

Accessories for Ball Runner Blocks and Ball Guide Rails

Product Description, Accessories for Ball Runner Blocks


Rexroth offers limitless interchangeability as all ball runner block versions can be combined at will with all accessories within each size.

The entire range is perfectly geared to provide top performance and to meet all special requirements.


Overview of Accessories for Ball Runner Blocks

Scraper Plates  155




Two-piece End Seal¹⁾  156




FKM Seal, one-piece and two-piece¹⁾
 157




Seal Kit¹⁾  158



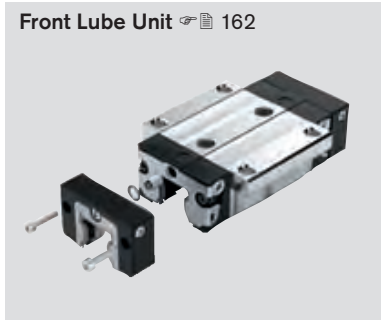
Lube Adapter, only for existing systems with high Ball Runner Blocks SNH or SLH¹⁾  159



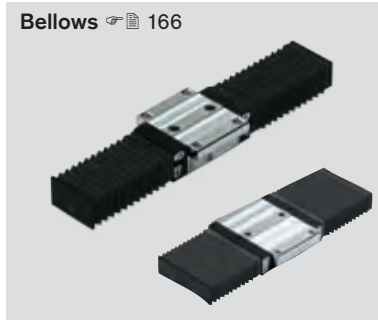
Lube Plate¹⁾  160



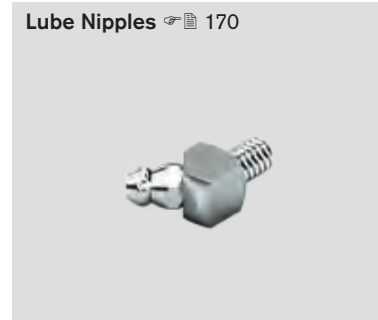
Front Lube Unit  162




Bellows  166



Lube Nipples  170




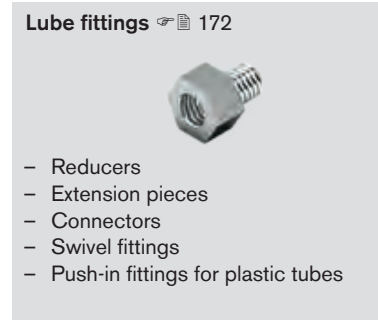
Plastic Hose for lube fittings  171



O-rings  171



Lube fittings  172




¹⁾ Not available for Ball Runner Blocks F.N (flanged, ..., low profile) and S.N (slimline, ..., low profile)

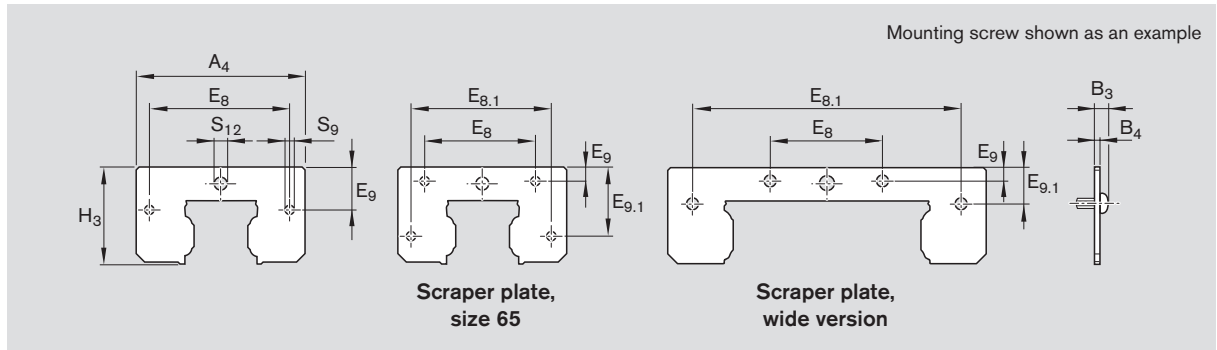
Accessories for Ball Runner Blocks

Scraper Plates R16.0 .10 ..

- Material: corrosion-resistant steel per EN 10088
- Specification: bright
- Precision version with 0.1 to 0.3 mm maximum gap dimension

Notes for mounting

- When combining with two-piece end seals, use seal kit: Part numbers R1619 .20 40/50  158
- Comes complete with mounting screws.
- When mounting, make sure there is a uniform gap between the guide rail and the scraper.
- For end-face lubrication, consider minimum screw-in depth.
- Follow the mounting instructions.



Size	Part number for ball guide rail with cover strip	Dimensions (mm)										Weight (g)
		A ₄	B ₃	B ₄	E ₈	E _{8.1}	E ₉	E _{9.1}	H ₃	S ₉	S ₁₂	
15	R1620 110 30	33.0	3.1	1.0	24.55	-	6.30	-	19.2	3.5	4.6	5
20	R1620 810 30	42.0	3.4	1.0	32.40	-	6.80	-	24.8	4.0	5.1	6
	R1620 810 35 ³⁾	41.0	3.4	1.0	30.50	-	5.10	-	22.8	4.0	4.0	5
25	R1620 210 30	47.0	3.4	1.0	38.30	-	11.00	-	29.5	4.0	7.0	8
	R1620 210 35 ³⁾	47.0	3.4	1.0	38.30	-	8.00	-	26.5	4.0	4.0	7
30	R1620 710 30	59.0	3.4	1.0	48.40	-	14.10	-	34.7	4.0	7.0	12
35	R1620 310 40 ¹⁾	69.0	3.4	1.0	58.00	-	17.00	-	40.1	4.0	7.0	16
45	R1620 410 40 ¹⁾	85.0	5.1	2.0	69.80	-	20.50	-	50.0	5.0	7.0	50
55	R1620 510 40 ¹⁾	98.0	5.7	2.0	80.00	-	21.80	-	56.4	6.0	7.0	65
65	R1620 610 40 ¹⁾	124.0	5.6	2.5	76.00	100.0	10.00	52.50	74.7	5.0	9.0	140
20/40 ⁴⁾⁵⁾	R1670 510 00 ²⁾	60.0	3.1	1.0	18.00	53.4	2.65	7.35	21.7	3.5	4.0	7
25/70 ⁴⁾	R1670 210 10 ²⁾	101.0	3.4	1.0	35.00	83.5	4.35	10.75	29.1	4.0	7.0	14
35/90 ⁴⁾	R1670 310 10 ²⁾	129.0	3.4	1.0	79.00	116.0	5.60	28.70	40.8	4.0	7.0	25

1) Part number for ball guide rail **without** cover strip: R1620 .10 30

2) Ball guide rail **without** cover strip

3) For ball runner blocks F.N (flanged, ..., low profile) and S.N (slimline, ..., low profile)

4) Wide Ball Rail System

5) **Note:** New scraper plate not combinable with existing Ball Guide Rail R167. 8.. ..!

Accessories for Ball Runner Blocks and Ball Guide Rails

Accessories for Ball Runner Blocks

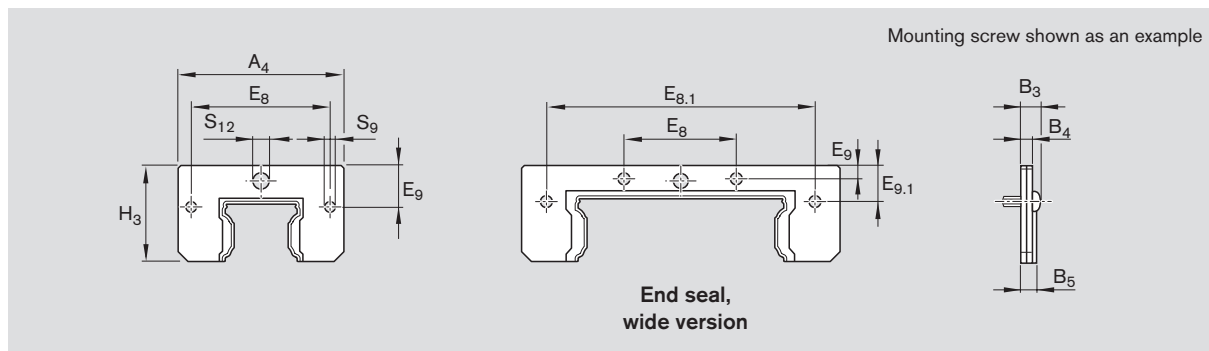
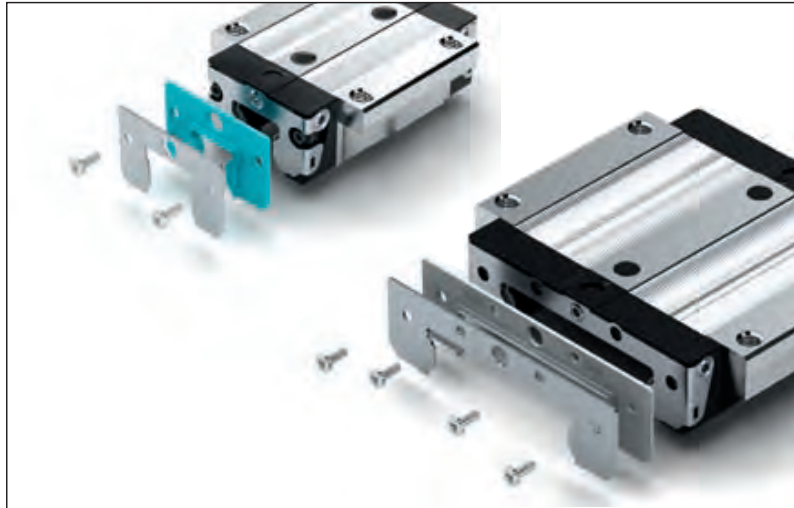
End Seal R1619 .2. .0

Two-piece

- Material: corrosion-resistant steel per EN 10088 with polymer seal
- Specification: bright

Notes for mounting

- Comes complete with mounting screws.
- For end-face lubrication, consider minimum screw-in depth.
- Follow the mounting instructions.



Size	Part number	Dimensions (mm)											Weight (g)
		A ₄	B ₃	B ₄	B ₅	E ₈	E _{8.1}	E ₉	E _{9.1}	H ₃	S ₉	S ₁₂	
15	R1619 121 20	32.0	4.3	2.2	3.0	24.55	–	6.30	–	19.0	3.5	4.3	6.0
20 ¹⁾	R1619 821 20	42.0	4.9	2.5	3.3	32.40	–	6.80	–	24.3	4.0	5.1	8.0
25 ¹⁾	R1619 221 30	47.0	4.9	2.5	3.3	38.30	–	11.00	–	29.0	4.0	7.0	10.0
30	R1619 721 30	59.0	5.7	3.3	4.5	48.40	–	14.10	–	34.5	4.0	7.0	18.0
35	R1619 321 30	69.0	5.7	3.3	4.5	58.00	–	17.00	–	39.5	4.0	7.0	25.0
45	R1619 421 30	85.0	7.1	4.0	5.5	69.80	–	20.50	–	49.5	5.0	7.0	55.0
55	R1619 521 30	98.0	7.7	4.0	5.5	80.00	–	21.50	–	56.0	6.0	7.0	65.0
20/40 ²⁾³⁾	R1619 522 20	60.0	4.6	2.5	3.3	18.00	53.4	2.65	7.35	21.7	3.5	4.0	7.5
25/70 ²⁾	R1619 222 20	99.0	4.9	2.5	3.3	35.00	83.5	4.30	10.70	28.6	4.0	7.3	14.5
35/90 ²⁾	R1619 322 20	128.6	5.7	3.3	4.5	79.00	116.0	5.80	28.90	41.0	4.0	7.0	40.0

1) Not for ball runner blocks F.N (flanged, ..., low profile) and S.N (slimline, ..., low profile)


2) Wide Ball Rail System

3) Note: New end seal not combinable with existing Ball Guide Rail R167. 8.. ..!

