2)</sup>	10	–	–	–	4	+8 0	+12 +2	+15 +3	55	65	45	65
<b>4</b>	8 <sup>2)</sup>	12	–	–	–	4	+8 0	+14 +2	+17 +3	70	80	60	85
<b>5</b>	12	22	14,2	1,1	11,5	4	+11 +1	+16 +4	+20 +4	160	185	180	250
<b>8</b>	16	25	16,2	1,1	15,2	4	+12 +2	+18 +5	+24 +5	210	240	235	330
<b>10</b>	19	29	21,6	1,3	18	4	+8 0	+18 +5	+24 +5	300	350	260	370
<b>12</b>	22	32	22,6	1,3	21	4	+12 +2	+20 +5	+26 +6	400	460	420	600
<b>16</b>	26	36	24,6	1,3	24,9	4	+14 +2	+22 +5	+28 +6	460	530	440	630
<b>20</b>	32	45	31,2	1,6	30,3	5	+14 +2	+23 +6	+31 +6	680	800	860	1250
<b>25</b>	40	58	43,7	1,85	37,5	6	+16 +2	+25 +6	+32 +7	780	830	1620	2100
<b>30</b>	47	68	51,7	1,85	44,5	6	+16 +2	+25 +6	+32 +7	1250	1320	2000	2500
<b>40</b>	62	80	60,3	2,15	59	6	+19 +2	+30 +7	+38 +8	1720	1820	3300	4200

<sup>1)</sup> Statistically determined. Recommended housing bore tolerance: H6 or H7.

<sup>2)</sup> Tolerance h6

# Linear Bushings and Shafts, Supplement

## Tandem Linear Bushings

### Tandem Linear Bushing, 0650- with seals

#### Design

- Hardened and ground outer sleeve
- Ball retainer of plastic
- Balls of bearing steel
- Integrated seals

### Tandem Linear Bushings, 0650- with seals

#### corrosion resistant type

#### Design

- Hardened and ground outer sleeve of corrosion resistant steel
- Ball retainer of corrosion resistant steel
- Balls of corrosion resistant bearing steel
- Integrated seals



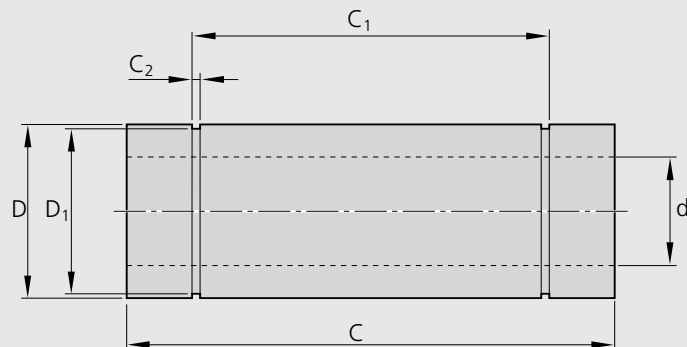
#### Ordering data

Shaft Ø d [mm]	Part numbers		mass [kg]
	regular	corrosion resistant	
8	0650-508-00	0650-208-30	0,04
12	0650-512-00	0650-212-30	0,08
16	0650-516-00	0650-216-30	0,12
20	0650-520-00	0650-220-30	0,18
25	0650-525-00	0650-225-30	0,43
30	0650-530-00	0650-230-30	0,62
40	0650-540-00	0650-240-30	1,40

The values for dynamic-load capacity are based on a nominal travel of 100,000 m.  
For a nominal travel of 50,000 m the values must be multiplied by the factor 1.26.

Corrosion resistant steels to ISO 683-17 resp. EN 10088.

## Dimensions



$\varnothing d$	Dimensions [mm]					ball circuits	bore tolerance [ $\mu\text{m}$ ]	radial clearance <sup>1)</sup> [ $\mu\text{m}$ ]		load capacity			
	$D$ h6	C	$C_1$	$C_2$	$D_1$			h6	h7	dyn. C [N]		stat. $C_0$ [N]	
										min	max	min	max
<b>8</b>	16	46 <sub>-0,3</sub>	33 <sub>-0,3</sub>	1,10	15,2	4	+9 -1	+15 +2	+21 +2	340	390	470	660
<b>12</b>	22	61 <sub>-0,3</sub>	45,8 <sub>-0,3</sub>	1,30	21,0	4	+9 -1	+17 +2	+23 +3	650	750	840	1200
<b>16</b>	26	68 <sub>-0,3</sub>	49,8 <sub>-0,3</sub>	1,30	24,9	4	+11 -1	+19 +2	+25 +3	750	860	880	1260
<b>20</b>	32	80 <sub>-0,3</sub>	61 <sub>-0,3</sub>	1,60	30,5	5	+11 -1	+20 +3	+28 +3	1100	1300	1720	2500
<b>25</b>	40	112 <sub>-0,4</sub>	82 <sub>-0,4</sub>	1,85	38,0	6	+13 -2	+22 +2	+29 +3	1250	1350	3240	4200
<b>30</b>	47	123 <sub>-0,4</sub>	104,2 <sub>-0,4</sub>	1,85	44,5	6	+13 -2	+22 +2	+29 +3	2000	2150	4000	5000
<b>40</b>	62	151 <sub>-0,4</sub>	121,2 <sub>-0,4</sub>	2,15	59,0	6	+16 -4	+27 +1	+35 +2	2800	3000	6600	8400

<sup>1)</sup> Statistically determined. Recommended housing bore tolerance: H6 or H7.

