

Rexroth Ball Rail Systems Standard Runner Blocks, Steel Version

Runner Block 1653-

Standard Width, long

Versions:

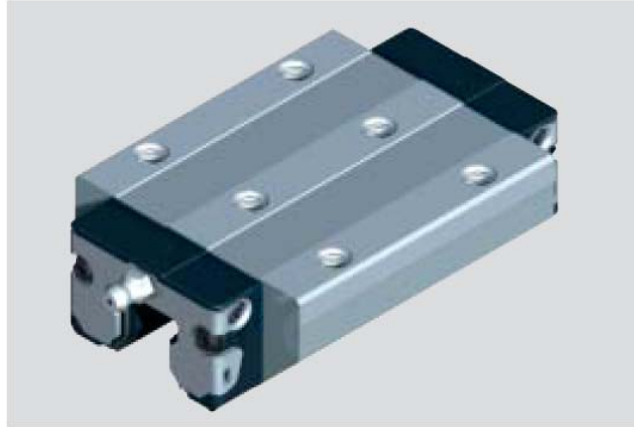
- Runner block without ball retainer:
for part numbers, see table
- Runner block with ball retainer:
part numbers 1653-...-22

Dynamic characteristics

Speed $v_{max} = 5 \text{ m/s}$

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

Other technical data, see chapter "General Technical Data and Calculations".



Part numbers

Size	Accuracy class	Part numbers for runner blocks for preload class			
		up to approx. 10 μm clearance	Preload 0.02 C	Preload 0.08 C	Preload 0.13 C
15	N	1653-194-20	1653-114-20		
	UP		1653-819-20	1653-829-20	1653-839-20
20	SP		1653-811-20	1653-821-20	1653-831-20
	P		1653-812-20	1653-822-20	1653-832-20
	H	1653-893-20	1653-813-20	1653-823-20	
	N	1653-894-20	1653-814-20	1653-824-20	
	UP		1653-219-20	1653-229-20	1653-239-20
25	SP		1653-211-20	1653-221-20	1653-231-20
	P		1653-212-20	1653-222-20	1653-232-20
	H	1653-293-20	1653-213-20	1653-223-20	
	N	1653-294-20	1653-214-20	1653-224-20	
30	UP		1653-719-20	1653-729-20	1653-739-20
	SP		1653-711-20	1653-721-20	1653-731-20
	P		1653-712-20	1653-722-20	1653-732-20
	H	1653-793-20	1653-713-20	1653-723-20	
	N	1653-794-20	1653-714-20	1653-724-20	
35	UP		1653-319-20	1653-329-20	1653-339-20
	SP		1653-311-20	1653-321-20	1653-331-20
	P		1653-312-20	1653-322-20	1653-332-20
	H	1653-393-20	1653-313-20	1653-323-20	
	N	1653-394-20	1653-314-20	1653-324-20	
45*	UP		1653-419-20	1653-429-20	1653-439-20
	SP		1653-411-20	1653-421-20	1653-431-20
	P		1653-412-20	1653-422-20	1653-432-20
	H	1653-493-20	1653-413-20	1653-423-20	
	N	1653-494-20	1653-414-20	1653-424-20	

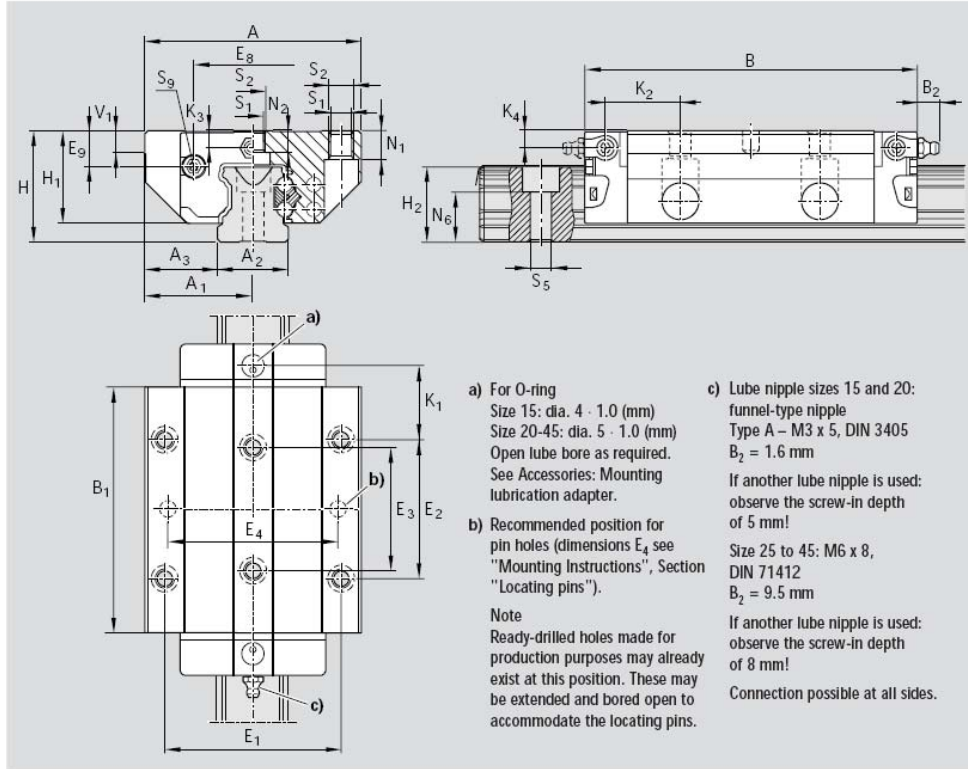
Note on dynamic load capacities and moments (see table)

Determination of dynamic load capacities and moments is based on a travel life of 100 000 m.

However, frequently this is determined on the basis of only 50 000 m.

In this case for comparison:
multiply values C , M_t and M_l by 1.26
in accordance with Rexroth table.

* Under preparation



Size	Dimensions (mm)																			
	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	45	37.5	174.1	133.5	60	50.30	40.15	39.85	10.0	100	80	60	69.8	20.9	35.5	37.5	8.20	8.20

¹⁾ Dimension H_2 with rail seal cover strip

²⁾ Dimension H_2 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		0.30	10 000	20 200	130	190	98
20	7.7	5.2	13.2	5.3	M6	6.0	M3-5 deep	0.55	24 400	35 200	310	450	225	330	
25	9.3	7.0	15.2	6.7	M8	7.0	M3-5 deep	0.90	30 400	45 500	430	650	345	510	
30	11.0	7.9	17.0	8.5	M10	9.0	M3-5 deep	1.50	40 000	57 800	690	1 000	495	715	
35	12.0	10.2	20.5	8.5	M10	9.0	M3-5 deep	2.25	55 600	81 000	1 200	1 740	830	1215	
45	15.0	12.4	23.5	10.4	M12	14.0	M4-7 deep	4.30	90 400	128 500	2 440	3 470	1700	2425	

³⁾ Load capacities for version without ball retainer. Load capacities for version without ball retainer, see Product Overview with Load Capacities.