Accessories for Ball Runner Blocks

FKM Seal R1619 . 20 30

Two-piece

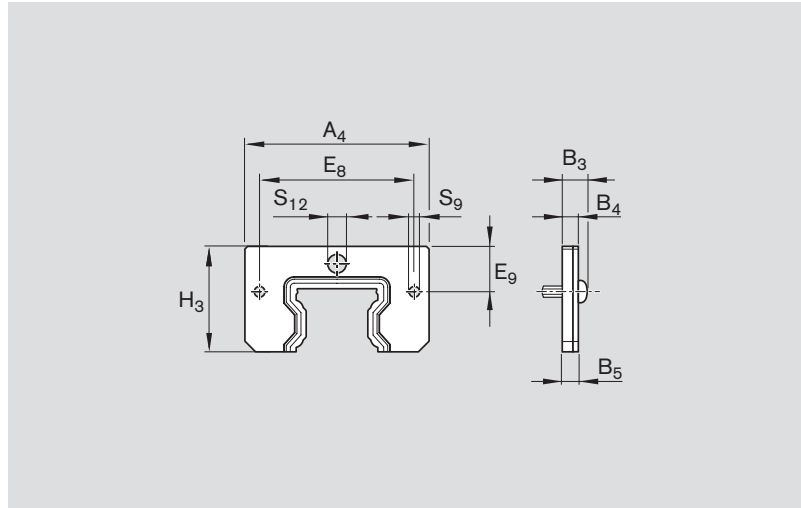
- Material: corrosion-resistant steel per EN 10088 and seal made of FKM
- For application areas and resistance  23

Special feature

Easy mounting and removal even when guide rail is screwed down.

Notes for mounting

- Comes complete with mounting screws.
- For end-face lubrication, consider minimum screw-in depth.
- Follow the mounting instructions.



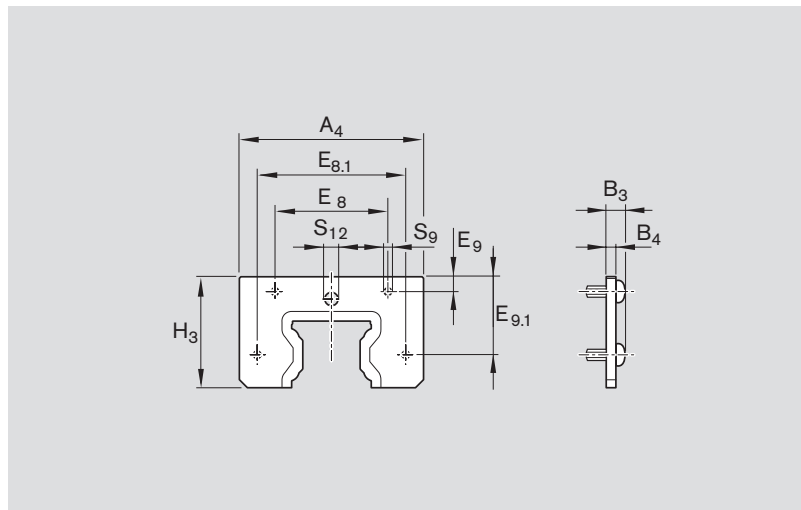
Size	Part number	Dimensions (mm)									Weight (g)
		A ₄	B ₃	B ₄	B ₅	E ₈	E ₉	H ₃	S ₉	S ₁₂	
35	R1619 320 30	69	8.4	4	6	58.0	17.0	39.5	4	7	39.0
45	R1619 420 30	85	9.1	4	6	69.8	20.5	49.5	5	7	61.0
55	R1619 520 30	98	9.7	4	6	80.0	21.8	56.4	6	7	80.5

One-piece

- Material: corrosion-resistant steel per EN 10088 and seal made of FKM

Notes for mounting

- Comes complete with mounting screws.
- For end-face lubrication, consider minimum screw-in depth.
- Follow the mounting instructions.



Size	Part number	Dimensions (mm)										Weight (g)
		A ₄	B ₃	B ₄	E ₈	E _{8.1}	E ₉	E _{9.1}	H ₃	S ₉	S ₁₂	
65	R1619 620 30	124	9.6	6.5	76	100	10	52.5	74.7	5	9	146

Accessories for Ball Runner Blocks and Ball Guide Rails

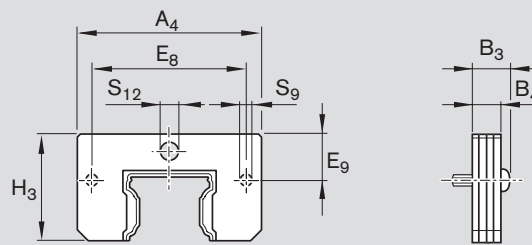
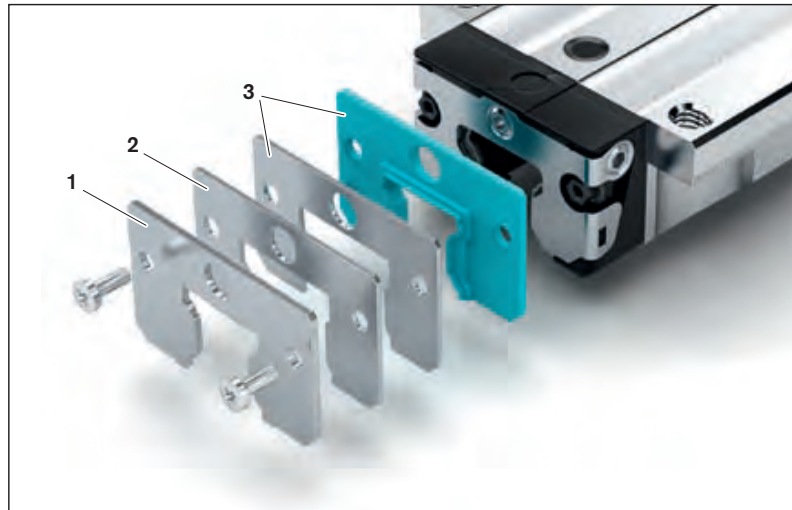
Accessories for Ball Runner Blocks

Seal Kit R1619 .20 .0

- 1 Scraper plate
- 2 Supporting plate
- 3 Two-piece end seal

Notes for mounting

- The seal kit is recommended in cases where both a scraper plate and a two-piece end seal are required.
- Comes complete with mounting screws.
- For end-face lubrication, consider minimum screw-in depth.
- Follow the mounting instructions.



Size	Part number for ball guide rail		Dimensions (mm)								Weight (g)
	without cover strip	with cover strip	A ₄	B ₃	B ₄	E ₈	E ₉	H ₃	S ₉	S ₁₂	
15	R1619 120 50	R1619 120 50	32.0	6.3	4.2	24.55	6.30	19.0	3.5	4.3	16
20 ¹⁾	R1619 820 50	R1619 820 50	42.0	6.9	4.5	32.40	6.80	24.3	4.0	5.1	20
25 ¹⁾	R1619 220 50	R1619 220 50	47.0	6.9	4.5	38.30	11.00	29.0	4.0	7.0	26
30	R1619 720 50	R1619 720 50	59.0	8.2	5.8	48.40	14.10	34.5	4.0	7.0	42
35	R1619 320 40	R1619 320 50	69.0	8.2	5.8	58.00	17.00	39.5	4.0	7.0	57
45	R1619 420 40	R1619 420 50	85.0	11.1	8.0	69.80	20.50	49.5	5.0	7.0	155
55	R1619 520 40	R1619 520 50	98.0	11.7	8.0	80.00	21.50	56.0	6.0	7.0	195

1) Not for ball runner blocks F.N (flanged, ..., low profile) and S.N (slimline, ..., low profile)

Accessories for Ball Runner Blocks

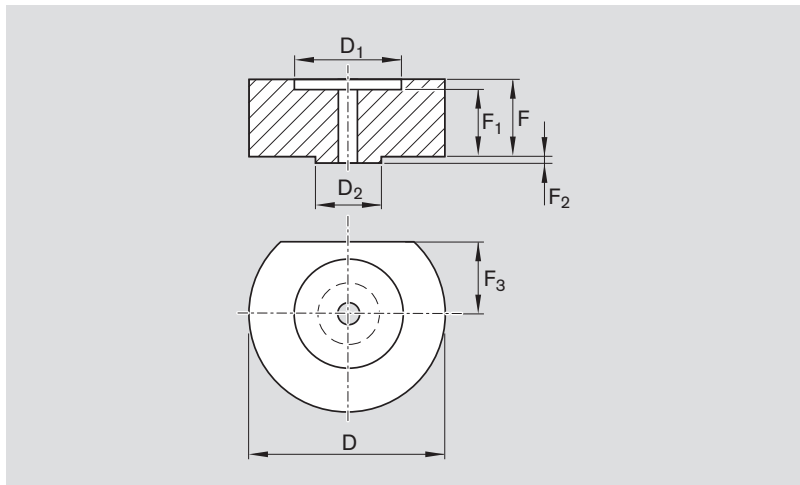
Lube Adapter R1621 .00 05

For oil and grease lubrication from above, only for high ball runner blocks SNH R1621 or SLH R1624

- Material: plastic
- Quantity per pack: 1 pc.

Notes for mounting

- O-rings are provided.
- Before mounting, use a heated pointed metal tool to open the lube bore on the ball runner block (do not use a drill).
- For details, see 258.



Size	Part number	Dimensions (mm)							Weight (g)
		D	D ₁	D ₂	F	F ₁	F ₂	F ₃	
15	R1621 100 05	12	6.2	3.4	3.7	3.1	0.5	3.20	0.5
25	R1621 200 05	15	7.2	4.4	3.8	3.2	0.5	5.85	0.9
30	R1621 700 05	16	7.2	4.4	2.8	2.2	0.5	6.10	0.7
35	R1621 300 05	18	7.2	4.4	6.8	6.2	0.5	6.80	2.2
45	R1621 400 05	20	7.2	4.4	9.8	9.2	0.5	8.30	4.1

Accessories for Ball Runner Blocks and Ball Guide Rails

Accessories for Ball Runner Blocks

Lubrication Plate R1620 .11 20

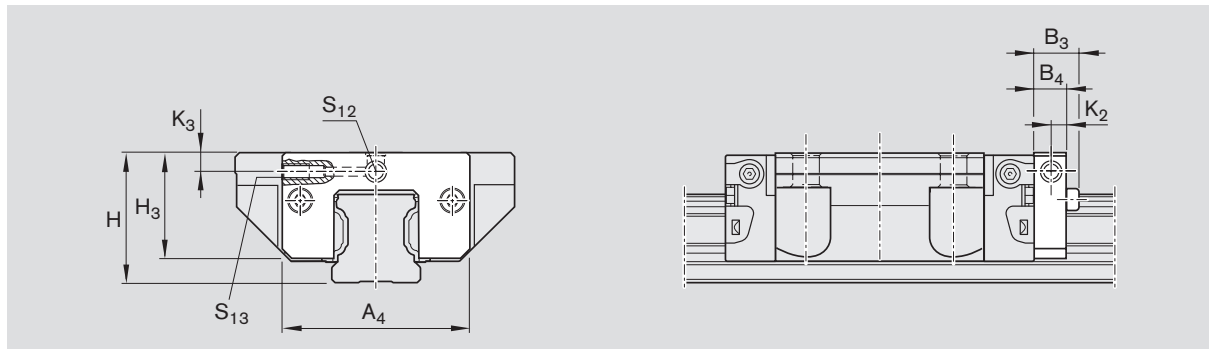
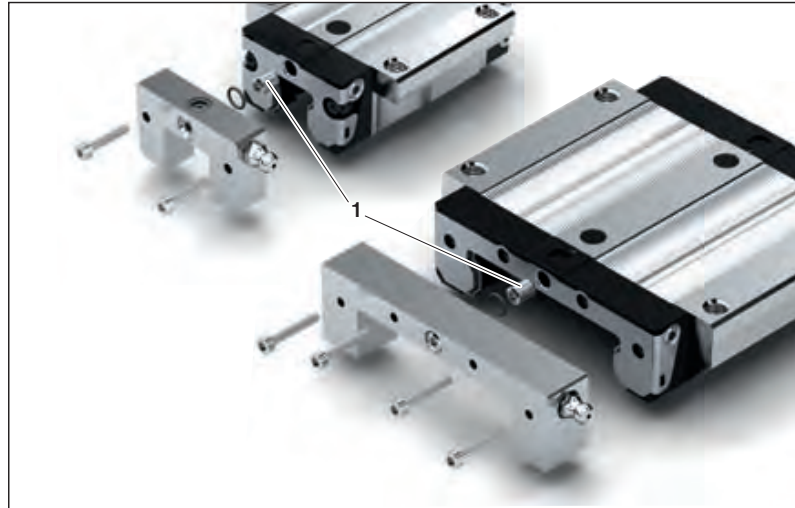
For standard lube nipples

- Material: aluminum

Notes for mounting

- Comes complete with all necessary parts for mounting.
- Sizes 15 - 20:
A funnel-type lube nipple with a knock-in spigot is supplied ready for insertion.
- Sizes 25 - 65:
The runner block lube nipple can be used.
- Follow the mounting instructions.