# Linear Bushings and Shafts, Supplement

## Flange Linear Bushings

### Flange Linear Bushing, 0740-

#### Design

- Hardened and ground sleeve
- Ball retainer of plastic
- Balls of bearing steel
- Integrated seals

### Flange Linear Bushing, 0740- corrosion resistant type

#### Design

- Hardened and ground outer sleeve of corrosion resistant steel
- Ball retainer of corrosion resistant steel (size 5 with plastic retainer)
- Balls of corrosion resistant steel
- Integrated seals



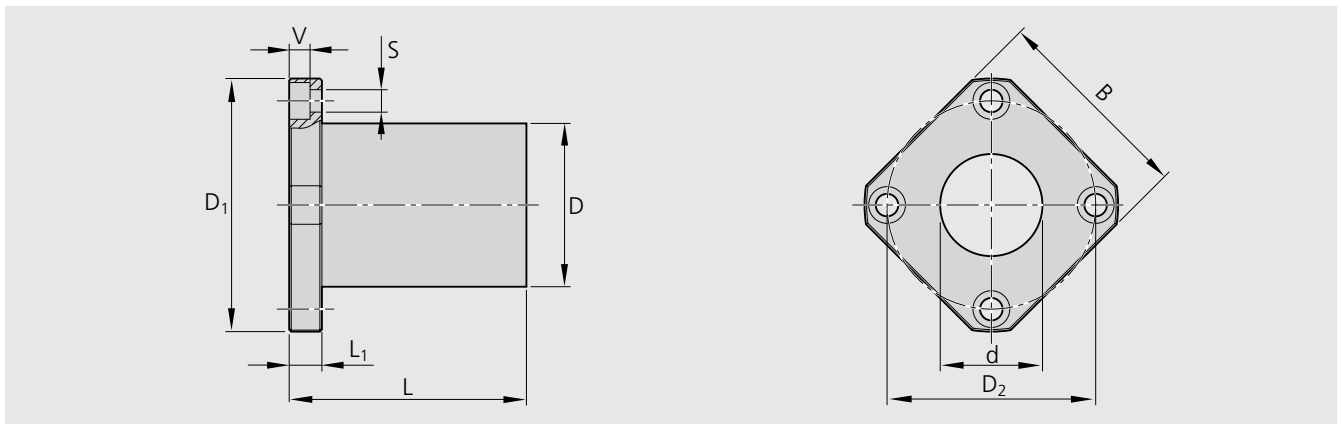
### Ordering data

shaft Ø d [mm]	Part numbers		mass [kg]
	regular	corrosion resistant	
5	0740-505-00	0740-505-30	0,020
8	0740-508-00	0740-208-30	0,033
12	0740-512-00	0740-212-30	0,064
16	0740-516-00	0740-216-30	0,090
20	0740-520-00	0740-220-30	0,150
25	0740-525-00	0740-225-30	0,300
30	0740-530-00	0740-230-30	0,470
40	0740-540-00	0740-240-30	0,980

The values for dynamic-load capacity are based on a nominal travel of 100,000 m.  
For a nominal travel of 50,000 m the values must be multiplied by the factor 1.26.

Corrosion resistant steels to ISO 683-17 resp. EN 10088.

## Dimensions



Ø d	Dimensions [mm]								ball circuits	bore tolerance [µm]	radial clearance [µm]		load capacity [N]			
	D	D <sub>1</sub>	D <sub>2</sub>	B	L ±0,3	L <sub>1</sub>	V	S			h6	h7	dyn. C		stat. C <sub>0</sub>	
													min	max	min	max
<b>5</b>	12 <sub>-0,013</sub>	28	20	22	22	5	3,1	3,5	4	+8 +0	+14 +2	+17 +3	160	185	180	250
<b>8</b>	16 <sub>-0,013</sub>	32	24	25	25	5	3,1	3,5	4	+8 +0	+15 +2	+20 +3	210	240	235	330
<b>12</b>	22 <sub>-0,016</sub>	42	32	32	32	6	4,1	4,5	4	+8 +0	+16 +3	+23 +3	400	460	420	600
<b>16</b>	26 <sub>-0,016</sub>	46	36	35	36	6	4,1	4,5	4	+9 -1	+17 +2	+23 +3	460	530	440	630
<b>20</b>	32 <sub>-0,019</sub>	54	43	42	45	8	5,1	5,5	5	+9 -1	+19 +2	+26 +3	680	800	860	1250
<b>25</b>	40 <sub>-0,019</sub>	62	51	50	58	8	5,1	5,5	6	+11 -1	+20 +3	+28 +3	780	830	1620	2100
<b>30</b>	47 <sub>-0,019</sub>	76	62	60	68	10	6,1	6,6	6	+11 -1	+20 +3	+28 +3	1250	1320	2000	2500
<b>40</b>	62 <sub>-0,022</sub>	98	80	75	80	13	8,1	9	6	+13 -2	+24 +3	+33 +3	1720	1820	3300	4200

<sup>1)</sup> Statistically determined. Recommended housing bore tolerance: H6 or H7.

