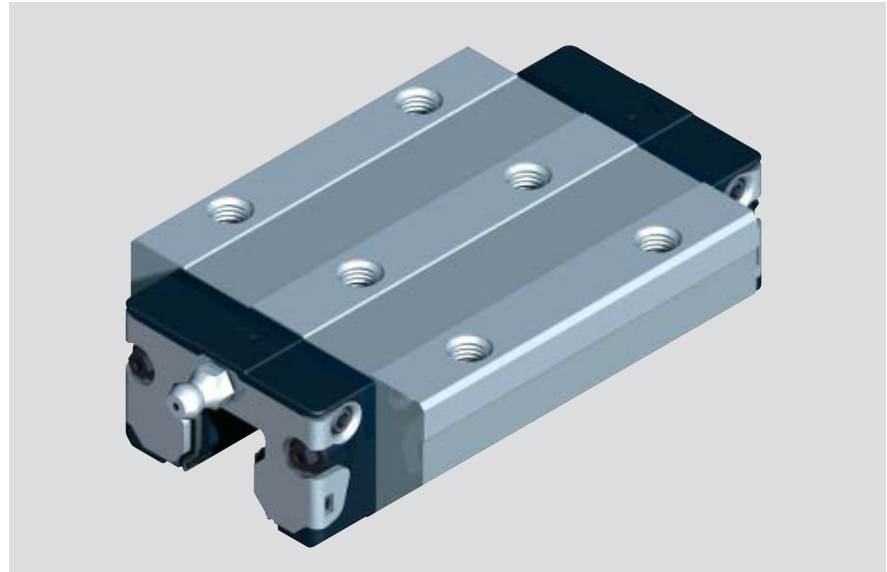


Standard Runner Blocks, Steel Version

Runner Block FLS R1653

Flange Long

- Runner block without ball chain:
See table for part numbers
- Runner block with low friction seal without ball chain**:
Part numbers R1653 xxx 21
- Runner block with ball chain:
Part numbers R1653 xxx 22
- Runner block with low friction seal and ball chain**:
Part numbers R1653 xxx 23



Dynamic Characteristics

Speed $v_{max} = 3 \text{ m/s}$
 Acceleration $a_{max} = 500 \text{ m/s}^2$

Precision Runner Block

- 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.

Size	Accuracy Class	Part numbers for runner blocks for preload class		
		C0	C1	C2
15	N	R1653 194 20	R1653 114 20	R1653 124 20
	H	R1653 193 20	R1653 113 20	R1653 123 20
	P		R1653 112 20	R1653 122 20
20	N	R1653 894 20	R1653 814 20	R1653 824 20
	H	R1653 893 20	R1653 813 20	R1653 823 20
	P		R1653 812 20	R1653 822 20
25	N	R1653 294 20	R1653 214 20	R1653 224 20
	H	R1653 293 20	R1653 213 20	R1653 223 20
	P		R1653 212 20	R1653 222 20
30	N	R1653 794 20	R1653 714 20	R1653 724 20
	H	R1653 793 20	R1653 713 20	R1653 723 20
	P		R1653 712 20	R1653 722 20
35	N	R1653 394 20	R1653 314 20	R1653 324 20
	H	R1653 393 20	R1653 313 20	R1653 323 20
	P		R1653 312 20	R1653 322 20
45*	N	R1653 494 20	R1653 414 20	R1653 424 20
	H	R1653 493 20	R1653 413 20	R1653 423 20
	P		R1653 412 20	R1653 422 20

