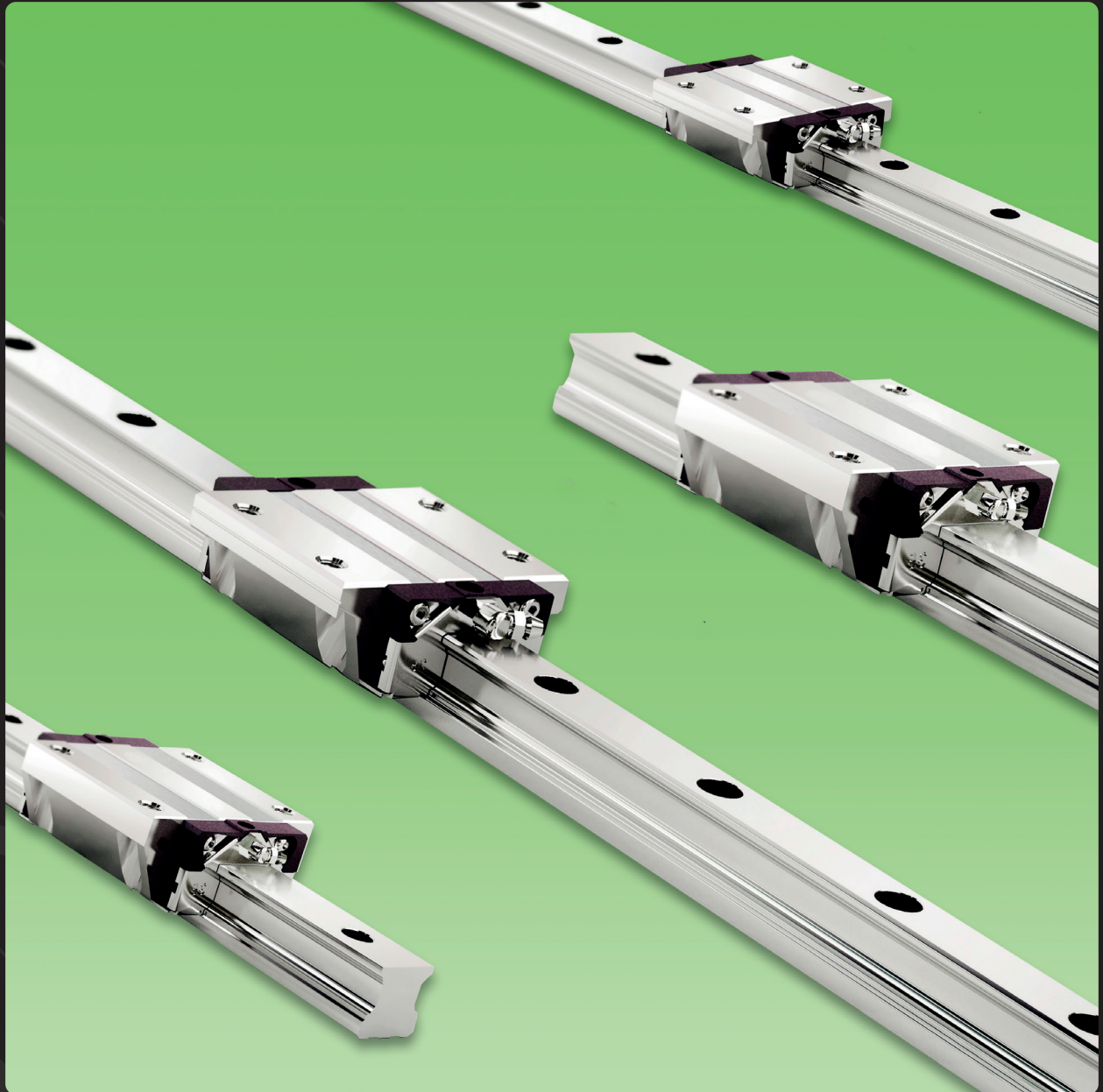


LINEAR RAIL HRC/ARC/ERC



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Product Overview

The ARC/HRC/ERC Linear Guide Series uses the O-type arrangement for the four row ball circulation design. The contact angle between the rail and ball is 45 degrees, and can manage the 4 directional load effects.

