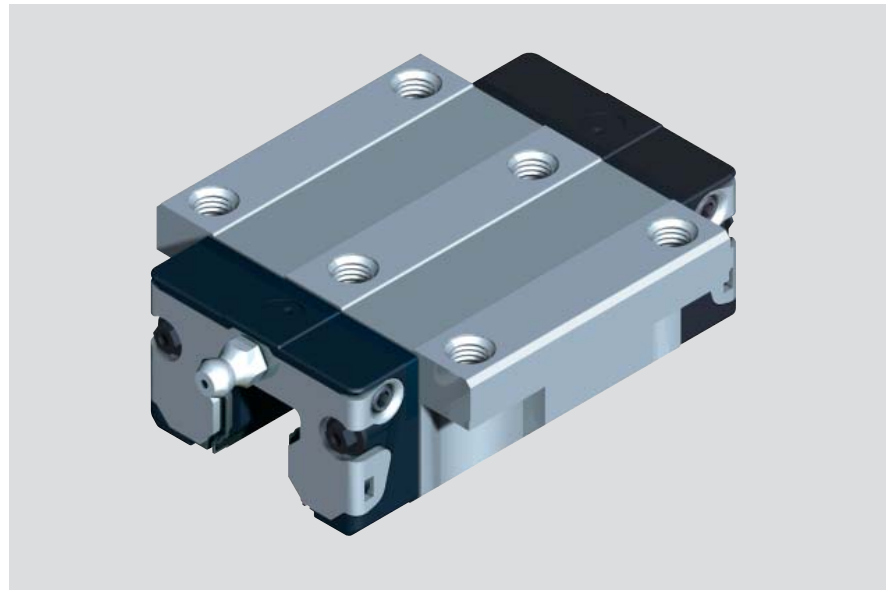


Runner Blocks, Steel

Runner Block FNS R1651

Flange Standard

- Runner block without ball chain:
See table for part numbers
- Runner block with low friction seal without ball chain**:
Part numbers R1651 xxx 21
- Runner block with ball chain:
Part numbers R1651 xxx 22
- Runner block with low friction seal and ball chain**:
Part numbers R1651 xxx 23



Dynamic Characteristics

Speed $v_{max} = 5 \text{ m/s}$
 Acceleration $a_{max} = 500 \text{ m/s}^2$

Precision Runner Blocks

- Pre-lubricated

Corrosion resistant versions

For Resist NR with runner block out of corrosion resistant steel, see appropriate section.

For Resist NR II all corrosion resistant steel parts see appropriate section.

High Precision Runner Blocks

- Improved travel accuracy
- Superior quality
- Highest precision
- Pre-lubricated
- Minimal oil preservation

Preload Class

- C0 = without Preload
- C1 = Preload 2% C
- C2 = Preload 8% C
- C3 = Preload 13% C