**⚠ The lube pin (1) must be mounted between the lubrication plate and the ball runner block!
(The pin contains a lube bore.)**



Size	Part number	Dimensions (mm)									Weight (g)
		A ₄	B ₃	B ₄	H	H ₃ ²⁾	K ₂	K ₃ ²⁾	S ₁₂	S ₁₃	
15	R1620 111 20	32	13.1	11	24	19.0	5.5	3.4	M3	Ø3	15
					28 ³⁾			7.4 ³⁾			
20 ¹⁾	R1620 811 20	42	15.0	12	30	24.8	6.0	3.5	M3	Ø3	25
25 ¹⁾	R1620 211 20	47	15.0	12	36	28.3	6.0	6.0	M6	M6	30
					40 ³⁾			10.0 ³⁾			
30	R1620 711 20	59	15.0	12	42	33.8	6.0	8.0	M6	M6	45
					45 ³⁾			11.0 ³⁾			
35	R1620 311 20	69	15.0	12	48	39.1	6.0	8.0	M6	M6	60
					55 ³⁾			15.0 ³⁾			
45	R1620 411 20	85	16.0	12	60	48.5	6.0	8.0	M6	M6	85
					70 ³⁾			18.0 ³⁾			
55	R1620 511 20	98	17.0	12	70	56.0	6.0	9.0	M6	M6	115
					80 ³⁾			19.0 ³⁾			
65	R1620 611 20	124	18.0	14	90	75.7	7.0	18.0	M8x1	M8x1	250

1) Not for ball runner blocks F.N (flanged, ..., low profile) and S.N (slimline, ..., low profile)

2) Referred to the runner block mounting face

3) For ball runner blocks S.H (slimline, ..., high)

Accessories for Ball Runner Blocks

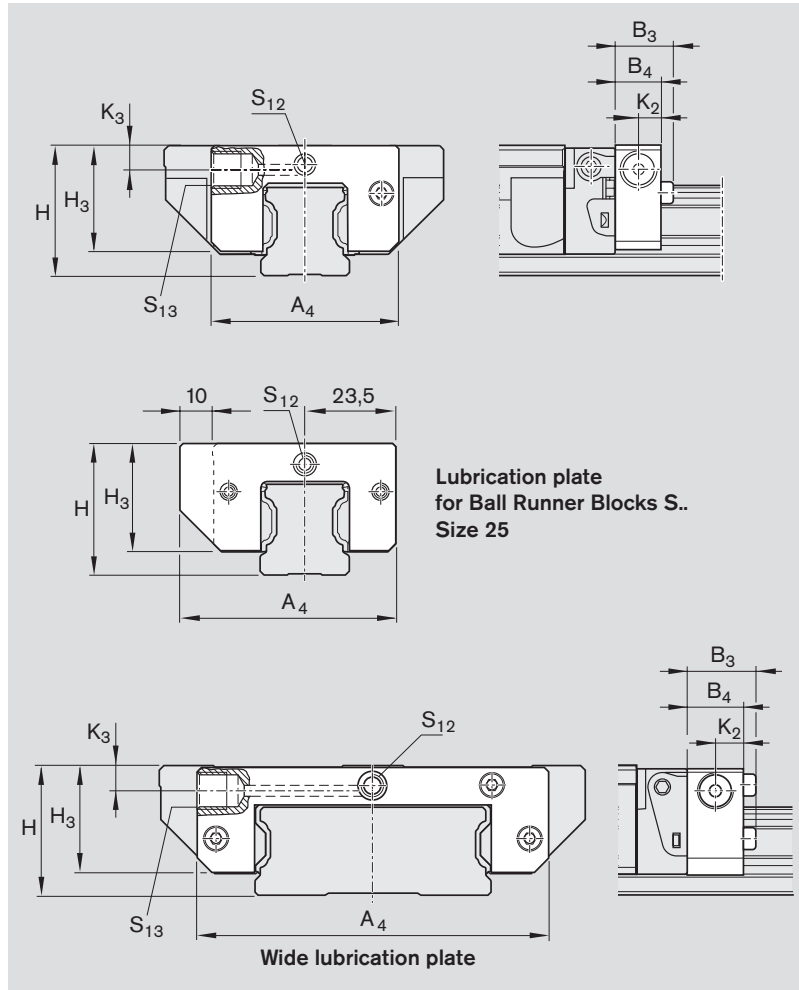
Lubrication Plate G 1/8 R1620 .11 30

For lube nipple G 1/8

- Material: aluminum

Notes for mounting

- Comes complete with all necessary parts for mounting.
- Ball runner block S.. (slimline)
Size 25: remember that the lubrication plate will project at the side.
- Follow the mounting instructions.



Size	Part number	Dimensions (mm)										Weight (g)
		A ₄	B ₃	B ₄	H	H ₃ ²⁾	K ₂	K ₃ ²⁾	S ₁₂	S ₁₃		
25 ¹⁾	R1620 211 30	57	19.0	16	36 40 ³⁾	28.3	8	7.0 11.0 ³⁾	M6	G 1/8x8	40	
30	R1620 711 30	59	19.0	16	42 45 ³⁾	33.8	8	7.0 10.0 ³⁾	M6	G 1/8x8	59	
35	R1620 311 30	69	19.0	16	48 55 ³⁾	39.1	8	8.0 15.0 ³⁾	M6	G 1/8x8	79	
45	R1620 411 30	85	20.0	16	60 70 ³⁾	48.5	8	8.0 18.0 ³⁾	M6	G 1/8x8	112	
55	R1620 511 30	98	21.0	16	70 80 ³⁾	56.0	8	9.0 19.0 ³⁾	M6	G 1/8x8	152	
65	R1620 611 30	124	20.0	16	90	75.7	8	18.0	M6	G 1/8x8	285	
25/70 ⁴⁾	R1670 211 40	99	19.0	16	35	29.6	8	8.4	M6	G 1/8x8	65	
35/90 ⁴⁾	R1670 311 30	129	19.0	16	50	42.0	8	9.5	M6	G 1/8x8	120	

1) Not for ball runner blocks F.N (flanged, ..., low profile) and S.N (slimline, ..., low profile)

2) Referred to the runner block mounting face

3) For ball runner blocks S.H (slimline, ..., high)

4) Wide Ball Rail System

Accessories for Ball Runner Blocks and Ball Guide Rails

Accessories for Ball Runner Blocks

Front Lube Unit

For travel up to 10,000 km without relubrication

Advantages during mounting and service

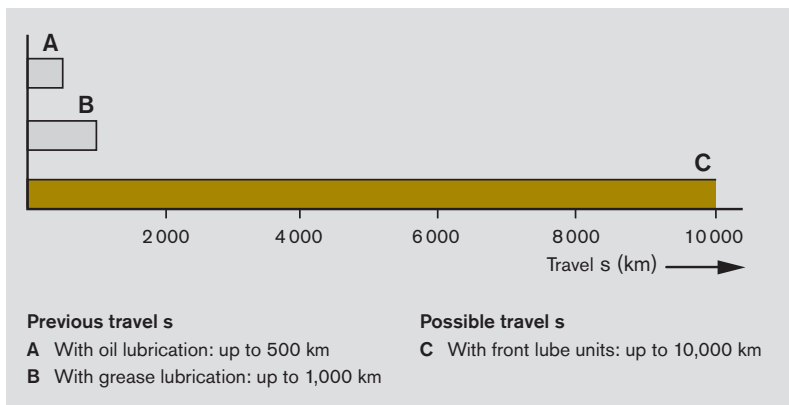
- Up to 10,000 km travel without relubrication
- Only initial lubrication (with grease) of the runner block necessary
- Front lube units at both runner block ends
- Minimal lubricant loss
- Reduced oil consumption
- No lube lines
- Max. operating temperature 60 °C
- In-service refilling possible using lube nipple on end face or at side
- Lube port on end face of the front lube unit suitable for lubricating runner block with grease

Standard Ball Runner Block with two Front Lube Units



Size	Possible travel s with front lube units (km)
15	10 000
20	10 000
25	10 000
30	10 000
35	10 000
45	10 000
55	1 500
65	1 000

Table 1



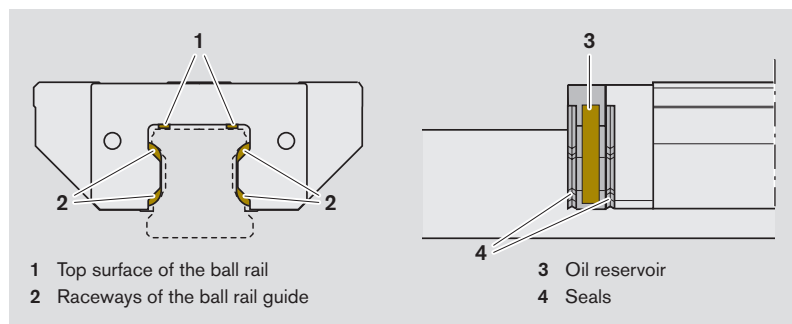
For part numbers, dimension drawing, dimensions and technical data, see next page.

Oil consumption comparison for size 25

Front lube units	Lubricant quantity per lubrication cycle (cm ³)	Travel s (km)	Lubricant consumption	
			absolute (cm ³ /km)	comparative (%)
without	1.2	20	0.06	100.00
with	5.2	5 000	0.00104	1.73

Lubricant distribution

Specially designed lube distribution ducts ensure that the lubricant is applied only where needed: directly to the raceways and to the guide rail top surface.



**Front Lube Unit
R1619 .2. 00**

Material: special plastic

Front lube units R1619 .2. 00 are supplied ready-filled with oil (Mobil SHC 639) and can be mounted immediately after greasing the runner block.