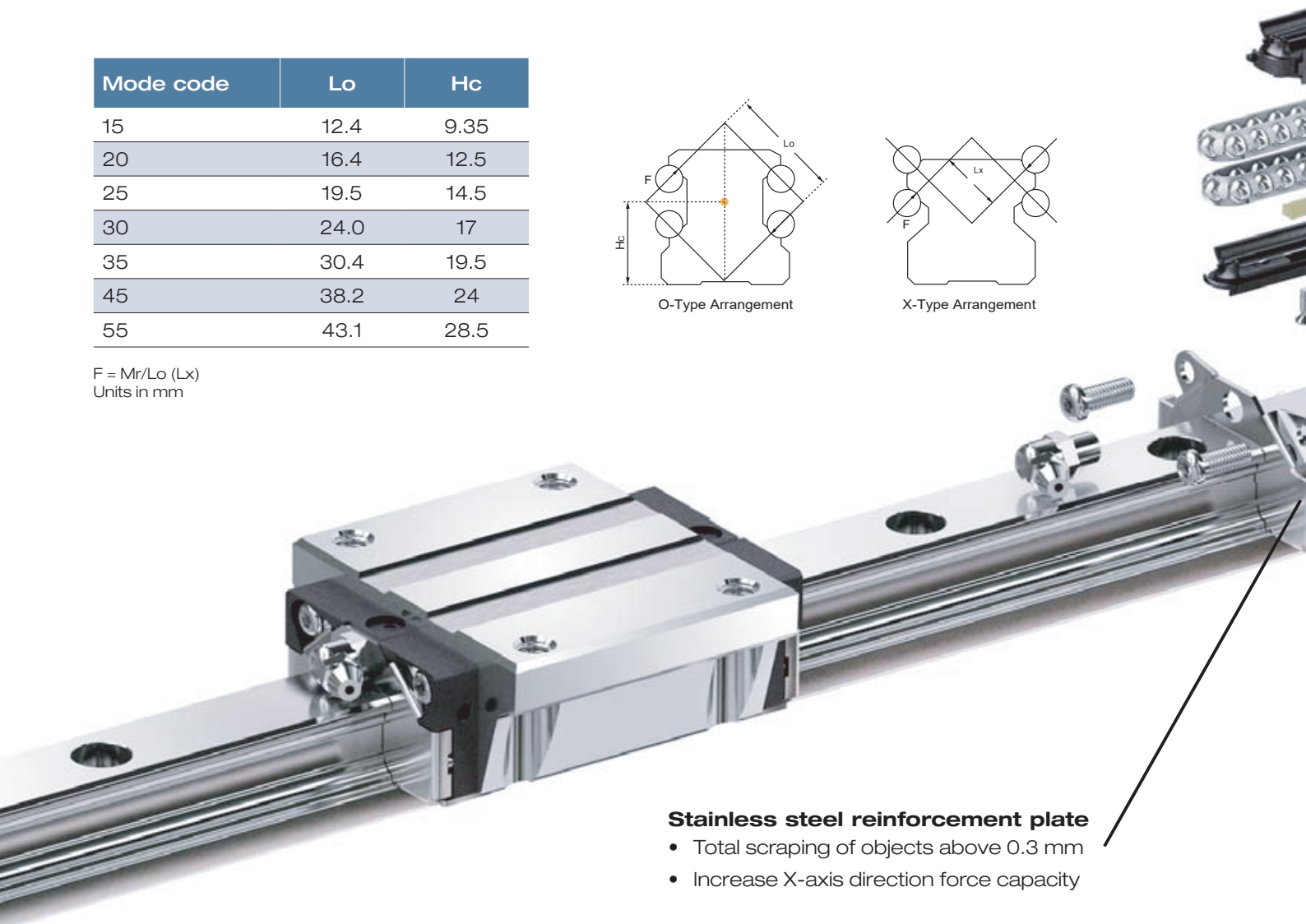
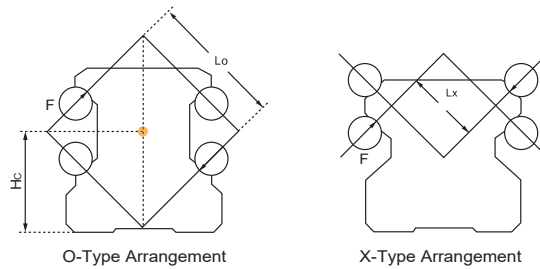
We place special emphasis on strengthening the Arm length(LO), so when sustaining external force F, it will have even higher Mr value to increase the rigidity and static moment capability. In addition, the runner block for the same size uses larger and more balls, and will outperform competitor's models by 10% to 30% depending on load capabilities. The linear system is characterised by its high load capacity, high moment and high stiffness.

Product characteristics

- Quiet with long service life
- High dynamic load and high load capabilities
- Dustproof design
- Excellent dynamic performance: Reaches Vmax 10 m/s, a max 450 m/s² without ball chain
- Optional counterbored holes from the top and tapped mounting holes from the bottom rail
- Optional surface treatments