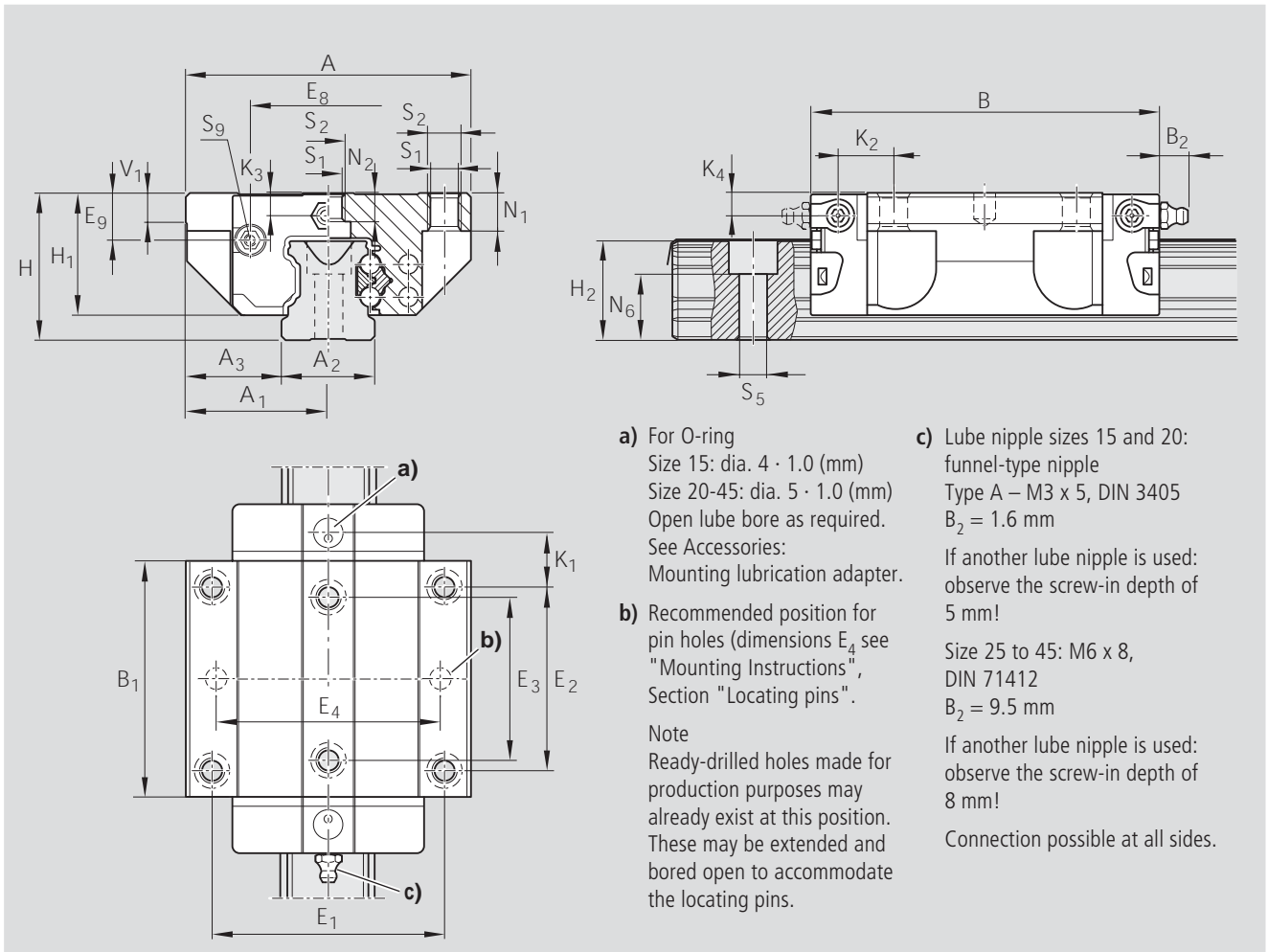
For further technical information, please see chapter on "General Technical Data and Calculations".

Size	Accuracy Class	Part numbers for runner blocks for preload class		
		C0	C1	C2
15	N	R1651 194 20	R1651 114 20	R1651 124 20
	H	R1651 193 20	R1651 113 20	R1651 123 20
	P		R1651 112 20	R1651 122 20
20	N	R1651 894 20	R1651 814 20	R1651 824 20
	H	R1651 893 20	R1651 813 20	R1651 823 20
	P		R1651 812 20	R1651 822 20
25	N	R1651 294 20	R1651 214 20	R1651 224 20
	H	R1651 293 20	R1651 213 20	R1651 223 20
	P		R1651 212 20	R1651 222 20
30	N	R1651 794 20	R1651 714 20	R1651 724 20
	H	R1651 793 20	R1651 713 20	R1651 723 20
	P		R1651 712 20	R1651 722 20
35	N	R1651 394 20	R1651 314 20	R1651 324 20
	H	R1651 393 20	R1651 313 20	R1651 323 20
	P		R1651 312 20	R1651 322 20
45*	N	R1651 494 20	R1651 414 20	R1651 424 20
	H	R1651 493 20	R1651 413 20	R1651 423 20
	P		R1651 412 20	R1651 422 20

Size	Accuracy Class	Part numbers for runner blocks for preload class		
		C1	C2	C3
15	XP	R1651 118 20	R1651 128 20	R1651 138 20
	SP	R1651 111 20	R1651 121 20	R1651 131 20
	UP	R1651 119 20	R1651 129 20	R1651 139 20
20	XP	R1651 818 20	R1651 828 20	R1651 838 20
	SP	R1651 811 20	R1651 821 20	R1651 831 20
	UP	R1651 819 20	R1651 829 20	R1651 839 20
25	XP	R1651 218 20	R1651 228 20	R1651 238 20
	SP	R1651 211 20	R1651 221 20	R1651 231 20
	UP	R1651 219 20	R1651 229 20	R1651 239 20
30	XP	R1651 718 20	R1651 728 20	R1651 738 20
	SP	R1651 711 20	R1651 721 20	R1651 731 20
	UP	R1651 719 20	R1651 729 20	R1651 739 20
35	XP	R1651 318 20	R1651 328 20	R1651 338 20
	SP	R1651 311 20	R1651 321 20	R1651 331 20
	UP	R1651 319 20	R1651 329 20	R1651 339 20
45*	XP	R1651 418 20	R1651 428 20	R1651 438 20
	SP	R1651 411 20	R1651 421 20	R1651 431 20
	UP	R1651 419 20	R1651 429 20	R1651 439 20