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

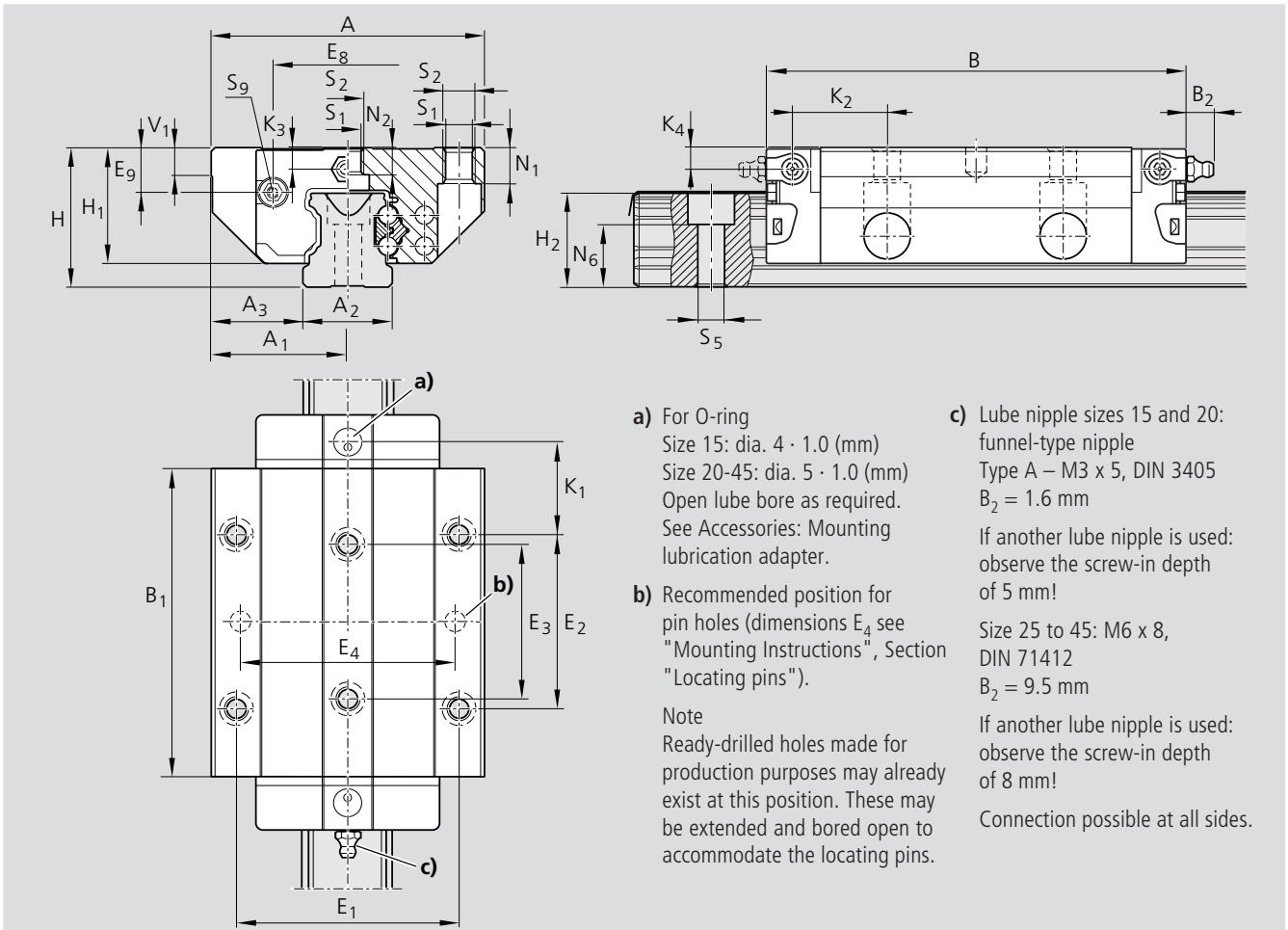
C3 = Preload 13% C

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

Size	Accuracy Class	Part numbers for runner blocks for preload class		
		C1	C2	C3
15	XP	R1653 118 20	R1653 128 20	R1653138 20
	SP	R1653 111 20	R1653 121 20	R1653131 20
	UP	R1653 119 20	R1653 129 20	R1653139 20
20	XP	R1653 818 20	R1653 828 20	R1653838 20
	SP	R1653 811 20	R1653 821 20	R1653831 20
	UP	R1653 819 20	R1653 829 20	R1653839 20
25	XP	R1653 218 20	R1653 228 20	R1653238 20
	SP	R1653 211 20	R1653 221 20	R1653231 20
	UP	R1653 219 20	R1653 229 20	R1653239 20
30	XP	R1653 718 20	R1653 728 20	R1653738 20
	SP	R1653 711 20	R1653 721 20	R1653731 20
	UP	R1653 719 20	R1653 729 20	R1653739 20
35	XP	R1653 318 20	R1653 328 20	R1653338 20
	SP	R1653 311 20	R1653 321 20	R1653331 20
	UP	R1653 319 20	R1653 329 20	R1653339 20
45*	XP	R1653 418 20	R1653 428 20	R1653438 20
	SP	R1653 411 20	R1653 421 20	R1653431 20
	UP	R1653 419 20	R1653 429 20	R1653439 20

* No delivery with low friction seal

** Delivery of low friction seal in preloads for C0 and C1 (only for precision classes N, H, XP)



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	72.6	53.6	24	19.90	16.30	16.20	5.0	38	30	26	24.55	6.70	15.20	16.80	3.20	3.20
20	63	31.5	20	21.5	91.0	65.6	30	25.35	20.75	20.55	6.0	53	40	35	32.50	7.30	19.80	19.80	3.35	3.35
25	70	35.0	23	23.5	107.9	79.5	36	29.90	24.45	24.25	7.5	57	45	40	38.30	11.50	23.30	24.45	5.50	5.50
30	90	45.0	28	31.0	119.7	89.4	42	35.35	28.55	28.35	7.0	72	52	44	48.40	14.60	25.00	26.70	6.05	6.05
35	100	50.0	34	33.0	139.0	105.5	48	40.40	32.15	31.85	8.0	82	62	52	58.00	17.35	28.75	30.25	6.90	6.90
45	120	60.0	45	37.5	174.1	133.5	60	50.30	40.15	39.85	10.0	100	80	60	69.80	20.90	35.50	37.50	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	M2.5-3.5tief	0.30	10 000	20 200	130	190	98	150
20	7.7	5.2	13.2	5.3	M6	6.0	M3-5tief	0.55	24 400	35 200	310	450	225	330
25	9.3	7.0	15.2	6.7	M8	7.0	M3-5tief	0.90	30 400	45 500	430	650	345	510
30	11.0	7.9	17.0	8.5	M10	9.0	M3-5tief	1.50	40 000	57 800	690	1 000	495	715
35	12.0	10.2	20.5	8.5	M10	9.0	M3-5tief	2.25	55 600	81 000	1 200	1 740	830	1 215
45	15.0	12.4	23.5	10.4	M12	14.0	M4-7tief	4.30	90 400	128 500	2 440	3 470	1700	2425

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_t and M_L per table multiplied by 1.26.