**Front Lube Unit
R1619 .2. 10**

Material: special plastic

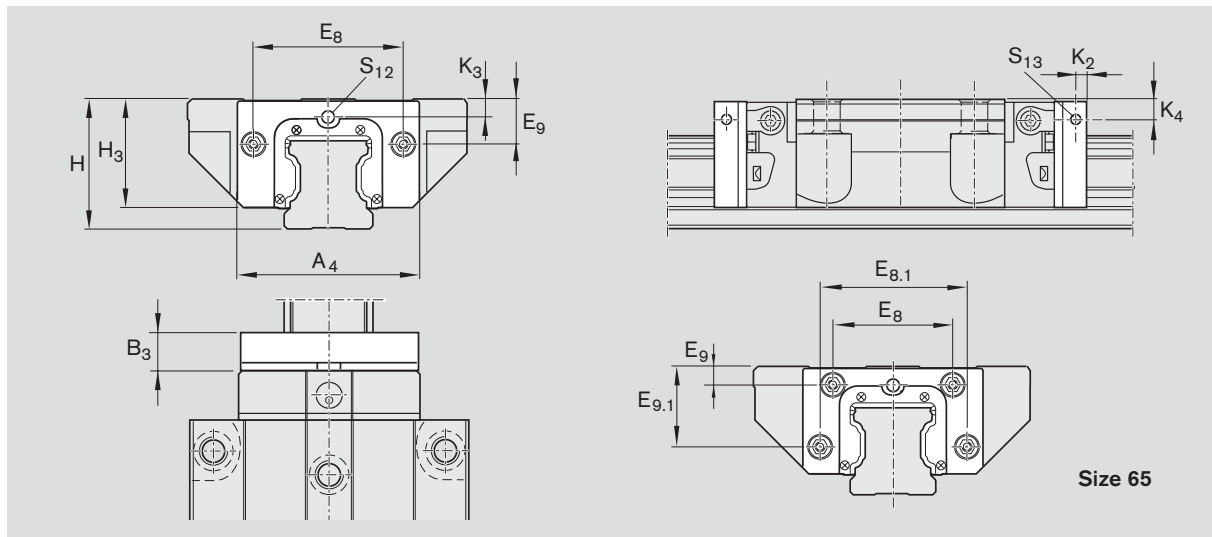
Front lube units R1619 .2. 10 are supplied unfilled.

Recommended oil lubricant for initial filling:

- Mobil SHC 639 (viscosity 1000 mm²/s at 40 °C)

⚠ Before mounting the front lube units, always lubricate the runner blocks first using grease!
📄 245

⚠ If other types of oil are used, please check the compatibility of the lubricants and the possible travel!



Size	Part number	Dimensions (mm)												Oil (cm ³)	Weight (g)
		A ₄	B ₃	E ₈	E _{8.1}	E ₉ ²⁾	E _{9.1} ²⁾	H	H ₃ ²⁾	K ₂	K ₃ ²⁾ /K ₄ ²⁾	S ₁₂	S ₁₃		
15	R1619 125 00	31.8	11.5	24.55	-	6.70	-	24	19.40	5	3.35	M3	M3	1.00	15
						10.70 ³⁾		28 ³⁾	23.40 ³⁾		7.35 ³⁾				
20	R1619 825 00	43.0	12.5	32.50	-	7.30	-	30	24.90	5	3.70	M3	M3	2.20	20
	R1619 826 00 ¹⁾	41.0	12.5	30.50	-	5.60	-	28	22.90	-	3.10	-	M3	1.80	20
25	R1619 225 00	47.0	13.0	38.30	-	11.50	-	36	29.30	5	5.50	M6	M6	2.60	25
						15.50 ³⁾		40 ³⁾	33.30 ³⁾		9.50 ³⁾				
	R1619 226 00 ¹⁾	47.0	13.0	38.30	-	8.50	-	33	26.30	5	4.10	M3	M3	2.50	25
30	R1619 725 00	58.8	14.5	48.40	-	14.60	-	42	35.05	6	6.05	M6	M6	3.85	35
						17.60 ³⁾		45 ³⁾	38.05 ³⁾		9.05 ³⁾				
35	R1619 325 00	69.0	16.0	58.00	-	17.35	-	48	39.85	6	6.90	M6	M6	5.70	50
45	R1619 425 00	84.0	17.0	69.80	-	20.90	-	60	49.80	7	8.20	M6	M6	9.60	70
						30.90 ³⁾		70 ³⁾	59.80 ³⁾		18.20 ³⁾				
55	R1619 525 00	99.0	18.0	80.00	-	22.30	-	70	57.05	8	8.90	M6	M6	14.50	90
						32.30 ³⁾		80 ³⁾	67.05 ³⁾		18.90 ³⁾				
65	R1619 625 00	124.2	19.0	76.00	100	11.00	53.5	90	75.70	8	16.00	M8	M8	30.00	130

1) For ball runner blocks F.N (flanged, ..., low profile) and S.N (slimline, ..., low profile)

2) Referred to the runner block mounting face

3) For ball runner blocks S.H (slimline, ..., high)

Accessories for Ball Runner Blocks and Ball Guide Rails

Accessories for Ball Runner Blocks

Initial filling of a front lube unit shipped without oil

- Remove the set screw from the lube hole (Fig. 1, item 1) and keep it ready for later use.
 - Screw in lube nipple (2).
 - Lay the front lube unit (3) down flat and fill with the oil quantity specified in Table 2. Leave to settle for approx. 36 hours.
 - Check whether the lube insert is completely soaked with oil.
 - If necessary, add oil.
 - Remove lube nipple.
 - Screw in the set screw.
- For size 20 low profile: Stand the front lube unit in 10 mm of oil for approx. 36 hours (see Fig. 2)

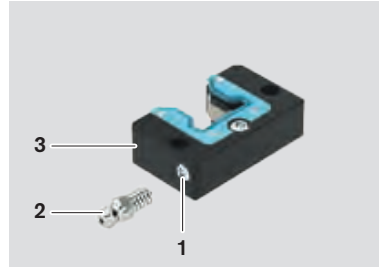


Fig. 1

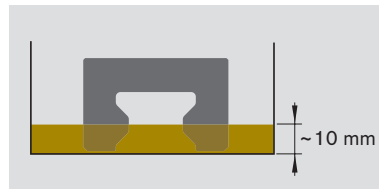


Fig. 2

Size	Oil quantity for initial filling of an unfilled front lube unit (cm ³)
15	0.90
20	2.00
25	2.40
30	3.85
35	5.70
45	9.60
55	14.50
65	30.00

Table 2

Relubrication of front lube units

- When the relubrication interval according to Graph 1 has been reached, add the relubrication quantity according to Table 2.
- The units can be relubricated through the lube port at the side.
- The size 20 low-profile front lube unit **cannot** be refilled through the lube port (see Fig. 2).

Note

Rexroth recommends replacing the front lube units every 3 years at the latest and regreasing the runner blocks before mounting the new front lube units.

Relubrication of runner blocks

In clean operating environments, the runner blocks can be relubricated with grease (Dynalub 510) from the end face.

⚠ Relubrication of ball runner blocks with grease lubricant. 📄 246

⚠ If other types of lubricants are used, this may lead to a reduction in the relubrication intervals, the achievable travel in short-stroke applications, and the load capacities. Possible chemical interactions between the plastic materials, lubricants and preservative oils must also be taken into account.

⚠ The recommended in-service lubrication intervals depend on environmental factors, load and type of loading. Typical environmental factors include fine metal particles, mineral and similar abraded material, solvents, and temperature. Load types include vibrations, impacts and tilting.

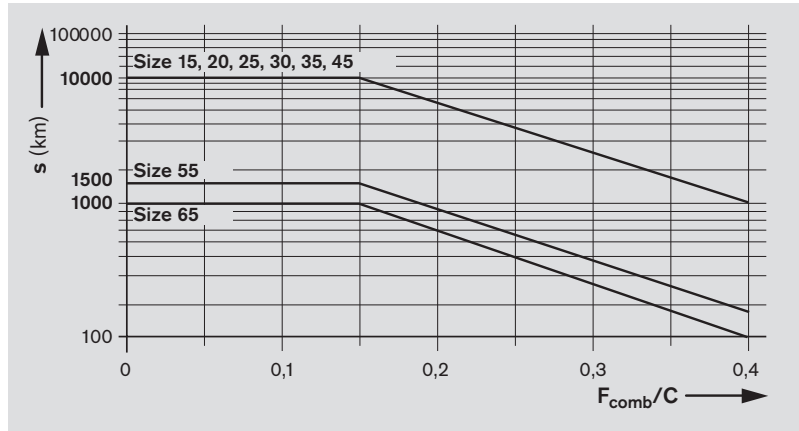
⚠ The service conditions are unknown to the manufacturer. Users can only determine the in-service lubrication intervals with certainty by conducting their own in-house tests or by close observation.

⚠ Do not allow ball guide rails or runner blocks to come into contact with water-based metalworking fluids!

Load-dependent relubrication intervals for ball runner blocks with front lube units

The following conditions apply:

- Lubricants for runner blocks:
Dynalub 510 (grease NLGI 2)
or alternatively
Castrol Longtime PD 2 (grease NLGI 2)
- Lubricant for front lube units:
Mobil SHC 639 (synthetic oil)
- Maximum speed:
 $v_{max} = 2 \text{ m/s}$
- No exposure to metalworking fluids
- Standard seals
- Ambient temperature:
 $T = 20 - 30 \text{ }^\circ\text{C}$



Graph 1

Key to graph

- C = dynamic load capacity (N)
- F_{comb} = combined equivalent dynamic load on bearing (N)
- F_{comb}/C = load ratio (-)
- s = relubrication interval expressed as travel (km)

Definition of F_{comb}/C

The load ratio F_{comb}/C is the quotient of the equivalent dynamic load on the bearing at the combined load on the bearing F_{comb} (taking account of the internal preload force F_{pr}) divided by the dynamic load capacity C [8 - 9].

Mounting of front lube units

Notes for mounting

All required mounting accessories (coated screws, seals and lube nipples) are supplied along with the units.

⚠ Mount a front lube unit at each end of the ball runner block (Fig. 3, item 3)!

⚠ Do not remove the runner block from the rail!

Ball runner blocks up to size 45 (Fig. 3a):

⚠ The lube pin (2) must be mounted between the lubrication plate and the ball runner block! (The pin contains a lube bore.)

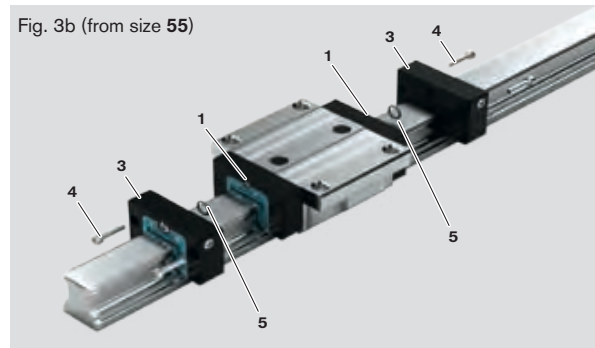
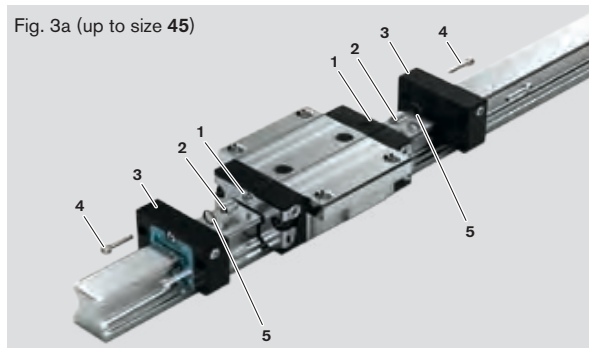
- Remove set screw (1).
- Screw in lube pin (2).
- Push on front lube unit (3).
- Insert O-ring (5) between runner block and front lube unit.
- Tighten screws (4) with tightening torque M_A (see Table 3).

Ball runner blocks from size 55 (Fig. 3b):

- Push on front lube unit (3).
- Remove set screw (1) and insert O-ring (5) between runner block and front lube unit.
- Tighten screws (4) with tightening torque M_A (see Table 3).