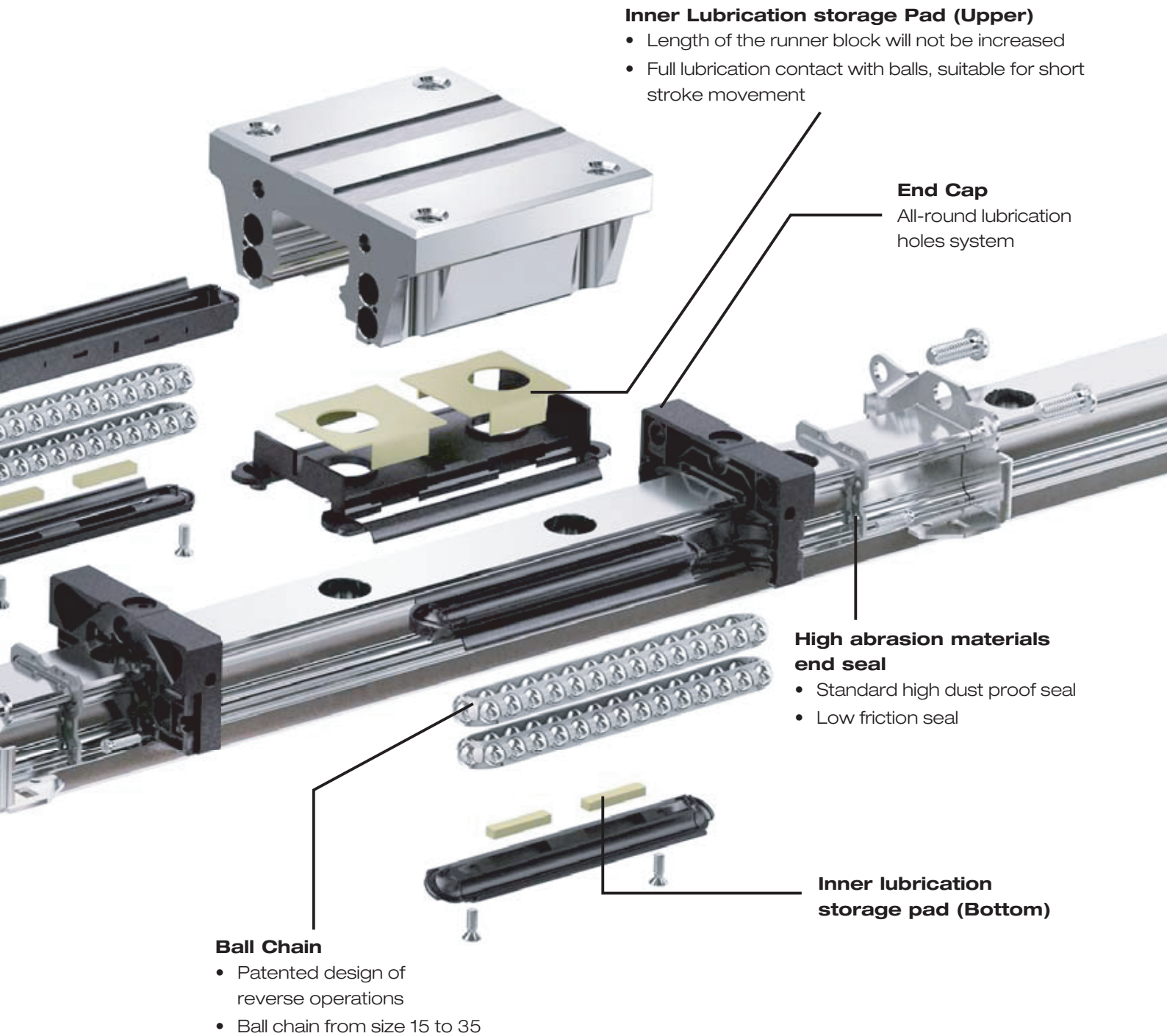
Mode code	Lo	Hc
15	12.4	9.35
20	16.4	12.5
25	19.5	14.5
30	24.0	17
35	30.4	19.5
45	38.2	24
55	43.1	28.5

F = Mr/Lo (Lx)
Units in mm



Stainless steel reinforcement plate

- Total scraping of objects above 0.3 mm
- Increase X-axis direction force capacity



Inner Lubrication storage Pad (Upper)

- Length of the runner block will not be increased
- Full lubrication contact with balls, suitable for short stroke movement

End Cap

All-round lubrication holes system

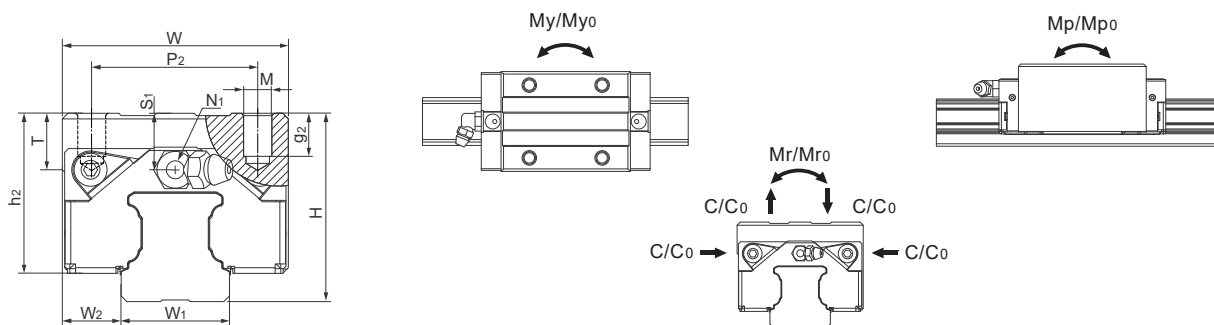
High abrasion materials end seal

- Standard high dust proof seal
- Low friction seal

Ball Chain

- Patented design of reverse operations
- Ball chain from size 15 to 35

Inner lubrication storage pad (Bottom)



Block dimensions (mm)								Load capacity (KN)		Static moment (Nm)			Weight	
N ₁	N ₂	N ₃	E	S ₁	S ₂	S ₃	S ₄	C	C0	Mr0	Mp0	My0	Block (g)	Rail (g/m)
M3x6.5	M3x6	P3	3.5	8.5	11.5	9.8	10.9	9.9	17.5	140	105	105	200	1290
M3x7.5	M3x5.5	P4	10	6	9.4	11	11.7	17.1	30.0	325	230	230	318	2280
M6x7.5	M3x6.5	P4	12	12	16.3	16.6	17.6	24.8	42.5	540	385	385	578	3020
M6x8.5	M6x5	P5	12	10.5	15	20.8	20.5	32.8	53.7	845	565	565	896	4380
M6x10	M6x7	P5	12	15	22	23.4	24.1	45.9	82.9	1700	1080	1080	1430	6790
PTI/8x12.5	M6x10.5	P5	14	21.1	28.1	27.3	27.3	71.3	122.1	3200	1910	1910	2794	10530
M6x10	M6x13	P5	12	23.5	33.5	34.8	33.8	128	186	4949	3278	3278	5110	14000

