

Product Design (Standard)

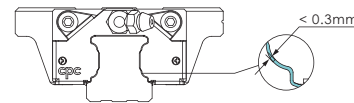
Dustproof design

Inner Seals

The newly designed inner seals both protect the rails from foreign particles and keep the lubrication inside the runner block while maintaining a low friction profile.

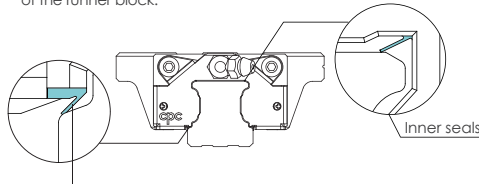
Stainless Steel Reinforcement Plate

The reinforcement plate also functions as a scraper for larger particulates like iron fillings, and has no more than 0.3mm clearance between the plate and the rail.



Bottom Seals

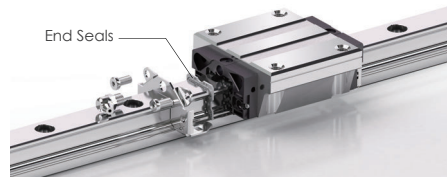
The bottom seals work in conjunction with the inner seals to keep foreign particles out and lubrication from leaking out. Our comprehensive sealing design significantly reduces re-lubrication needs and prolongs the service life of the runner block.



Bottom Seals

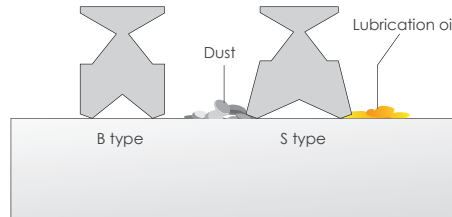
End Seals

The end seals work in conjunction with the bottom and inner seals to block foreign particles out and prevent lubrication leakage. Our engineering plastic has a strong friction resistance and is less prone to cracking than typical NBR plastics.



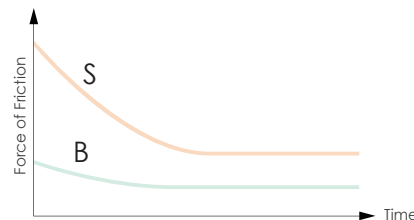
Standard Seals (S)

Our standard seals are in direct contact with the rail surface, giving them increased dustproof and lubrication retention capabilities. **cpc** recommends this class of seal for blocks that operate in environments high in foreign particles, such as sawdust, for long periods of time. S-type seals will have comparatively higher friction than B-Type seals.



Low Friction Seals (B)

Our low-friction seals have slight contact with the rail and are suitable for most environments, with both low friction and a scraper function.



Seal type friction comparison

Friction levels will be the highest on new linear rails. But, after short periods of operation, such friction will be reduced to a constant level.

Average Friction of Block

The following table shows the resistance value of the running block mounted with different seal types under the condition when the running block lubricated with ISO VG32 lubricant.

Unit : N

Block Type	ARC/HRC/ERC							
	Friction caused from ball bearing				Bottom Seals + Inner Seals	End Seals (2 sides)		External NBR seal with metal scraper
	Preload Class					S-Type Standard	B-Type Low friction	
VC	V0	V1	V2					
15MN/FN	0.30	0.65	0.85	1.10	1.5	2.0	0.5	4
20MN/FN	0.40	0.75	1.40	1.60	2.0	2.5	1.0	5
25MN/FN	0.60	0.95	1.60	1.95	2.5	3.0	1.5	8
30MN/FN	0.55	1.10	2.00	3.10	3.0	5.0	2.0	10
35MN/FN	0.65	1.25	2.50	3.25	3.0	8.0	3.0	12
45MN/FN	0.85	2.10	2.80	4.00	4.0	11.0	4.0	20
55MN/FN	1.6	4.1	5.5	7.95	2.0	13.0	-	-

Unit : N

Block Type	ARC/HRC/ERC							
	Friction caused from ball bearing				Bottom Seals + Inner Seals	End Seals (2 sides)		External NBR seal with metal scraper
	Preload Class					S-Type Standard	B-Type Low friction	
VC	V0	V1	V2					
15MS/FS	0.30	0.60	0.80	1.00	1.5	2.0	0.5	4
20MS/FS	0.40	0.70	1.10	1.40	2.0	2.5	1.0	5
25MS/FS	0.50	0.90	1.20	1.80	2.5	3.0	1.5	8
30MS/FS	0.50	1.00	1.80	2.30	3.0	5.0	2.0	10

Unit : N

Block Type	ARC/HRC/ERC							
	Friction caused from ball bearing				Bottom Seals + Inner Seals	End Seals (2 sides)		External NBR seal with metal scraper
	Preload Class					S-Type Standard	B-Type Low friction	
VC	V0	V1	V2					
15ML/FL	0.40	0.70	0.90	1.40	1.5	2.0	0.5	4
20ML/FL	0.50	0.80	1.60	1.80	2.0	2.5	1.0	5
25ML/FL	0.70	1.20	1.80	2.00	2.5	3.0	1.5	8
30ML/FL	0.80	1.40	2.20	2.80	3.0	5.0	2.0	10
35ML/FL	0.90	1.60	2.70	3.50	3.0	8.0	3.0	12
45ML/FL	1.00	2.30	3.50	4.55	4.0	11.0	4.0	20
55ML/FL	1.9	4.3	6.6	8.6	2.0	13.0	-	-

Note: The end seal is made of elastic plastic material, not NBR, with low friction resistance and constant dynamic and static friction.

Applied example

- ARC25MN SZ V1N
Block friction = 1.6+2.5+3 = 7.1N
- HRC30FL BZ V0P
Block friction = 1.4+3+2 = 6.4N

Friction caused from ball bearing
Bottom Seals + Inner Seals
+ End Seals (2 sides)
Block friction