Size	Item 4	Tightening torque M_A (Nm)
15	M2.5 x 12	0.3
20	M3 x 14	0.6
25	M3 x 14	0.6
30	M3 x 14	1.2
35	M3 x 16	1.2
45	M4 x 18	1.6
55	M5 x 18	2.0
65	M4 x 20	1.6

Table 3



Accessories for Ball Runner Blocks and Ball Guide Rails

Accessories for Ball Runner Blocks

Standard bellows R1620 .0. 00

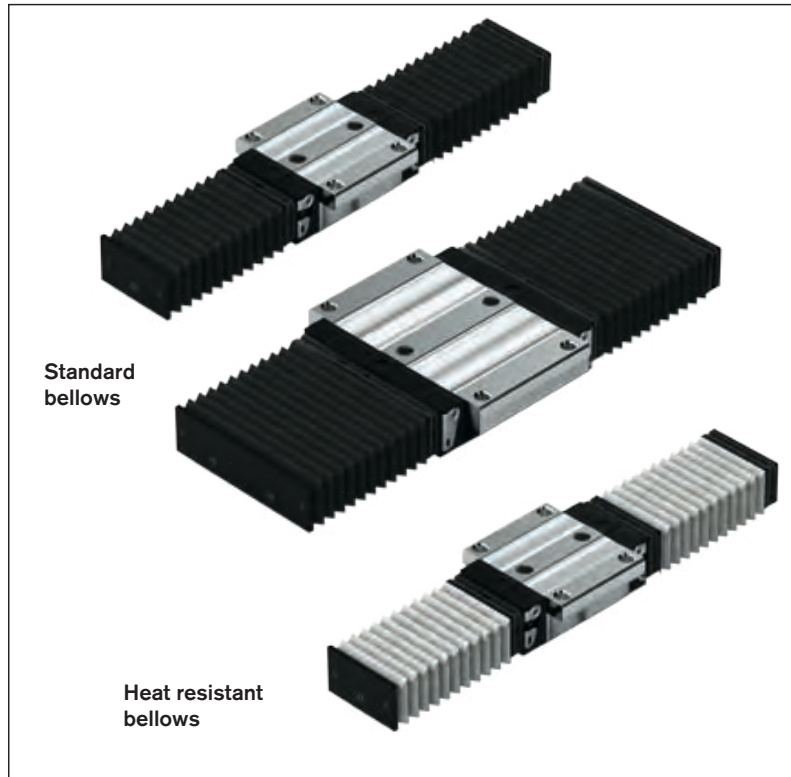
- Material: polyurethane-coated polyester fabric
- Aluminum lube plate

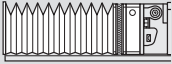
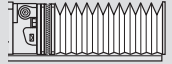
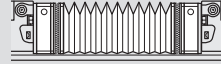
Heat resistant bellows R1620 .5. 00

- Material: Nomex fabric, metallized on both sides

Temperature resistance

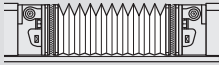
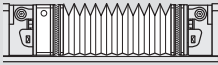
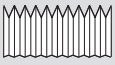
- Non combustible, non flammable
- Resistant to sparks, welding spatter and hot chips.
- The protective metal coating can withstand peak temperatures of up to 200 °C.
- Operating temperature for the entire bellows: max. 80 °C.



Size	Part number, no. of folds		
	 Type 1: with lubrication plate ¹⁾ and end plate Type 6: with VSE ²⁾ and end plate	 Type 2: with mounting frame and end plate	 Type 3: with 2 lubrication plates ¹⁾ Type 7: with 2 VSE ²⁾
Standard bellows			
15	R1620 10. 00, ...	R1620 102 00, ...	R1620 10. 00, ...
20	R1620 80. 00, ...	R1620 802 00, ...	R1620 80. 00, ...
25	R1620 20. 00, ...	R1620 202 00, ...	R1620 20. 00, ...
30	R1620 70. 00, ...	R1620 702 00, ...	R1620 70. 00, ...
35	R1620 30. 00, ...	R1620 302 00, ...	R1620 30. 00, ...
45	R1620 40. 00, ...	R1620 402 00, ...	R1620 40. 00, ...
55	R1620 50. 00, ...	R1620 502 00, ...	R1620 50. 00, ...
65	R1620 60. 00, ...	R1620 602 00, ...	R1620 60. 00, ...
20/40 ³⁾	-	R1670 502 00, ...	-
25/70 ³⁾	-	R1670 202 00, ...	-
35/90 ³⁾	-	R1670 302 00, ...	-
Heat resistant bellows			
25	R1620 25. 00, ...	R1620 252 00, ...	R1620 25. 00, ...
30	R1620 75. 00, ...	R1620 752 00, ...	R1620 75. 00, ...
35	R1620 35. 00, ...	R1620 352 00, ...	R1620 35. 00, ...
45	R1620 45. 00, ...	R1620 452 00, ...	R1620 45. 00, ...
55	R1620 55. 00, ...	R1620 552 00, ...	R1620 55. 00, ...
65	R1620 65. 00, ...	R1620 652 00, ...	R1620 65. 00, ...

Weight on request

- 1) Lubrication plate **not required** for ball runner blocks with side lube ports
- 2) VSE = front lube unit
- 3) Wide Ball Rail System

Size	Part number, no. of folds		
	 Type 4: with 2 mounting frames	 Type 5: with lubrication plate ¹⁾ and mounting frame Type 8: with VSE ²⁾ and mounting frame	 Type 9: loose supply (spare part)
Standard bellows			
15	R1620 104 00, ...	R1620 10. 00, ...	R1600 109 00, ...
20	R1620 804 00, ...	R1620 80. 00, ...	R1600 809 00, ...
25	R1620 204 00, ...	R1620 20. 00, ...	R1600 209 00, ...
30	R1620 704 00, ...	R1620 70. 00, ...	R1600 709 00, ...
35	R1620 304 00, ...	R1620 30. 00, ...	R1600 309 00, ...
45	R1620 404 00, ...	R1620 40. 00, ...	R1600 409 00, ...
55	R1620 504 00, ...	R1620 50. 00, ...	R1600 509 00, ...
65	R1620 604 00, ...	R1620 60. 00, ...	R1600 609 00, ...
20/40 ³⁾	R1670 504 00, ...	–	R1670 509 00, ...
25/70 ³⁾	R1670 204 00, ...	–	R1670 209 00, ...
35/90 ³⁾	R1670 304 00, ...	–	R1670 309 00, ...
Heat resistant bellows			
25	R1620 254 00, ...	R1620 25. 00, ...	R1600 259 00, ...
30	R1620 754 00, ...	R1620 75. 00, ...	R1600 759 00, ...
35	R1620 354 00, ...	R1620 35. 00, ...	R1600 359 00, ...
45	R1620 454 00, ...	R1620 45. 00, ...	R1600 459 00, ...
55	R1620 554 00, ...	R1620 55. 00, ...	R1600 559 00, ...
65	R1620 654 00, ...	R1620 65. 00, ...	R1600 659 00, ...

Weight on request

- 1) Lubrication plate **not required** for ball runner blocks with side lube ports
- 2) VSE = front lube unit
- 3) Wide Ball Rail System

Ordering example:

- Bellows
- Size 35
- Standard
- Type 6: with FLU and end plate
- number of folds: 36

Example: R1620 3 0 6 00, 36 folds

Standard = 0
Heat = 5
resistant
Type 1 - 9

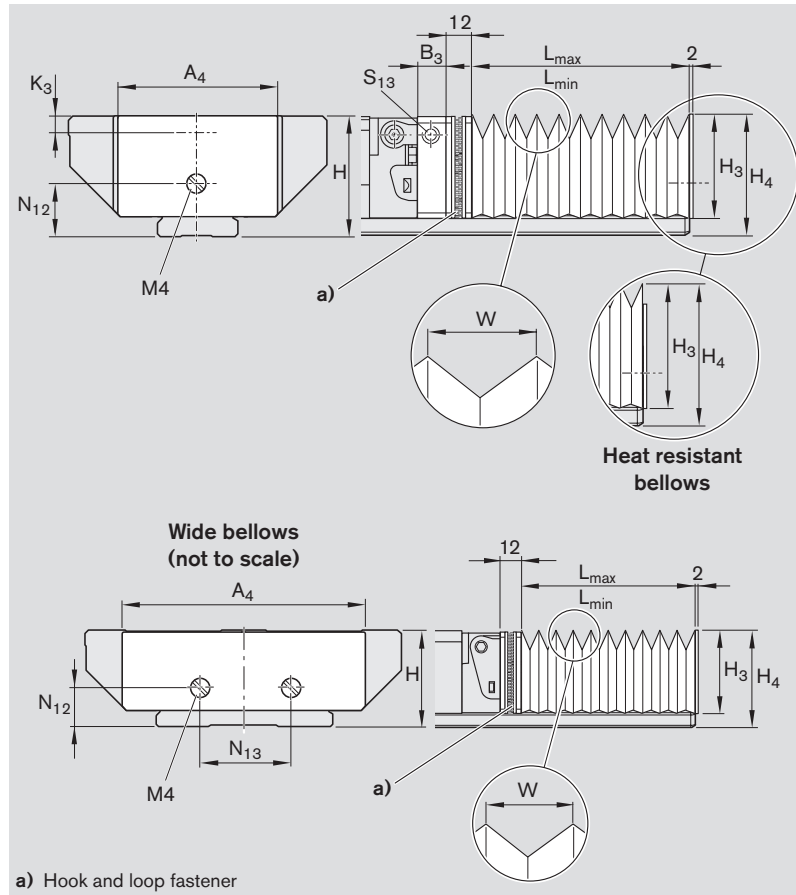
Accessories for Ball Runner Blocks and Ball Guide Rails

Accessories for Ball Runner Blocks

Bellows

Notes for mounting

- The bellows are delivered pre-assembled.
- The assembly comes complete with mounting screws.
- Bellows with lube plate (Type 1, 3 - 5)
 Sizes 15 - 20:
 A funnel-type lube nipple with knock-in spigot is supplied.
- Sizes 25 - 65 and wide version:
 The runner block lube nipple can be used.
- For types 1 and 2, thread size M4 x 10 mm deep and countersunk 2 x 45° must be tapped in each end face of the SNS ball guide rail. For ball guide rail BNS: tap two threads at each end face.
- Follow the mounting instructions.



Standard bellows

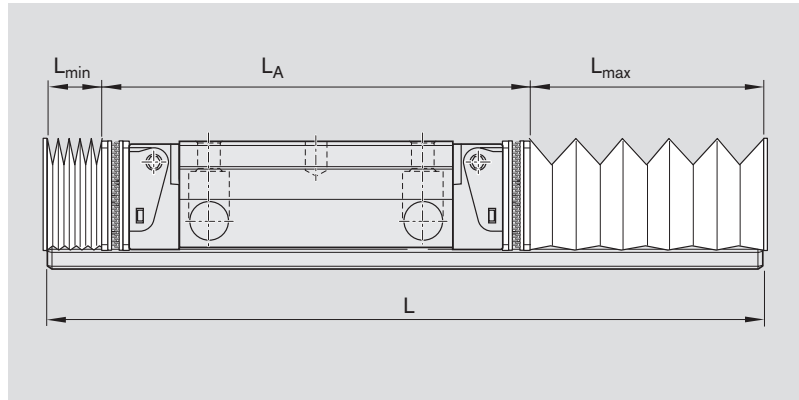
Size	Dimensions (mm)										Factor	
	A ₄	B ₃	H	H ₃	H ₄	K ₃	N ₁₂	N ₁₃	S ₁₃	W	U	
15	45	11	24	26.5	31.5	3.4	11.0	-	M3	19.9	1.18	
20	42	12	30	24.0	29.2	3.5	13.0	-	M3	10.3	1.33	
25	45	12	36	28.5	35.0	6.0	15.0	-	M3	12.9	1.32	
30	55	12	42	34.0	41.0	8.0	18.0	-	M6	15.4	1.25	
35	64	12	48	39.0	47.0	8.0	22.0	-	M6	19.9	1.18	
45	83	12	60	49.0	59.0	8.0	30.0	-	M6	26.9	1.13	
55	96	12	70	56.0	69.0	9.0	30.0	-	M6	29.9	1.12	
65	120	14	90	75.0	89.0	18.0	40.0	-	M8x1	40.4	1.08	
20/40 ¹⁾	73	-	27	31.0	35.0	-	11.5	-	-	19.9	1.12	
25/70 ¹⁾	101	-	35	29.0	35.0	-	14.0	26	-	12.9	1.25	
35/90 ¹⁾	128	-	50	42.0	49.0	-	21.5	40	-	19.9	1.18	