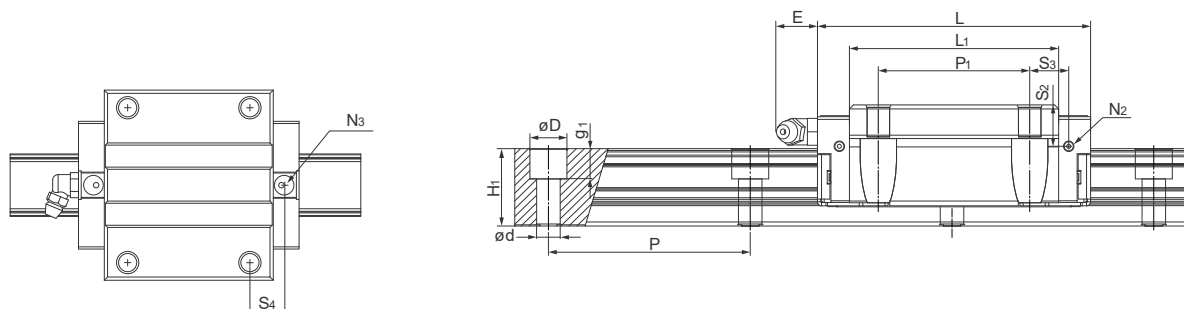
Block dimensions (mm)								Load capacity (KN)		Static moment (Nm)			Weight	
N ₁	N ₂	N ₃	E	S ₁	S ₂	S ₃	S ₄	C	C0	Mr0	Mp0	My0	Block (g)	Rail (g/m)
M3x7.5	M3x5.5	P4	10	6	9.4	13.1	13.8		38.5	415	390	390	400	2280
M6x7.5	M3x6.5	P4	12	12	16.3	21	22	30.7	57.7	735	710	710	685	3020
M6x8.5	M6x5	P5	12	10.5	15	21.7	21.8	39.6	70.2	1105	950	950	1150	4380
M6x10	M6x7	P5	12	15	22	25.1	25.8	54.7	106.5	2185	1755	1755	1953	6790
PTI/8x12.5	M6x10.5	P5	14	21.1	28.1	35	35	89.5	169.1	4430	3460	3460	4060	10530
M6x10	M6x13	P5	12	23.5	33.5	41.5	40.5	147	226	6472	5284	5284	6243	14000

Block dimensions (mm)								Load capacity (KN)		Static moment (Nm)			Weight	
N ₁	N ₂	N ₃	E	S ₁	S ₂	S ₃	S ₄	C	C0	Mr0	Mp0	My0	Block (g)	Rail (g/m)
M6x7.5	M3x6.5	P4	12	8	12.3	16.6	17.6	24.8	42.5	540	385	385	470	3020
M6x7.5	M3x6.5	P4	12	8	12.3	21	22	30.7	57.7	735	710	710	610	3020

Notes:

The above rating load capacities and static moment are calculated according to ISO14728 standard. The rating life for basic dynamic load rating is defined as the total 100 km travel distance that 90% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50km travel distance is applied, the above basic dynamic load rating C of ISO 14728 should be multiplied by 1.26 for conversion.

Dimensions HRC



HRC FN

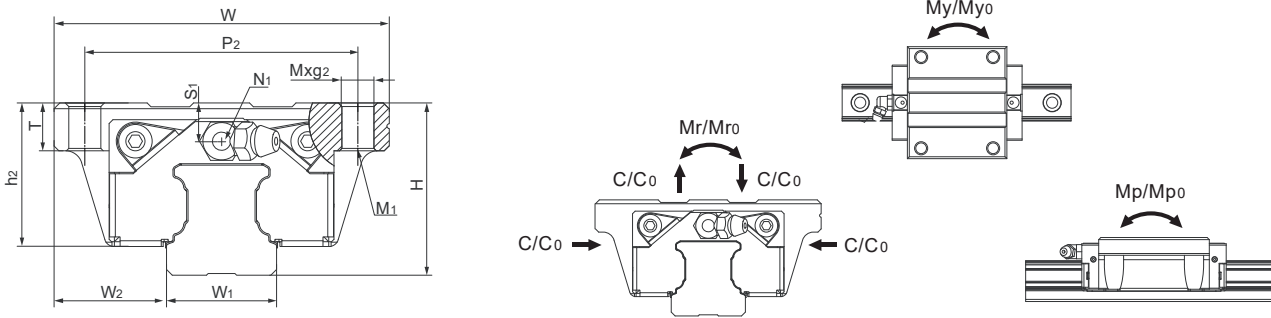
Article No.	Mounting dimensions		Rail dimensions (mm)				Block dimensions (mm)								
	H	W ₂	W ₁	H ₁	P	Dxdxg ₁	W	L	L ₁	h ₂	P ₁	P ₂	Mxg ₂	M ₁	T
HRC 15 FN	24	16	15	15	60	7.5x4.5x5.3	47	55.5	40.3	20,7	30	38	M5x7	M4	7
HRC 20 FN	30	21.5	20	20	60	9.5x6x8.5	63	69	52	25	40	53	M6x10	M5	10
HRC 25 FN	36	23.5	23	23	60	11x7x9	70	81.2	62.2	30	45	57	M8x12	M6	12
HRC 30 FN	42	37.5	28	27	80	14x9x12	90	95.5	71.5	35.2	52	72	M10x15	M8	16
HRC 35 FN	48	31	34	32	80	14x9x12	100	111.2	86.2	40.4	62	82	M10x15	M8	16
¹ HRC 45 FN	60	33	45	39	105	20x14x17	120	135.5	102.5	50.7	80	100	M12x18	M10	19
¹ HRC 55 FN	70	43.5	53	45.7	120	24x16x20	140	168.5	126.5	58	95	116	M14x18	M12	18