# Linear Bushings and Shafts, Supplement

## Flange Tandem Linear Bushings

### Flange Tandem Linear Bushing, 0741-

#### Design

- Hardened and ground sleeve
- Ball retainer of plastic
- Balls of bearing steel
- Integrated seals

### Flange Tandem Linear Bushing, 0741- corrosion resistant type

#### Design

- Hardened and ground outer sleeve of corrosion resistant steel
- Ball retainer of corrosion resistant steel
- Balls of corrosion resistant steel
- Integrated seals



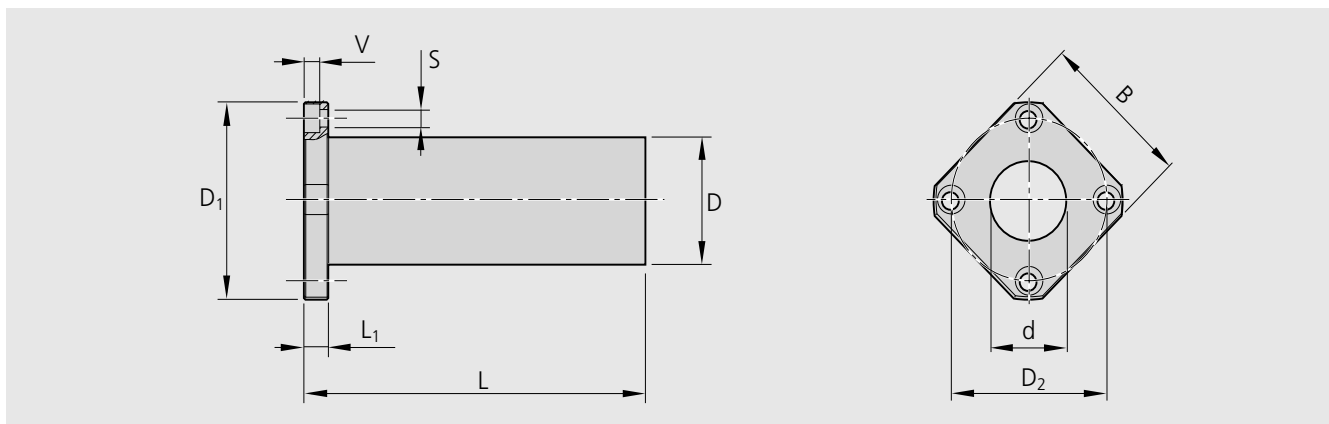
#### Ordering data

Shaft Ø d [mm]	Part numbers		mass [kg]
	regular	corrosion resistant	
8	0741-508-00	0741-208-30	0,05
12	0741-512-00	0741-212-30	0,09
16	0741-516-00	0741-216-30	0,14
20	0741-520-00	0741-220-30	0,23
25	0741-525-00	0741-225-30	0,50
30	0741-530-00	0741-230-30	0,72
40	0741-540-00	0741-240-30	1,60

The values for dynamic-load capacity are based on a nominal travel of 100,000 m. For a nominal travel of 50,000 m the values must be multiplied by the factor 1.26.

Corrosion resistant steels to ISO 683-17 resp. EN 10088.

## Dimensions



Ø d	Dimensions [mm]								ball circuits	bore tolerance [µm]	radial clearance [µm]		load capacity			
	D	D <sub>1</sub>	D <sub>2</sub>	B	L ±0,3	L <sub>1</sub>	V	S			h6	h7	dyn. C [N]		stat. C <sub>0</sub> [N]	
													min	max	min	max
<b>8</b>	16 <sub>-0,013</sub>	32	24	25	46	5	3,1	3,5	4	+9 -1	+15 +2	+21 +2	340	390	470	660
<b>12</b>	22 <sub>-0,016</sub>	42	32	32	61	6	4,1	4,5	4	+9 -1	+17 +2	+23 +3	650	750	840	1200
<b>16</b>	26 <sub>-0,016</sub>	46	36	35	68	6	4,1	4,5	4	+11 -1	+19 +2	+25 +3	750	860	880	1260
<b>20</b>	32 <sub>-0,019</sub>	54	43	42	80	8	5,1	5,5	5	+11 -1	+20 +3	+28 +3	1100	1300	1720	2500
<b>25</b>	40 <sub>-0,019</sub>	62	51	50	112	8	5,1	5,5	6	+13 -2	+22 +2	+29 +3	1250	1350	3240	4200
<b>30</b>	47 <sub>-0,019</sub>	76	62	60	123	10	6,1	6,6	6	+13 -2	+22 +2	+29 +3	2000	2150	4000	5000
<b>40</b>	62 <sub>-0,022</sub>	98	80	75	151	13	8,1	9	6	+16 -4	+27 +1	+35 +2	2800	3000	6600	8400

<sup>1)</sup> Statistically determined. Recommended housing bore tolerance: H6 or H7.

# Linear Bushings and Shafts, Supplement

## Centre Flange Linear Bushings

### Centre Flange Linear Bushing, 0742-

#### Design

- Hardened and ground sleeve
- Ball retainer of plastic
- Balls of bearing steel
- Integrated seals

### Centre Flange Bushing, 0742- corrosion resistant type

#### Design

- Hardened and ground outer sleeve of corrosion resistant steel
- Ball retainer of corrosion resistant steel
- Balls of corrosion resistant steel
- Integrated seals