Heat resistant bellows

Size	Dimensions (mm)										Factor	
	A ₄	B ₃	H	H ₃	H ₄	K ₃	N ₁₂	N ₁₃	S ₁₃	W	U	
25	62	12	36	39.0	44.5	6.0	15	-	M6	25.9	1.25	
30	67	12	42	42.0	47.5	8.0	18	-	M6	25.9	1.25	
35	74	12	48	47.0	54.0	8.0	22	-	M6	29.9	1.21	
45	88	12	60	55.0	64.0	8.0	30	-	M6	32.9	1.18	
55	102	12	70	63.0	75.0	9.0	30	-	M6	37.9	1.16	
65	134	14	90	86.0	99.0	18.0	40	-	M8x1	52.4	1.11	

1) Wide Ball Rail System

Calculations



Bellows

$$L_{max} = (\text{stroke} + 30) \cdot U$$

$$L_{min} = L_{max} - \text{stroke}$$

$$\text{Number of folds} = \frac{L_{max}}{W} + 2$$

L_{max} = bellows extended (mm)

L_{min} = bellows compressed (mm)

Stroke = stroke (mm)

U = calculation factor (-)

W = maximum extension (mm)

L = rail length (mm)

L_A = length of runner block with mounting frame (mm)

Ball guide rail length

$$L = L_{min} + L_{max} + L_A$$

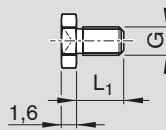
Accessories for Ball Runner Blocks and Ball Guide Rails

Accessories for Ball Runner Blocks

Lube Nipples

Funnel-type lube nipple per DIN 3405

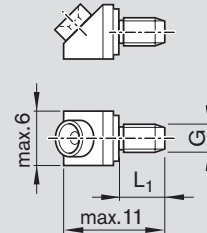
Form A



Part number	Dimensions (mm)		Weight (g)
	G	L ₁	
R3417 029 09	M3	5	0.3
R3417 032 09 ¹⁾			

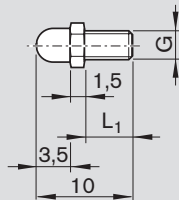
- 1) Lube nipple Resist NR II
made of corrosion-resistant steel per EN 10088

Form B



Part number	Dimensions (mm)		Weight (g)
	G	L ₁	
R3417 004 09	M3	5	1.5

Ball-type lube nipple

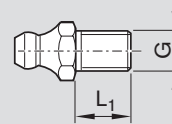


Part number	Dimensions (mm)		Weight (g)
	G	L ₁	
R3417 005 01 ²⁾	M3	5	0.5

- 2) Material: brass

Hydraulic-type lube nipple per DIN 71412

Form A

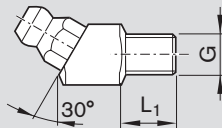


Part number	Dimensions (mm)		Weight (g)
	G	L ₁	
R3417 008 02	M6	8	2.6
R3417 016 02 ¹⁾			

- 1) Lube nipple Resist NR II
made of corrosion-resistant steel per EN 10088

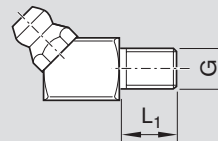
Hydraulic-type lube nipple per DIN 71412

30°



Part number	Dimensions (mm)		Weight (g)
	G	L ₁	
R3417 023 02	M6	8	7.4

Form B



Part number	Dimensions (mm)		Weight (g)
	G	L ₁	
R3417 007 02	M6	8	7.4
R3417 006 02	M8x1	8	8.0

Lube Fittings

Plastic Hose for lube fittings

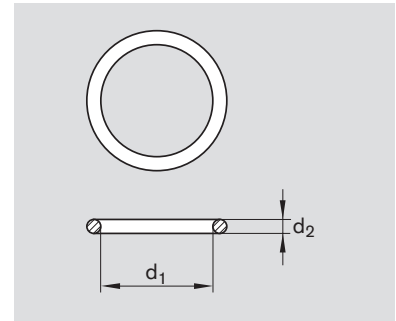
Plastic hose \varnothing 3 mm



Part number	Dimensions			Weight (kg)
	Outside \varnothing (mm)	Inside \varnothing (mm)	Length (m)	
R3499 287 00	3	1.7	50	0.4

O-rings

Part number	$d_1 \times d_2$ (mm)	Weight (g)
R3411 130 01	4 x 1.0	0.01
R3411 131 01	5 x 1.0	0.01
R3411 003 01	6 x 1.5	0.03

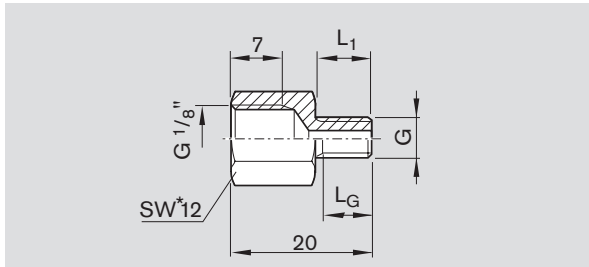


Accessories for Ball Runner Blocks and Ball Guide Rails

Accessories for Ball Runner Blocks

Lube Fittings

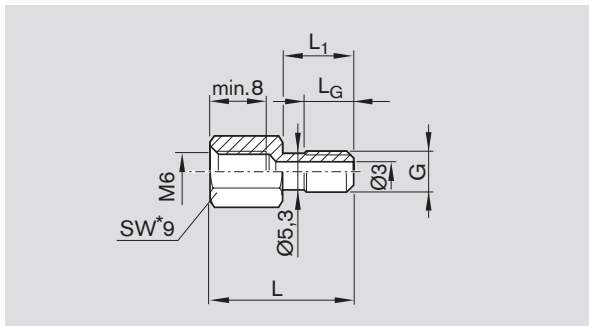
Reducers



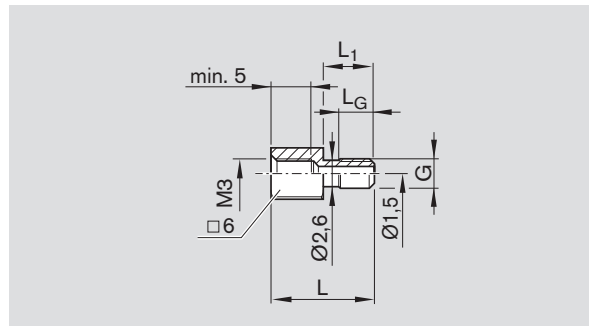
* SW = width across flats

Part number	Dimensions (mm)			Weight (g)
	G	L ₁	L _G	
R3455 030 34	M6	8	6.5	7.5

Extension pieces

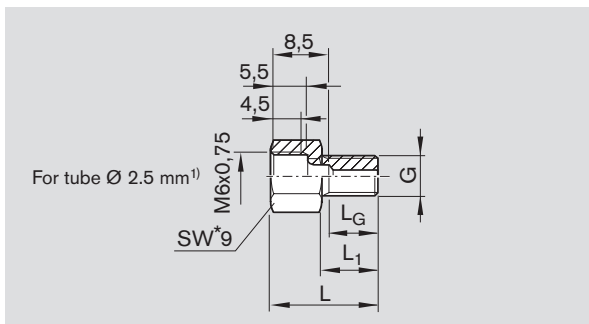


Part number	Dimensions (mm)				Weight (g)
	G	L	L ₁	L _G	
R3455 030 69	M6	21.0	10.5	7	5.0
R3455 030 87	M6	25.0	14.5	8	5.5
R3455 030 85	M6	26.5	16.0	7	5.0

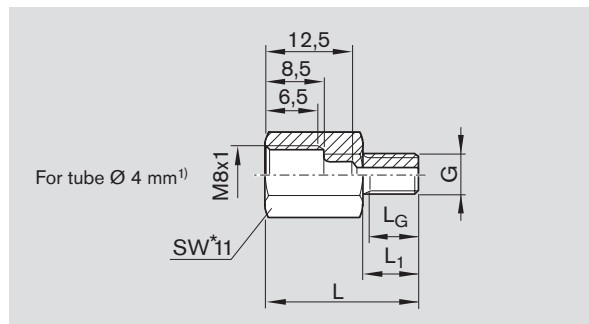


Part number	Dimensions (mm)				Weight (g)
	G	L	L ₁	L _G	
R3455 030 78	M3	16.5	8.5	6	2.5

Connectors



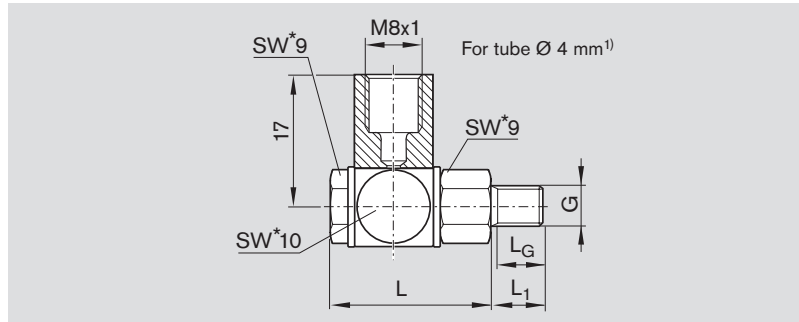
Part number	Dimensions (mm)				Weight (g)
	G	L	L ₁	L _G	
R3455 030 38	M6	15.5	8	6.5	4.1



Part number	Dimensions (mm)				Weight (g)
	G	L	L ₁	L _G	
R3455 030 37	M6	22	8	6.5	8.8

1) For connections as per DIN 2353 (solderless tube fittings)

Swivel fittings



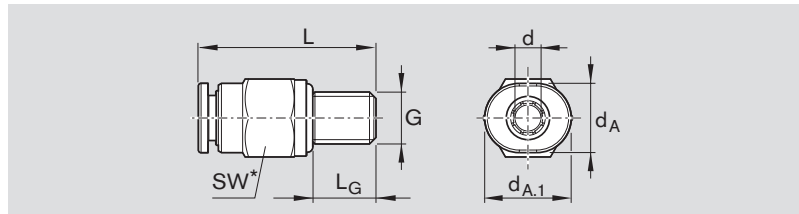
Part number	Dimensions (mm)				Weight (g)
	G	L	L ₁	L _G	
R3417 018 09	M6	21.5	8	6.5	18.6

1) For connections as per DIN 2353 (solderless tube fittings)

Push-in fittings for plastic and metal tubes

⚠ Not permitted for ball runner blocks with accessories attached to end face.

Straight connectors

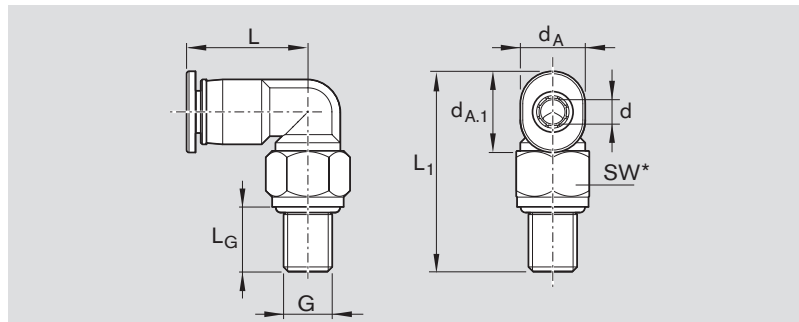


Part number	Dimensions (mm)							Weight (g)
	d _A	d _{A.1}	d±0.1	G	L	L _G	SW*	
R3417 033 09	6.0	7	3	M3	15.5	5	6 ¹⁾	1.4
R3417 034 09	8.0	9	3	M5	18.0	5	8	3.5
R3417 035 09	8.5	10	4	M6	20.5	8	9	4.6
R3417 036 09	10.0	12	6	M6	21.5	8	10	4.8

1) Maximum tightening torque: M_A = 0.5 Nm

* SW = width across flats

Elbow couplings, rotatable¹⁾



Part number	Dimensions (mm)								Weight (g)
	d _A	d _{A.1}	d±0.1	G	L	L ₁	L _G	SW*	
R3417 037 09	6.0	7	3	M3	13.7	18.0	5	6 ²⁾	1.7
R3417 038 09	8.0	10	4	M6	19.5	24.7	8	9	5.1
R3417 039 09	10.5	12	6	M6	20.0	25.0	8	9	6.1

1) Maximum lubricant pressure: 30 bar (exerting slow pressure with manual grease gun)

2) Maximum tightening torque: M_A = 0.5 Nm

Accessories for Ball Runner Blocks and Ball Guide Rails

Product Description, Accessories for Ball Guide Rails


Rexroth offers limitless interchangeability as all ball guide rail versions can be combined at will with all accessories within each size.