HRC FL

Article No.	Mounting dimensions		Rail dimensions (mm)				Block dimensions (mm)								
	H	W ₂	W ₁	H ₁	P	Dxdxg ₁	W	L	L ₁	h ₂	P ₁	P ₂	Mxg ₂	M ₁	T
HRC 20 FL	30	21.5	20	20	60	9.5x6x8.5	63	87.2	70.2	25	40	53	M6x10	M5	10
HRC 25 FL	36	23.5	23	23	60	11x7x9	70	105	86	30	45	57	M8x12	M6	16
HRC 30 FL	42	37.5	28	27	80	14x9x12	90	118	94	35.2	52	72	M10x15	M8	12
HRC 35 FL	48	31	34	32	80	14x9x12	100	136.6	111.6	40.4	62	82	M10x15	M8	16
¹ HRC 45 FL	60	33	45	39	105	20x14x17	120	171.5	138.5	50.7	80	100	M12x18	M10	19
¹ HRC 55 FL	70	43.5	53	45.7	120	24x16x20	140	202	160	58	95	116	M14x18	M12	18

Notes:

1. The model is without ball chain
2. N2 = injecting holes
3. N2, N3 will be seal before shipment, open it when using product
4. N3 = O-ring size for lubrication from above



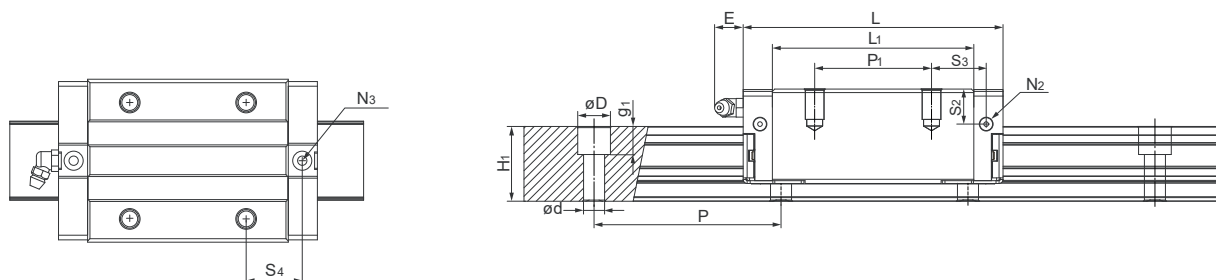
Block dimensions (mm)								Load capacity (KN)		Static moment (Nm)			Weight	
N ₁	N ₂	N ₃	E	S ₁	S ₂	S ₃	S ₄	C	C0	Mr0	Mp0	My0	Block (g)	Rail (g/m)
M3x6.5	M3x6	P3	3.5	8.5	11.5	9.8	10.9	9.9	17.5	140	105	105	200	1290
M3x7.5	M3x5.5	P4	10	6	9.4	11	11.7	17.1	30.0	325	230	230	318	2280
M6x7.5	M3x6.5	P4	12	12	16.3	16.6	17.6	24.8	42.5	540	385	385	578	3020
M6x8.5	M6x5	P5	12	10.5	15	20.8	20.5	32.8	53.7	845	565	565	896	4380
M6x10	M6x7	P5	12	15	22	23.4	24.1	45.9	82.9	1700	1080	1080	1430	6790
PTI/8x12.5	M6x10.5	P5	14	21.1	28.1	27.3	27.3	71.3	122.1	3200	1910	1910	2794	10530
M6x10	M6x13	P5	12	13.5	23.5	24.8	23.8	128	186	4949	3278	3278	5440	14000

Block dimensions (mm)								Load capacity (KN)		Static moment (Nm)			Weight	
N ₁	N ₂	N ₃	E	S ₁	S ₂	S ₃	S ₄	C	C0	Mr0	Mp0	My0	Block (g)	Rail (g/m)
M3x7.5	M3x5.5	P4	10	6	9.4	18.1	18.8	20.4	38.5	415	390	390	504	2280
M6x7.5	M3x6.5	P4	12	8	12.3	23.5	24.5	30.7	57.7	735	710	710	870	3020
M6x8.5	M6x5	P5	12	8	12	25.7	25.8	39.6	70.2	1105	950	950	1385	4380
M6x10	M6x7	P5	12	7.5	15	30.1	30.8	54.7	106.5	2185	1755	1755	2000	6790
PTI/8x12.5	M6x10.5	P5	14	11.1	18.1	35	35	89.5	169.1	4430	3460	3460	4280	10530
M6x10	M6x13	P5	12	13.5	23.5	41.5	40.5	147	226	6472	5284	5284	6963	14000

Notes:

The above rating load capacities and static moment are calculated according to ISO14728 standard. The rating life for basic dynamic load rating is defined as the total 100 km travel distance that 90% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50km travel distance is applied, the above basic dynamic load rating C of ISO 14728 should be multiplied by 1.26 for conversion.

Dimensions ARC



ARC MS

Article No.	Mounting dimensions		Rail dimensions (mm)				Block dimensions (mm)								
	H	W ₂	W ₁	H ₁	P	Dxdxg ₁	W	L	L ₁	h ₂	P ₁	P ₂	Mxg ₂	M ₁	T
ARC 15 MS	24	9.5	15	15	60	7.5x4,5x5.3	34	41.2	26	20.7	-	26	M4x7	-	6
ARC 20 MS	28	11	20	20	60	9.5x6x8.5	42	49.2	32.2	23	-	32	M5x7	-	8
ARC 25 MS	33	12.5	23	23	60	11x7x9	48	57.4	38.4	27	-	35	M6x9	-	8
ARC 30 MS	42	16	28	27	80	14x9x12	60	68	44	35.2	-	40	M8x10	-	12