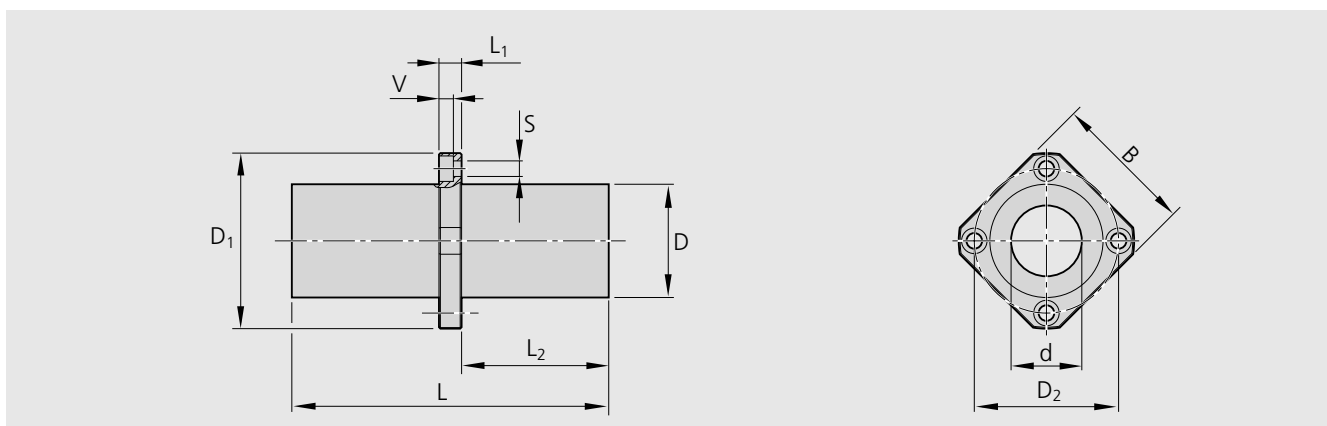
#### Ordering data

Shaft Ø d [mm]	Part numbers		mass [kg]
	regular	corrosion resistant	
8	0742-508-00	0742-208-30	0,05
12	0742-512-00	0742-212-30	0,09
16	0742-516-00	0742-216-30	0,14
20	0742-520-00	0742-220-30	0,23
25	0742-525-00	0742-225-30	0,50
30	0742-530-00	0742-230-30	0,72
40	0742-540-00	0742-240-30	1,60

The values for dynamic-load capacity are based on a nominal travel of 100,000 m.  
For a nominal travel of 50,000 m the values must be multiplied by the factor 1.26.

Corrosion resistant steels to ISO 683-17 resp. EN 10088.

## Dimensions



Ø d	Dimensions [mm]									ball circuits	bore tolerance [µm]	radial clearance [µm]		load capacity [N]			
	D	D <sub>1</sub>	D <sub>2</sub>	B	L ±0,3	L <sub>1</sub>	L <sub>2</sub>	V	S			h6	h7	dyn. C		stat. C <sub>0</sub>	
													min	max	min	max	
8	16 <sub>-0,013</sub>	32	24	25	46	5	20,5	3,1	3,5	4	+9 -1	+15 +2	+21 +2	340	390	470	660
12	22 <sub>-0,016</sub>	42	32	32	61	6	27,5	4,1	4,5	4	+9 -1	+17 +2	+23 +3	650	750	840	1200
16	26 <sub>-0,016</sub>	46	36	35	68	6	31,0	4,1	4,5	4	+11 -1	+19 +2	+25 +3	750	860	880	1260
20	32 <sub>-0,019</sub>	54	43	42	80	8	36,0	5,1	5,5	5	+11 -1	+20 +3	+28 +3	1100	1300	1720	2500
25	40 <sub>-0,019</sub>	62	51	50	112	8	52,0	5,1	5,5	6	+13 -2	+22 +2	+29 +3	1250	1350	3240	4200
30	47 <sub>-0,019</sub>	76	62	60	123	10	56,5	6,1	6,6	6	+13 -2	+22 +2	+29 +3	2000	2150	4000	5000
40	62 <sub>-0,022</sub>	98	80	75	151	13	69,0	8,1	9	6	+16 -4	+27 +1	+35 +2	2800	3000	6600	8400

<sup>1)</sup> Statistically determined. Recommended housing bore tolerance: H6 or H7.

# Linear Bushings and Shafts, Supplement

## Torque Resistant Linear Bushing

### Linear-Set with shaft, 0724-sleeve design

#### Design

- Hardened and ground sleeve
- Ball retainer of plastic
- Balls of bearing steel
- Integrated seals
- Precision steel shaft with 4 ball grooves
- Key for torque transmission
- With lubrication hole