The entire range is perfectly geared to provide top performance and to meet all special requirements.


Overview of Accessories for Ball Guide Rails

Cover strip, separate  176




Expanding tool  177



Mounting kit for cover strip with mounting tool and lifting plate  177




Aluminum strip clamp  178




Plastic protective cap  178




Plastic mounting hole plug  179




Steel mounting hole plug  179



Two-piece mounting tool for steel mounting hole plugs  179



Wedge profile (not for BNS)  180



Accessories for Ball Guide Rails

Mounting instructions for rail cover strip

Secure the cover strip!

 178

- Follow the mounting instructions! Send for the "Mounting Instructions for the Cover Strip."

Advantages

The cover strip is easy to clip on and remove.

- This considerably facilitates and speeds up the mounting process:
 - no need to plug each single hole.
 - no time delay while waiting for adhesive to harden when using adhesive tape.
- The cover strip can be mounted and removed (up to 4 times).

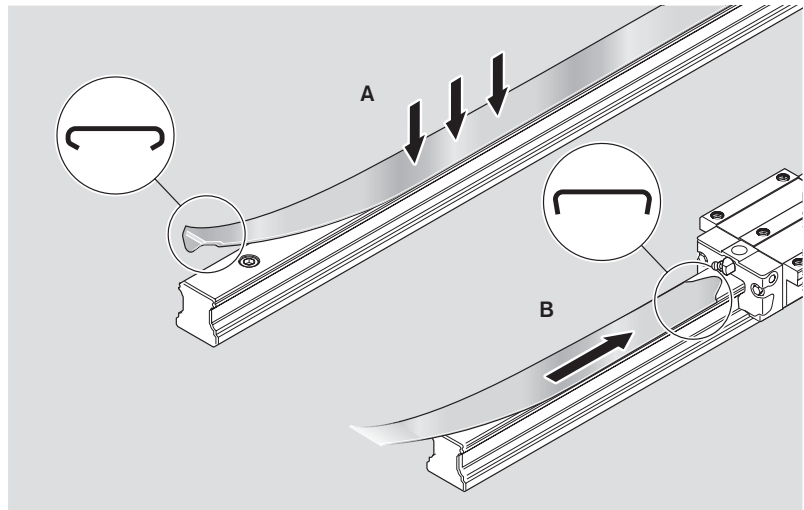
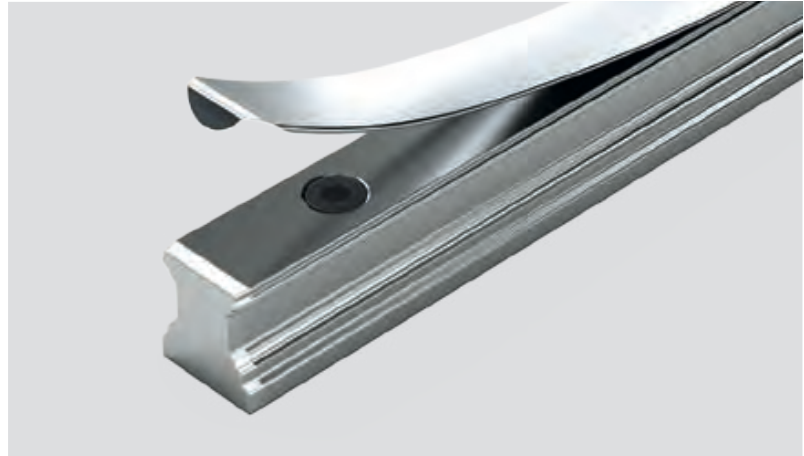
Versions and functions

A Snap-fit cover strip (standard)

- The cover strip is clipped on before the runner blocks are mounted and fits tightly.


B Sliding-fit cover strip

- For mounting or replacing a cover strip when the runner blocks or adjoining structure cannot be removed.
- A section of the snap-fit cover strip is very slightly widened and can then be easily slid under the runner blocks.



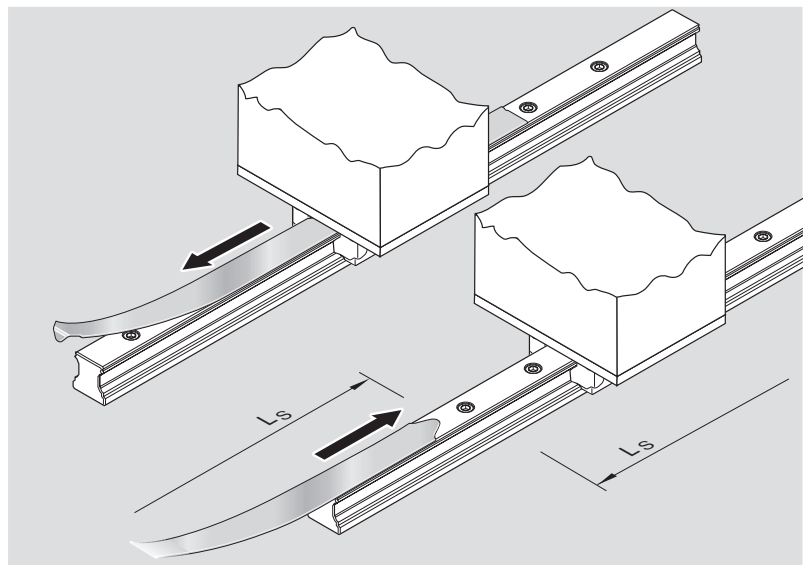
A special expanding tool can be used to create the sliding fit after a cover strip has been installed.

The main advantage is that the length L_S of the sliding fit can be optimized to suit the installation conditions.

 The cover strip is a precision-machined part that must be handled with great care. It must on no account be bent.

Risk of injury at the edges and ends of the cover strip! Wear gloves!

For part numbers, dimension drawing, dimensions and weights, see the following pages.



Accessories for Ball Runner Blocks and Ball Guide Rails

Accessories for Ball Guide Rails

Cover Strip, Separate

For initial mounting, as spare part or as replacement part

Note

A matching cover strip (sliding or snap fit) can be supplied for each ball guide rail SNS.

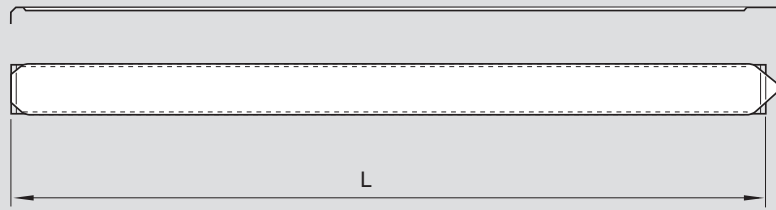
**Ordering example 1
(Standard snap-fit cover strip)**

- Ball Guide Rail SNS
- Size 35
- Rail length L = 2696 mm

Part number:

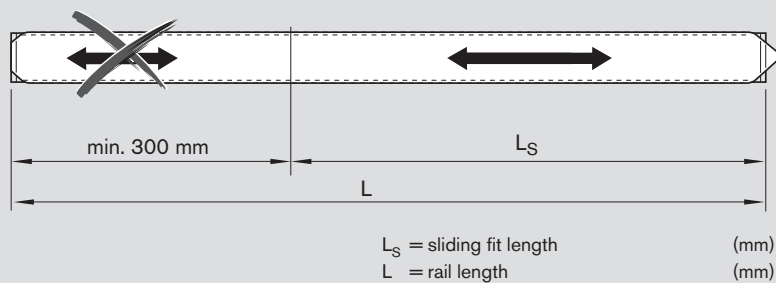
R1619 330 20, 2696 mm

Standard snap-fit cover strip



Size	Standard snap-fit cover strip Part number, rail length L (mm)	Weight (g/m)
15	R1619 130 00, ...	10
20	R1619 830 00, ...	29
25	R1619 230 00, ...	32
30	R1619 730 00, ...	40
35	R1619 330 20, ...	80
45	R1619 430 20, ...	100
55	R1619 530 20, ...	120
65	R1619 630 20, ...	148

Sliding-fit cover strip



**Ordering example 2
(Sliding-fit cover strip)**

- Ball Guide Rail SNS
- Size 35
- Rail length L = 2696 mm
- Sliding fit length
L_S = 1200 mm

Part number:

R1619 330 30, 2696, 1200 mm

Size	Sliding-fit cover strip Part number, rail length L (mm), Sliding fit length L _S (mm)	Weight (g/m)
15	R1619 130 10, ...	10
20	R1619 830 10, ...	29
25	R1619 230 10, ...	32
30	R1619 730 10, ...	40
35	R1619 330 30, ...	80
45	R1619 430 30, ...	100
55	R1619 530 30, ...	120
65	R1619 630 30, ...	148

- Follow the mounting instructions!
- Send for the "Mounting Instructions for the Cover Strip."

Expanding Tool

For creating a sliding fit in the cover strip



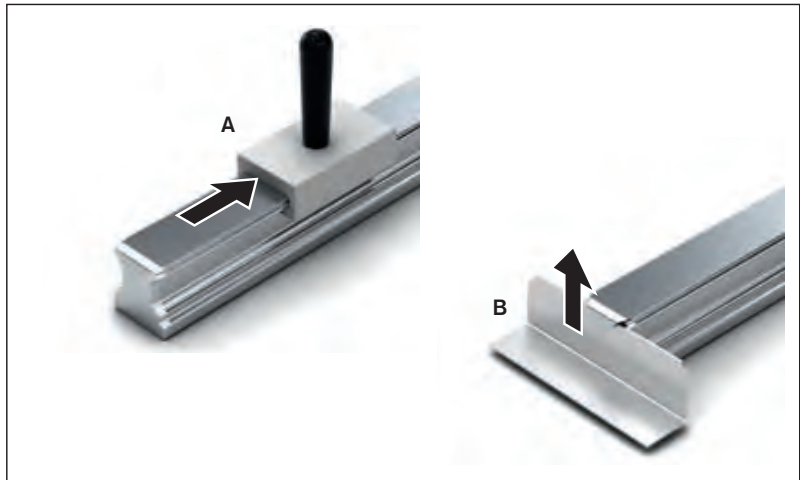
Size	Part number	Weight (g)
15	R1619 115 10	40
20	R1619 815 10	50
25	R1619 215 10	80
30	R1619 715 10	100
35	R1619 315 30	100
45	R1619 415 30	130
55	R1619 515 30	210
65	R1619 615 30	270

Cover Strip Mounting Kit

Mounting tool and lifting plate

Notes for mounting

- The kit comprises a mounting tool (A) for clipping on the cover strip and a lifting plate (B) for removing the cover strip.



Size	Part number	Weight (g)
25	R1619 210 80	170
30	R1619 710 80	200
35	R1619 310 60	200
45	R1619 410 60	210
55	R1619 510 60	210
65	R1619 610 60	280

- Follow the mounting instructions!
- Send for the "Mounting Instructions for the Cover Strip."