ARC MN

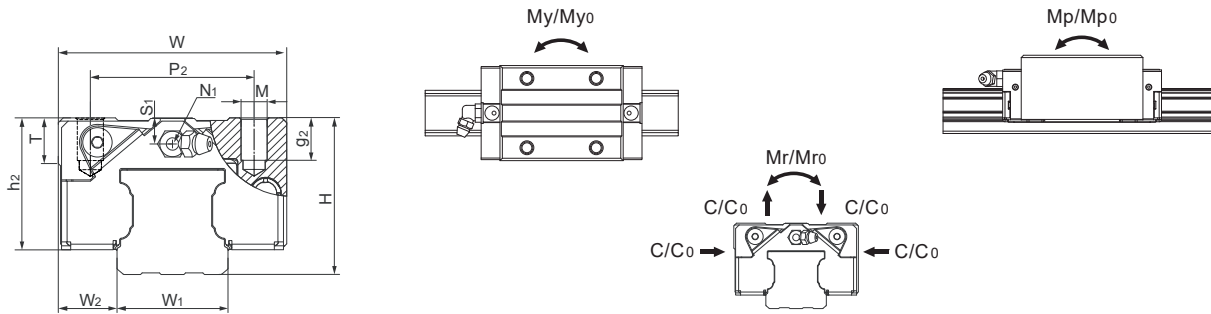
Article No.	Mounting dimensions		Rail dimensions (mm)				Block dimensions (mm)								
	H	W ₂	W ₁	H ₁	P	Dxdxg ₁	W	L	L ₁	h ₂	P ₁	P ₂	Mxg ₂	M ₁	T
ARC 15 MN	24	9,5	15	15	60	7.5x4.5x5.3	34	55.5	40.3	20.7	26	26	M4x7	-	6
ARC 20 MN	28	11	20	20	60	7.5x6x8.3	42	69	52	23	32	32	M5x7	-	8
ARC 25 MN	33	12.5	23	23	60	11x7x9	48	81.2	62.2	27	35	35	M6x9	-	8
ARC 30 MN	42	16	28	27	80	14x9x12	60	95.5	71.5	35.2	40	40	M8x10	-	12
ARC 35 MN	48	18	34	32	80	14x9x12	70	111.2	86.2	40.4	50	50	M8x13	-	14
¹ ARC 45 MN	60	20,5	45	39	105	20x14x17	86	135.5	102.5	50.7	60	60	M10x17	-	14
¹ ARC 55 MN	70	23.5	53	45.7	120	24x16x20	100	168.5	126.5	58	75	75	M12x20	-	16

ARC ML

Article No.	Mounting dimensions		Rail dimensions (mm)				Block dimensions (mm)								
	H	W ₂	W ₁	H ₁	P	Dxdxg ₁	W	L	L ₁	h ₂	P ₁	P ₂	Mxg ₂	M ₁	T
ARC 20 ML	28	11	20	20	60	9.5x6x8.5	42	87.2	70.2	23	45	32	M5x7	-	8
ARC 30 ML	42	16	28	27	80	14x9x12	60	118	94	35.2	60	40	M8x10	-	12
ARC 35 ML	48	18	34	32	80	14x9x12	70	136.6	111.6	40.4	72	50	M8x13	-	14
¹ ARC 45 ML	60	20.5	45	39	105	20x14x17	86	171.5	138.5	50.7	80	60	M10x17	-	14
¹ ARC 55 ML	70	23.5	53	45.7	120	24x16x20	100	202	160	58	95	75	M12x20	-	16

Notes:

1. The model is without ball chain
2. N2 = injecting holes
3. N2, N3 will be seal before shipment, open it when using product
4. N3 = O-ring size for lubrication from above



Block dimensions (mm)								Load capacity (KN)		Static moment (Nm)			Weight	
N ₁	N ₂	N ₃	E	S ₁	S ₂	S ₃	S ₄	C	C0	Mr0	Mp0	My0	Block (g)	Rail (g/m)
M3x6.5	M3x6	P3	3.5	4.5	7.5	15.6	16.7	7.7	12.1	100	50	50	106	1290
M3x7.5	M3x5.5	P4	10	4	7.4	19.1	19.8	12.5	19.3	205	100	100	170	2280
M6x7.5	M3x6.5	P4	12	5	9.3	22.2	23.2	18.2	27.3	350	160	160	300	3020
M6x8.5	M6x5	P5	12	7.5	12	27	26.7	23.3	33.1	520	230	230	560	4380

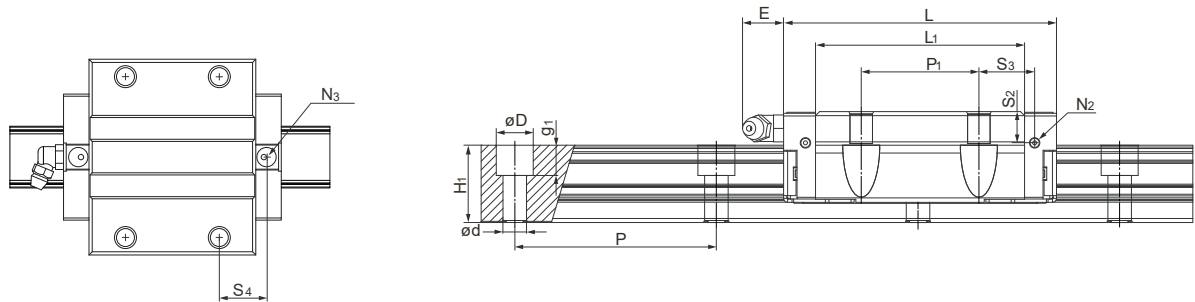
Block dimensions (mm)								Load capacity (KN)		Static moment (Nm)			Weight	
N ₁	N ₂	N ₃	E	S ₁	S ₂	S ₃	S ₄	C	C0	Mr0	Mp0	My0	Block (g)	Rail (g/m)
M3x6.5	M3x6	P3	3.5	4.5	7.5	9.8	10.9	9.9	17.5	140	105	105	158	1290
M3x7.5	M3x5.5	P4	10	4	7.4	13	13.7	17.1	30.0	325	230	230	266	2280
M6x7.5	M3x6.5	P4	12	5	9.3	16.6	17.6	24.8	42.5	540	385	385	420	3020
M6x8.5	M6x5	P5	12	7.5	12	20.8	20.5	32.8	53.7	845	565	565	800	4380
M6x10	M6x7	P5	12	8	15	23.4	24.1	45.9	82.9	1700	1080	1080	1120	6790
PTI/8x12.5	M6x10.5	P5	14	11.1	18.1	27.3	27.2	71.3	122.1	3200	1910	1910	2120	10530
M6x10	M6x13	P5	12	13.5	23.5	34.8	33.8	128	186	4949	3278	3278	4200	14000