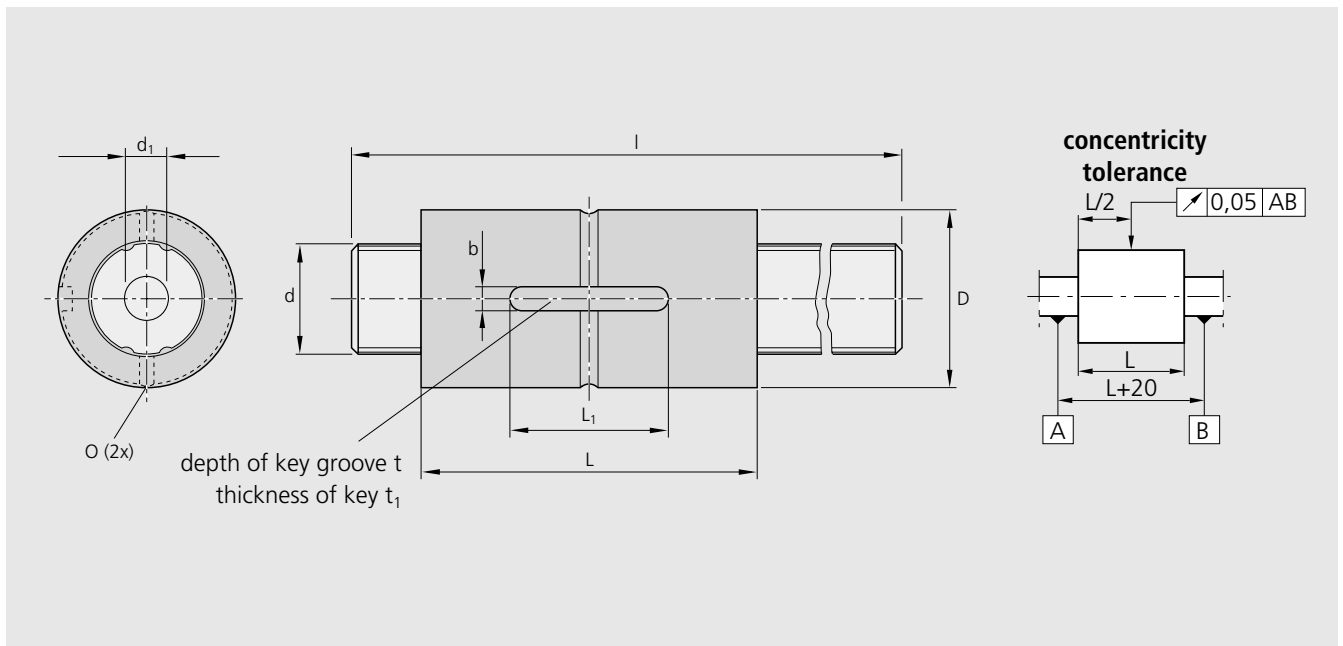
#### Ordering data

Size	Part numbers Linear-Set with			
	solid shaft		tubular shaft <sup>1)</sup>	
	cut to length	machined to drawing	cut to length	machined to drawing
<b>4</b>	0724-204-89	0724-204-86	0724-204-69	0724-204-66
<b>6</b>	0724-206-89	0724-206-86	0724-206-69	0724-206-66
<b>8</b>	0724-208-89	0724-208-86	0724-208-69	0724-208-66
<b>10</b>	0724-210-89	0724-210-86	0724-210-69	0724-210-66
<b>13</b>	0724-213-89	0724-213-86	0724-213-69	0724-213-66
<b>16</b>	0724-216-89	0724-216-86	0724-216-69	0724-216-66
<b>20</b>	0724-220-89	0724-220-86	–	–
<b>25</b>	0724-225-89	0724-225-86	–	–
<b>30</b>	0724-230-89	0724-230-86	–	–
<b>40</b>	0724-240-89	0724-240-86	–	–
<b>50</b>	0724-250-89	0724-250-86	–	–

<sup>1)</sup> Sizes 20 to 50 on request

The values for dynamic-load capacity are based on a nominal travel of 100,000 m. For a nominal travel of 50,000 m the values must be multiplied by the factor 1.26.

## Dimensions



Size	Dimensions [mm]									Shaft length max. l [mm]	Torque		Load capacity <sup>1)</sup>		mass		
	Ø d h7	d <sub>1</sub>	D h6	L	L <sub>1</sub>	O	t	t <sub>1</sub>	b		dyn. M <sub>t</sub> [Nm]	stat. M <sub>t</sub> [Nm]	dyn.C [N]	stat. C <sub>0</sub> [N]	without shaft [kg]	solid shaft [kg/m]	tubular shaft [kg/m]
4	4	1,5	10	16 <sub>-0,2</sub>	6	–	1,2	2	2	300	0,59	1,05	680	1220	0,0065	0,10	0,082
6	6	2	14	25 <sub>-0,2</sub>	10,5	1	1,2	2,5	2,5	600	1,20	2,40	970	2280	0,019	0,21	0,195
8	8	3	16	25 <sub>-0,2</sub>	10,5	1,5	1,2	2,5	2,5	600	1,70	3,70	1150	2870	0,023	0,38	0,34
10	10	4	21	33 <sub>-0,2</sub>	13	1,5	1,5	3	3	600	3,50	8,20	2170	5070	0,054	0,60	0,51
13	13	6	24	36 <sub>-0,2</sub>	15	1,5	1,5	3	3	600	16,70	39,20	2120	4890	0,07	1,00	0,80
16	16	8	31	50 <sub>-0,2</sub>	17,5	2	2	3,5	3,5	600	48	110	4860	11200	0,15	1,50	1,20
20	18,2	–	32	60 <sub>-0,2</sub>	26	2	2,5	4	4	1500	66	133	6200	11300	0,20	2,00	–
25	23	–	37	70 <sub>-0,3</sub>	33	3	3	5	5	1500	129	239	9800	16100	0,22	3,10	–
30	28	–	45	80 <sub>-0,3</sub>	41	3	4	7	7	1500	229	412	14800	23200	0,35	4,80	–
40	37,4	–	60	100 <sub>-0,3</sub>	55	4	4,5	8	10	1800	500	882	24400	37500	0,81	8,60	–
50	47	–	75	112 <sub>-0,3</sub>	60	4	5	10	15	1800	1100	3180	36600	74200	1,50	13,10	–

<sup>1)</sup> The given values are minimum values because the direction of load is not always precisely defined.

### Mounting instructions:

Linear-Set, shaft and key are delivered as separate parts.

Recommended housing bore tolerance: H6 oder H7.

Radial clearance: ca ± 5 µm; preload on request

Align the shaft grooves to the ball circuits before inserting the shaft into the linear set.