* No delivery with low friction seal

** Low friction seal available in preloads C0 and C1 (only for precision classes N, H, XP)



- a) For O-ring
 Size 15: dia. 4 · 1.0 (mm)
 Size 20-45: dia. 5 · 1.0 (mm)
 Open lube bore as required.
 See Accessories:
 Mounting lubrication adapter.
- b) Recommended position for pin holes (dimensions E₄ see "Mounting Instructions", Section "Locating pins").
 Note
 Ready-drilled holes made for production purposes may already exist at this position. These may be extended and bored open to accommodate the locating pins.
- c) Lube nipple sizes 15 and 20:
 Size 15: dia. 4 · 1.0 (mm)
 funnel-type nipple
 Type A – M3 x 5, DIN 3405
 B₂ = 1.6 mm
 If another lube nipple is used:
 observe the screw-in depth of 5 mm!
 Size 25 to 45: M6 x 8,
 DIN 71412
 B₂ = 9.5 mm
 If another lube nipple is used:
 observe the screw-in depth of 8 mm!
 Connection possible at all sides.

Dimensions (mm)																				
Size	A	A ₁	A ₂	A ₃	B	B ₁	H	H ₁	H ₂ ¹⁾	H ₂ ²⁾	V ₁	E ₁	E ₂	E ₃	E ₈	E ₉	K ₁	K ₂	K ₃	K ₄
15	47	23.5	15	16.0	58.2	39.2	24	19.90	16.30	16.20	5.0	38	30	26	24.55	6.70	8.00	9.6	3.20	3.20
20	63	31.5	20	21.5	75.0	49.6	30	25.35	20.75	20.55	6.0	53	40	35	32.50	7.30	11.80	11.8	3.35	3.35
25	70	35.0	23	23.5	86.2	57.8	36	29.90	24.45	24.25	7.5	57	45	40	38.30	11.50	12.45	13.6	5.50	5.50
30	90	45.0	28	31.0	97.7	67.4	42	35.35	28.55	28.35	7.0	72	52	44	48.40	14.60	14.00	15.7	6.05	6.05
35	100	50.0	34	33.0	110.5	77.0	48	40.40	32.15	31.85	8.0	82	62	52	58.00	17.35	14.50	16.0	6.90	6.90
45	120	60.0	45	37.5	137.6	97.0	60	50.30	40.15	39.85	10.0	100	80	60	69.80	20.90	17.30	19.3	8.20	8.20

¹⁾ Dimension H₂ with rail seal cover strip

²⁾ Dimension H₂ without rail seal cover strip

Size	Dimensions (mm)								Mass (kg)	Load capacities (N) ³⁾		Moments (Nm)			
	N ₁	N ₂	N ₆ ^{±0.5}	S ₁	S ₂	S ₅	S ₉	C dyn.		C ₀ stat.	M _t dyn.	M _{t0} stat.	M _L dyn.	M _{L0} stat.	
15	5.2	4.4	10.3	4.3	M5	4.4	M2.5-3.5 deep	0.20	7 800	13 500	130	74	40	71	
20	7.7	5.2	13.2	5.3	M6	6.0	M3-5 deep	0.45	18 800	24 400	240	310	130	165	
25	9.3	7.0	15.2	6.7	M8	7.0	M3-5 deep	0.65	22 800	30 400	320	430	180	240	
30	11.0	7.9	17.0	8.5	M10	9.0	M3-5 deep	1.10	31 700	41 300	540	720	290	380	
35	12.0	10.2	20.5	8.5	M10	9.0	M3-5 deep	1.60	41 900	54 000	890	1160	440	565	
45	15.0	14.4	23.5	10.4	M12	14.0	M4-7 deep	3.00	68 100	85 700	1830	2310	890	1130	

³⁾ Load capacities for version without ball chain. Load capacities for version with ball chain, see Product Overview with Load Capacities. Determination of the dynamic of the load capacities and moments is based on 100,000 m of stroke travel. Often only 50,000 m are actually stipulated. Comparison: Value C, M_L and M_{L0} per table multiplied by 1.26.