Block dimensions (mm)								Load capacity (KN)		Static moment (Nm)			Weight	
N ₁	N ₂	N ₃	E	S ₁	S ₂	S ₃	S ₄	C	C0	Mr0	Mp0	My0	Block (g)	Rail (g/m)
M3x7.5	M3x5.5	P4	10	4	7.4	15.6	16.3	20.4	38.5	415	390	390	330	2280
M6x8.5	M6x5	P5	12	8.7	12	21.7	21.7	39.6	70.2	1105	950	950	1138	4380
M6x10	M6x7	P5	12	8	15	25.1	25.8	54.7	106.5	2185	1755	1755	1536	6790
PTI/8x12.5	M6x10.5	P5	14	11.1	18.1	35	35	89.5	169.1	4430	3460	3460	3160	10530
M6x10	M6x13	P5	12	13.5	23.5	41.5	40.5	147	226	6472	5284	5284	5083	14000

Notes:

The above rating load capacities and static moment are calculated according to ISO14728 standard. The rating life for basic dynamic load rating is defined as the total 100 km travel distance that 90% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50km travel distance is applied, the above basic dynamic load rating C of ISO 14728 should be multiplied by 1.26 for conversion.

Dimensions ARC



ARC FS

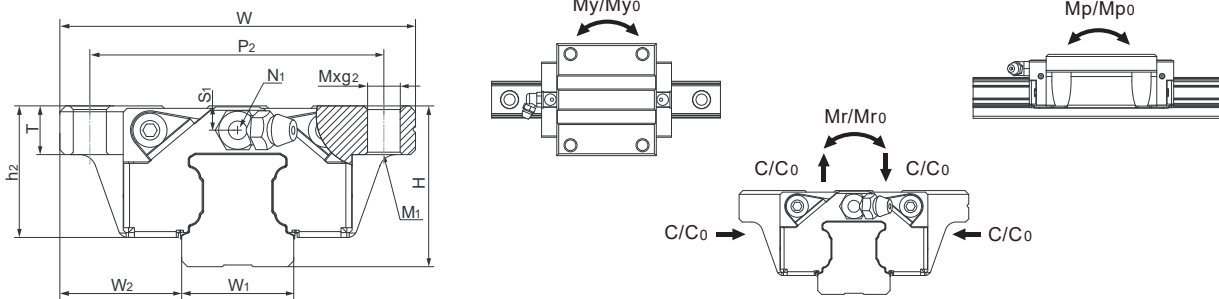
Article No.	Mounting dimensions		Rail dimensions (mm)				Block dimensions (mm)								
	H	W ₂	W ₁	H ₁	P	Dxdxg ₁	W	L	L ₁	h ₂	P ₁	P ₂	Mxg ₂	M ₁	T
ARC 15 FS	24	18.5	15	15	60	7.5x4.5x5.3	52	41.2	26	20,7	-	41	M5x7	M4	7
ARC 20 FS	28	19.5	20	20	60	9.5x6x8.5	59	49.2	32.2	23	-	49	M6x10	M5	10
ARC 25 FS	33	25	23	23	60	11x7x9	73	57.4	34.8	27	-	60	M8x12	M6	12
ARC 30 FS	42	31	28	27	80	14x9x12	90	68	44	35,2	-	72	M10x15	M8	15

ARC FN

Article No.	Mounting dimensions		Rail dimensions (mm)				Block dimensions (mm)								
	H	W ₂	W ₁	H ₁	P	Dxdxg ₁	W	L	L ₁	h ₂	P ₁	P ₂	Mxg ₂	M ₁	T
ARC 15 FN	24	18.5	15	15	60	7.5x4.5x5.3	52	55.5	40.3	20.7	26	41	M5x7	M4	7
ARC 20 FN	28	19.5	20	20	60	9.5x6x8.5	59	69	52	23	32	49	M6x10	M5	10
ARC 25 FN	33	25	23	23	60	11x7x9	73	81.2	62.5	27	35	60	M8x12	M6	12
ARC 30 FN	42	31	28	27	80	14x9x12	90	95.5	71.5	35.2	40	72	M10x15	M8	15
ARC 35 FN	48	33	34	32	80	14x9x12	100	111.2	86.2	40.4	50	82	M10x15	M8	15

Notes:

1. The model is without ball chain
2. N2 = injecting holes
3. N2, N3 will be seal before shipment, open it when using product
4. N3 = O-ring size for lubrication from above