# Linear Bushings and Shafts, Supplement

## Torque Resistant Linear Bushing

### Linear-Set with shaft, 0725- Flanged type

#### Design

- Hardened and ground sleeve
- Ball retainer of plastic
- Balls of bearing steel
- Integrated seals
- Precision steel shaft with 4 ball grooves
- With lubrication hole



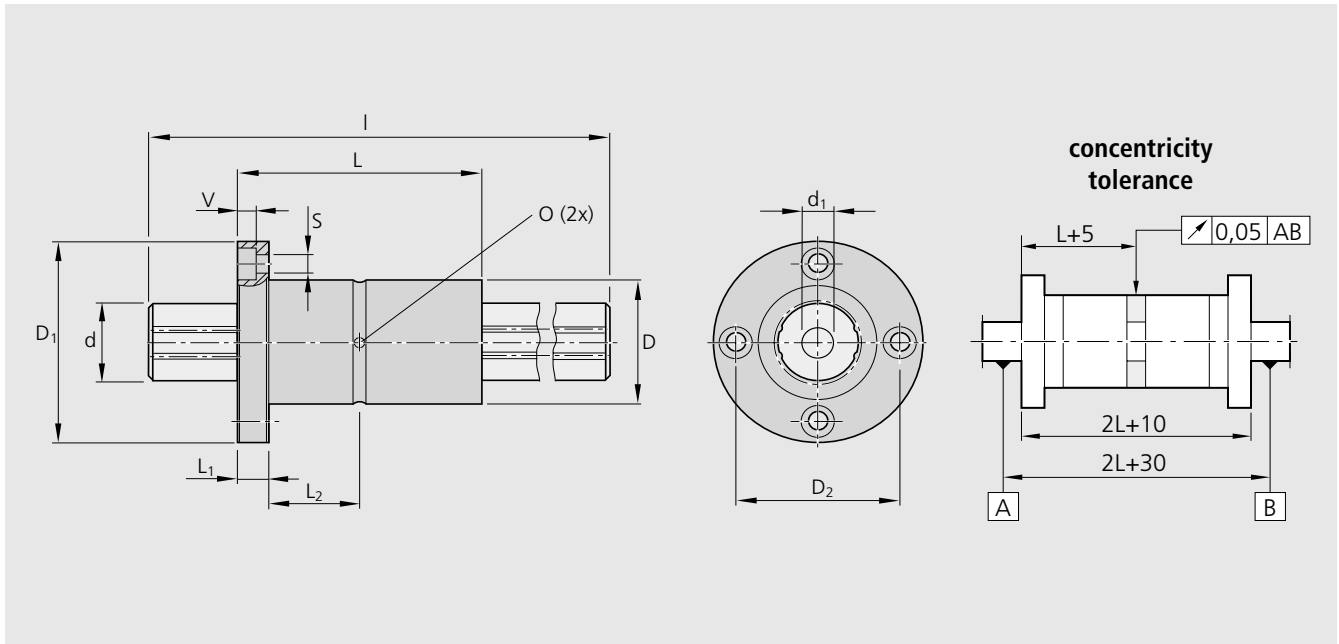
#### Ordering data

Size	Part numbers Linear-Set with			
	solid shaft		tubular shaft <sup>1)</sup>	
	cut to length	machined to drawing	cut to length	machined to drawing
6	0725-206-89	0725-206-86	0725-206-69	0725-206-66
8	0725-208-89	0725-208-86	0725-208-69	0725-208-66
10	0725-210-89	0725-210-86	0725-210-69	0725-210-66
13	0725-213-89	0725-213-86	0725-213-69	0725-213-66
16	0725-216-89	0725-216-86	0725-216-69	0725-216-66
20	0725-220-89	0725-220-86	–	–
25	0725-225-89	0725-225-86	–	–
30	0725-230-89	0725-230-86	–	–
40	0725-240-89	0725-240-86	–	–
50	0725-250-89	0725-250-86	–	–

<sup>1)</sup> Sizes 20 to 50 on request

The values for dynamic-load capacity are based on a nominal travel of 100,000 m. For a nominal travel of 50,000 m the values must be multiplied by the factor 1.26.

## Dimensions



Size	Dimensions [mm]											Shaft length max. l [mm]	Torque		Load capacity <sup>1)</sup>		mass		
	Ø d h7	d <sub>1</sub>	D h6	D <sub>1</sub>	D <sub>2</sub>	L	L <sub>1</sub>	L <sub>2</sub>	V	S <sup>2)</sup>	O		dyn. M <sub>t</sub> [Nm]	stat. M <sub>t</sub> [Nm]	dyn. C [N]	stat. C <sub>0</sub> [N]	without shaft [kg]	solid shaft [kg/m]	tubular shaft [kg/m]
6	6	2	14	30	22	25 <sub>-0,2</sub>	5	7,5	3,3	3,4	1	600	1,2	2,4	970	2280	0,037	0,21	0,195
8	8	3	16	32	24	25 <sub>-0,2</sub>	5	7,5	3,3	3,4	1,5	600	1,7	3,7	1150	2870	0,042	0,38	0,34
10	10	4	21	42	32	33 <sub>-0,2</sub>	6	10,5	4,4	4,5	1,5	600	3,5	8,2	2170	5070	0,094	0,60	0,51
13	13	6	24	43	33	36 <sub>-0,2</sub>	7	11	4,4	4,5	1,5	600	16,7	39,2	2120	4890	0,10	1,00	0,80
16	16	8	31	50	40	50 <sub>-0,2</sub>	7	18	4,4	4,5	2	600	48	110	4860	11200	0,20	1,50	1,20
20	18,2	-	32	51	40	60 <sub>-0,2</sub>	7	23	4,4	4,5	2	1500	66	133	6200	11300	0,22	2,00	-
25	23	-	37	60	47	70 <sub>-0,3</sub>	9	26	5,4	5,5	3	1500	129	239	9800	16100	0,32	3,10	-
30	28	-	45	70	54	80 <sub>-0,3</sub>	10	30	6,5	6,6	3	1500	229	412	14800	23200	0,51	4,80	-
40	37,4	-	60	90	72	100 <sub>-0,3</sub>	14	36	8,6	9	4	1800	500	882	24400	37500	1,15	8,60	-
50	47	-	75	113	91	112 <sub>-0,3</sub>	16	40	11	11	4	1800	1100	3180	36600	74200	2,10	13,10	-

<sup>1)</sup> The given values are minimum values because the direction of load is not always precisely defined.