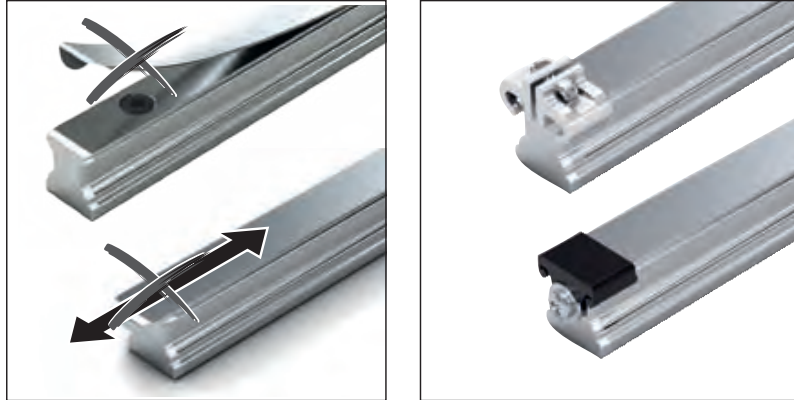
Accessories for Ball Runner Blocks and Ball Guide Rails

Accessories for Ball Guide Rails

Parts for securing the cover strip

Notes for mounting

- Rexroth recommends the use of strip clamps to:
- prevent unintentional lifting of the strip and penetration of dirt,
- fix the cover strip in place.



Strip clamps

For ball guide rails without threaded holes at the end faces

Material:

- Strip clamp made of anodized aluminum
- Clamping screw and nut made of corrosion-resistant steel per EN 10088

Size	Set (2 pieces per unit)		Bulk pack (100 per unit)	
	Part number (unit)	Weight (g)	Part number (unit)	Weight (kg)
15	R1619 139 50	11	R1619 139 60	1.1
20	R1619 839 50	13	R1619 839 60	1.3
25	R1619 239 50	14	R1619 239 60	1.4
30	R1619 739 50	22	R1619 739 60	2.2
35	R1619 339 50	30	R1619 339 60	3.0
45	R1619 439 50	56	R1619 439 60	5.6
55	R1619 539 50	62	R1619 539 60	6.2
65	R1619 639 50	84	R1619 639 60	8.4

Protective end caps

For ball guide rails with threaded holes at the end faces

Material:

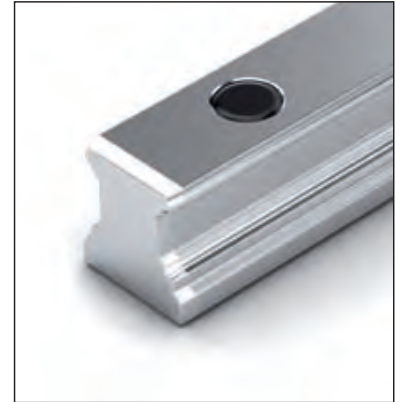
- Plastic protective cap, color black
- Screw made of corrosion-resistant steel per EN 10088
- Washer made of galvanized steel

Size	Single cap		Set (2 pieces per unit with screws)		Bulk pack	
	Part number (without screws)	Weight (g)	Part number (unit)	Weight (g)	Part number/qty (without screws)	Weight (kg)
15	R1619 139 00	0.8	R1619 139 20	5.5	R1619 139 01 / 1000	0.8
20	R1619 839 00	0.9	R1619 839 20	6.0	R1619 839 01 / 1000	0.9
25	R1619 239 00	1.0	R1619 239 20	7.0	R1619 239 01 / 1000	1.3
30	R1619 739 00	1.7	R1619 739 20	9.0	R1619 739 01 / 1000	1.7
35	R1619 339 10	2.0	R1619 339 30	10.0	R1619 339 01 / 1000	2.5
45	R1619 439 00	4.0	R1619 439 20	13.0	R1619 439 01 / 700	2.6
55	R1619 539 00	4.0	R1619 539 20	20.0	R1619 539 01 / 500	2.1
65	R1619 639 00	6.0	R1619 639 20	20.0	R1619 639 01 / 300	1.7

Accessories for Ball Guide Rails

Plastic Mounting Hole Plugs

Size	Single plug Part number	Weight (g)
15	R1605 100 80	0.05
20	R1605 800 80	0.10
25	R1605 200 80	0.30
30	R1605 300 80	0.60
35	R1605 300 80	0.60
45	R1605 400 80	1.00
55	R1605 500 80	1.70
65	R1605 600 90	2.10
20/40	R1605 100 80	0.05
25/70	R1605 200 80	0.30
35/90	R1605 300 80	0.60

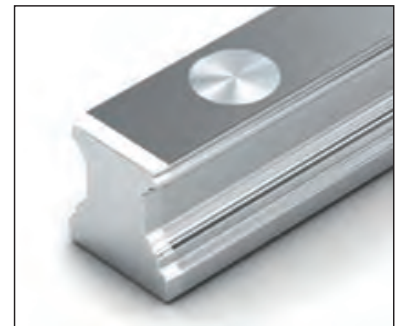


Notes for mounting

- Follow the mounting instructions!
Send for the publication “Mounting Instructions for Ball Rail Systems.”

Steel Mounting Hole Plugs

Size	Single plug made of machining steel Part number	Weight (g)
25	R1606 200 75	2
30	R1606 300 75	3
35	R1606 300 75	3
45	R1606 400 75	6
55	R1606 500 75	8
65	R1606 600 75	9
25/70	R1606 200 75	2
35/90	R1606 300 75	3



Notes on delivery and mounting

- Steel mounting hole plugs are not supplied with the guide rails.

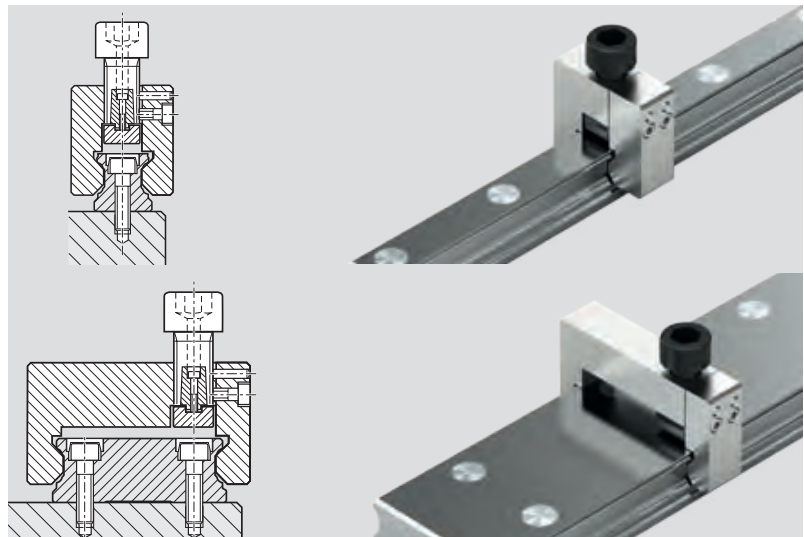
- **Order the mounting tool along with the plugs!**
- Follow the mounting instructions!
Send for the publication “Mounting Instructions for Ball Rail Systems.”

Mounting tool for steel mounting hole plugs

Two-piece, with instruction leaflet
The two-piece mounting tool is suitable for mounting plugs to a screwed down guide rail.

Size	Part number	Weight (kg)
25	R1619 210 00 ¹⁾	0.37
30	R1619 710 00 ¹⁾	0.37
35	R1619 310 10	0.57
45	R1619 410 10	0.85
55	R1619 510 10	1.50
65	R1619 610 00 ¹⁾	1.85
25/70	R1619 210 40	0.75
35/90	R1619 310 40	1.05

1) Only available as a one-piece unit



Accessories for Ball Runner Blocks and Ball Guide Rails

Accessories for Ball Guide Rails

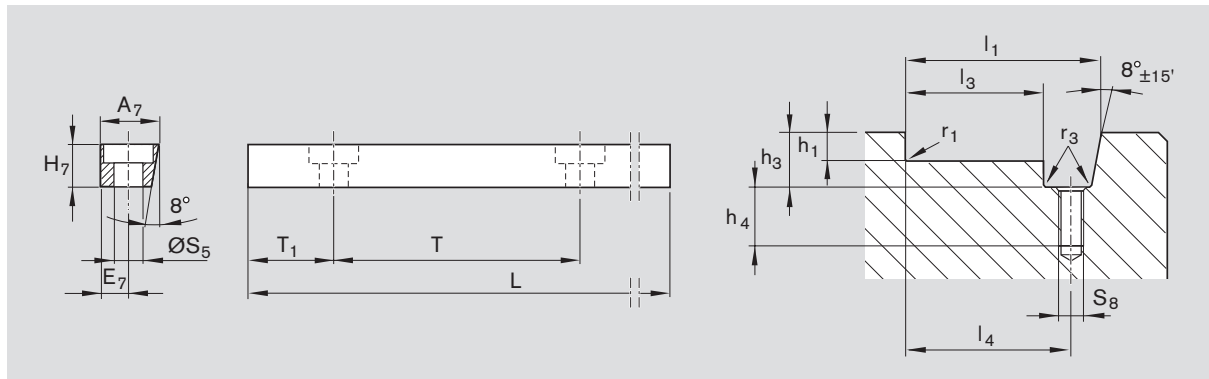
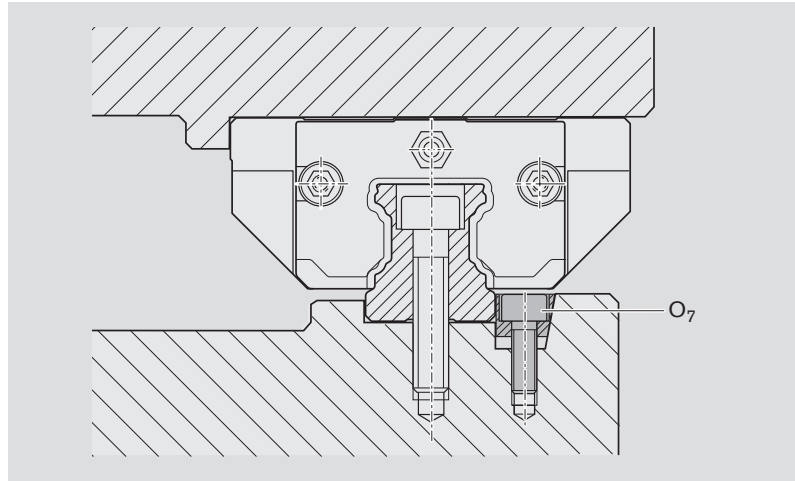
Wedge Profile

Lateral retention for Ball Guide Rails

- Material: steel
- Specification: black finished

Notes for mounting

- Follow the mounting instructions!
Send for the publication "Mounting Instructions for Ball Rail Systems."



Wedge profile

Size	Part number	Dimensions (mm)								Weight (kg)
		A ₇	E ₇	H ₇	L	O ₇ ¹⁾	S ₅	T	T ₁	
15	R1619 200 01	12.0	6	10	957	M5x20	6.0	60	28.5	0.8
20										
25										
30										
35										
45	R1619 400 01	19.0	9	16	942	M8x25	9.0	105	51.0	2.0
55										
65										

1) Screw O₇ to DIN 6912

Wedge profile groove

Size	Dimensions (mm)									
	h _{1-0.2}	h ₃₊₁	h ₄₊₂	l _{1±0.05}	l _{3-0.1}	l _{4±0.1}	r _{1 max}	r _{3 max}	S ₈	
15	3.5	12.5	15	27	14.9	21	0.4	0.5	M5	
20	4.0	12.5	15	32	19.9	26	0.5	0.5	M5	
25	4.0	12.5	15	35	22.9	29	0.8	0.5	M5	
30	5.0	12.5	15	40	12.9	34	0.8	0.5	M5	
35	6.0	12.5	15	46	33.9	40	0.8	0.5	M5	
45	8.0	19.0	16	64	44.9	54	0.8	0.5	M8	
55	10.0	19.0	16	72	52.9	62	1.2	0.5	M8	
65	10.0	19.0	16	82	62.9	72	1.2	0.5	M8	