<sup>2)</sup> mounting bolts ISO 4762-8.8

### Mounting instructions:

Linear-Set and shaft are delivered as separate parts.  
 Recommended housing bore tolerance: H6 oder H7.  
 Radial clearance: ca ± 5 µm; preload on request  
 Align the shaft grooves to the ball circuits before inserting the shaft into the linear set.

# Linear Bushings and Shafts, Supplement

## Torque Resistant Linear Bushing

### Linear-Set with shaft, 0726- Miniature - Flanged type

#### Design

- Hardened and ground sleeve
- Ball retainer of plastic
- Balls of bearing steel
- Integrated seals
- Precision steel shaft with 4 ball grooves
- With lubrication hole

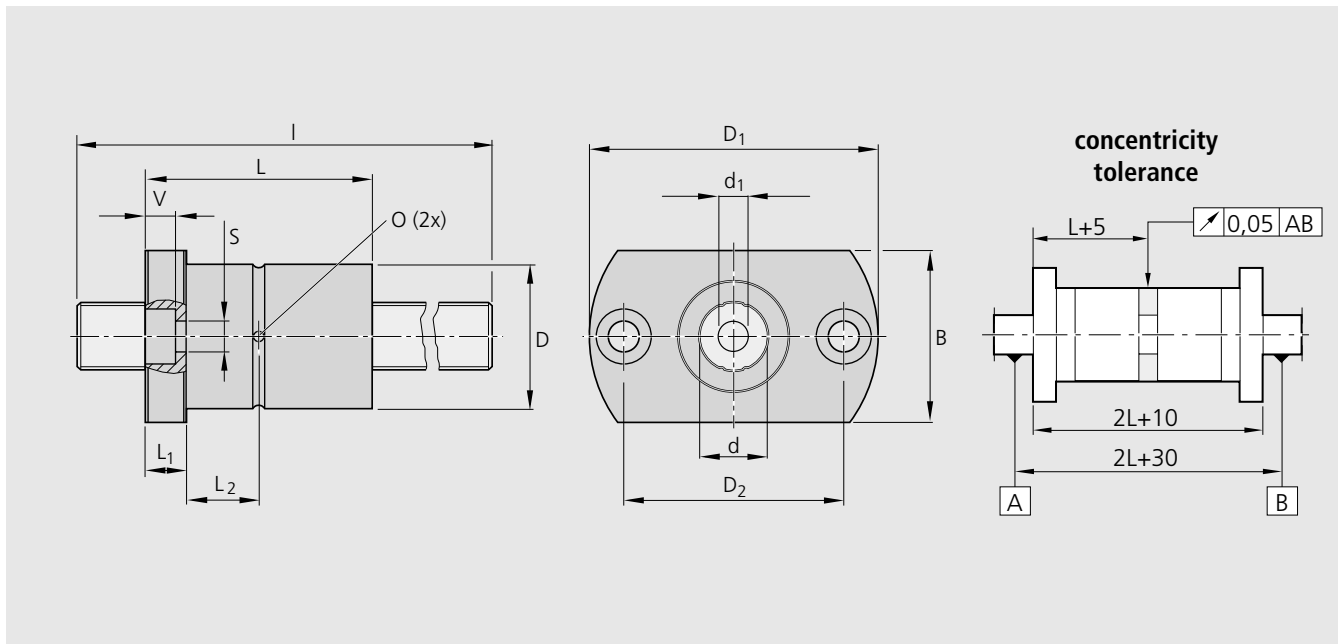


#### Ordering data

Size	Part numbers Linear-Set with			
	solid shaft		tubular shaft	
	cut to length	machined to drawing	cut to length	machined to drawing
<b>6</b>	0726-206-89	0726-206-86	0726-206-69	0726-206-66
<b>8</b>	0726-208-89	0726-208-86	0726-208-69	0726-208-66
<b>10</b>	0726-210-89	0726-210-86	0726-210-69	0726-210-66

The values for dynamic-load capacity are based on a nominal travel of 100,000 m.  
For a nominal travel of 50,000 m the values must be multiplied by the factor 1.26.

## Dimensions



Size	Dimensions [mm]												Shaft length max. I [mm]	Torque		Load capacity <sup>1)</sup>		mass		
	$\varnothing d$ h7	$d_1$	$D$ h6	$D_1$	$D_2$	$B$	$L$ -0,2	$L_1$	$L_2$	$V$	$S^2)$	$O$		dyn. $M_t$ [Nm]	stat. $M_t$ [Nm]	dyn.C [N]	stat. $C_0$ [N]	without shaft [kg]	solid shaft [kg/m]	tubular shaft [kg/m]
<b>6</b>	6	2	14	30	22	18	25	5	7,5	3,3	3,4	1	600	1,2	2,4	970	2280	0,029	0,21	0,195
<b>8</b>	8	3	16	32	24	21	25	5	7,5	3,3	3,4	1,5	600	1,7	3,7	1150	2870	0,035	0,38	0,34
<b>10</b>	10	4	21	42	32	25	33	6	10,5	4,4	4,5	1,5	600	3,5	8,2	2170	5070	0,075	0,60	0,51

<sup>1)</sup> The given values are minimum values because the direction of load is not always precisely defined.

<sup>2)</sup> mounting bolts ISO 4762-8.8

## Mounting instructions:

Linear-Set and shaft are delivered as separate parts.  
 Recommended housing bore tolerance: H6 oder H7.  
 Radial clearance: ca  $\pm 5 \mu\text{m}$ ; preload on request  
 Align the shaft grooves to the ball circuits before inserting the shaft into the linear set.

# Linear Bushings and Shafts, Supplement

## Torque Resistant Linear Bushing

**Linear-Set with shaft, 0727-  
Rotary Linear Bushings Combined  
Linear and Rotary Motion**

### Design

- Hardened and ground sleeve
- Hall retainer of plastic
- Halls of bearing steel
- Integrated seals
- Integrated cross roller bearing
- Precision steel shaft with 4 ball grooves

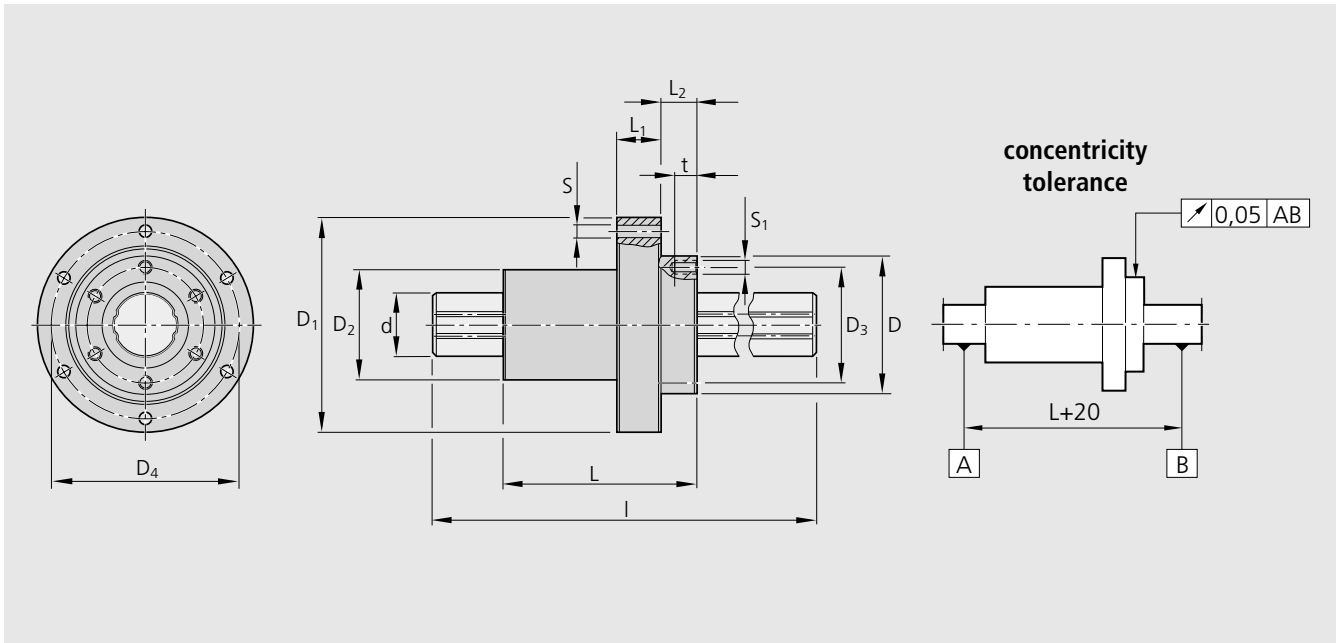


### Ordering data

Size	Part numbers Linear-Set with	
	cut to length	machined to drawing
20	0727-220-89	0727-220-86
25	0727-225-89	0727-225-86
30	0727-230-89	0727-230-86
40	0727-240-89	0727-240-86

The values for dynamic-load capacity are based on a nominal travel of 100,000 m. For a nominal travel of 50,000 m the values must be multiplied by the factor 1.26.

## Dimensions



Size	Dimensions [mm]												Shaft length max. $l$ [mm]
	$\varnothing d$ h7	$D$ h7	$D_1$ h7	$D_2$	$D_3$	$D_4$	$L$	$L_1$	$L_2$	$S$	$S_1$	$t$	
20	18,2	40	66	34	34	56	$60_{-0,2}$	13	12	4,5	M4	7	1500
25	23	50	78	40	42	68	$70_{-0,3}$	16	13	4,5	M5	8	1500
30	28	61	100	47	52	86	$80_{-0,3}$	17	17	6,6	M6	10	1500
40	37,4	76	120	62	64	104	$100_{-0,3}$	20	23	6,6	M6	10	1800

Size	Linear-Set				Cross roller bearing			Mass	
	Torque		Load capacity <sup>1)</sup>		Load capacity		speed limit	without shaft	shaft
	dyn. $M_t$ [Nm]	stat. $M_{t0}$ [Nm]	dyn. $C$ [N]	stat. $C_0$ [N]	dyn. $C$ [N]	stat. $C_0$ [N]	[ $\text{min}^{-1}$ ]	[kg]	[kg/m]
20	66	133	6200	11300	5900	7350	1200	0,45	2,0
25	129	239	9800	16100	9110	11500	1000	0,75	3,1
30	229	412	14800	23200	13200	18000	800	1,25	4,8
40	500	882	24400	37500	22800	32300	600	2,30	8,6

<sup>1)</sup> The given values are minimum values because the direction of load is not always precisely defined.

### Mounting instructions:

Linear-Set and shaft are delivered as separate parts.  
 Recommended housing bore tolerance: H6 oder H7.  
 Align the shaft grooves to the ball circuits before inserting the shaft into the linear set.

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