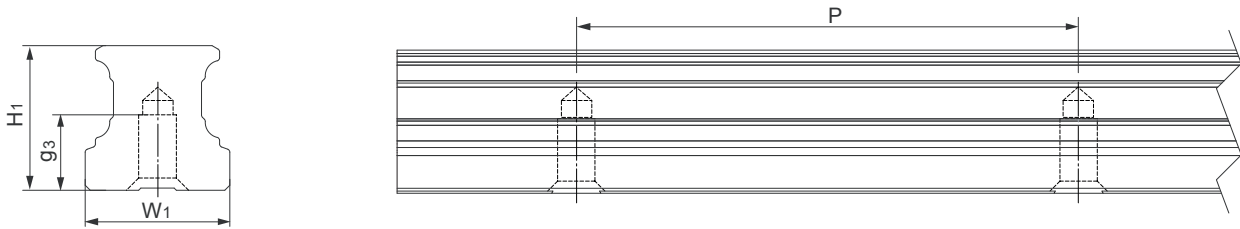
Block dimensions (mm)								Load capacity (KN)		Static moment (Nm)			Weight	
N ₁	N ₂	N ₃	E	S ₁	S ₂	S ₃	S ₄	C	C0	Mr0	Mp0	My0	Block (g)	Rail (g/m)
M3x6,5	M3x6	P3	3.5	4,5	7.5	15.6	16.7	7.7	12.1	100	50	50	132	1290
M3x7,5	M3x5,5	P4	10	4	7.4	19.1	19.8	12.5	19.3	205	100	100	210	2280
M6x7,5	M3x6,5	P4	12	5	9.3	22.2	23.2	18.2	27.3	350	160	160	345	3020
M6x8,5	M6x5	P5	12	7,5	12	27	26.8	23.3	33.1	520	230	230	750	4380

Block dimensions (mm)								Load capacity (KN)		Static moment (Nm)			Weight	
N ₁	N ₂	N ₃	E	S ₁	S ₂	S ₃	S ₄	C	C0	Mr0	Mp0	My0	Block (g)	Rail (g/m)
M3x6,5	M3x6	P3	3.5	4.5	7.5	8.9	10.9	9.9	17.5	140	105	105	200	1290
M3x7,5	M3x5,5	P4	10	4	7.4	13	13.7	17.1	30.0	325	230	230	336	2280
M6x7,5	M3x6,5	P4	12	5	9.3	16.6	17.6	24.8	42.5	540	385	385	524	3020
M6x8,5	M6x5	P5	12	7.5	12	20.8	20.5	32.8	53.7	845	565	565	1200	4380
M6x10	M6x7	P5	12	8	15	23.4	24.1	45.9	82.9	1700	1080	1080	1580	6790

Notes:

The above rating load capacities and static moment are calculated according to ISO14728 standard. The rating life for basic dynamic load rating is defined as the total 100 km travel distance that 90% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50km travel distance is applied, the above basic dynamic load rating C of ISO 14728 should be multiplied by 1.26 for conversion.

Dimensions Rail



Rail (tapped from the bottom)

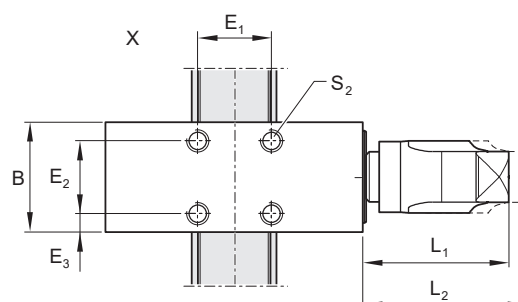
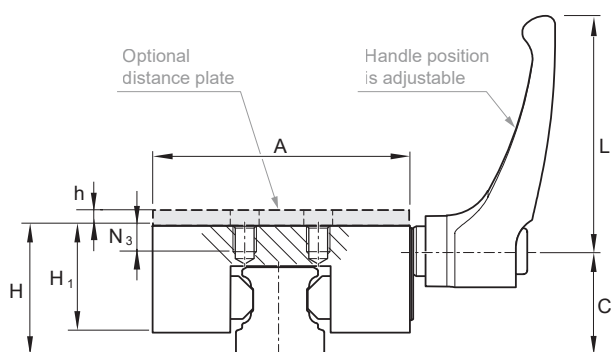
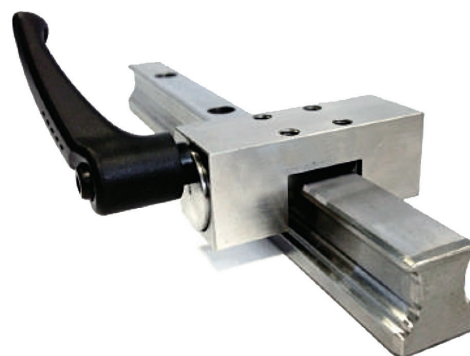
Article No.	W_1	H_1	P	$M \times \varnothing_3$	L_{max}	Rail (g/m)
HRU 15	15	15	60	M5x8	4000	1290
HRU 20	20	20	60	M6x10	4000	2280
HRU 25	23	23	60	M6x12	4000	3020
HRU 30	28	27	80	M8x15	4000	4380
HRU 35	34	32	80	M8x15	4000	6790
HRU 45	45	39	105	M12x19	4000	10530
HRU 55	53	45.7	120	M14x24	4000	14000

Hand Clamps

Clamping elements are designed to be used when holding a position on the rail. Due to the height difference of the rail guide blocks, a distance plate is sometimes needed to ensure proper function of the hand clamp. Please see the selection guide for further information.

- Temperature scope of application 0 - 70°C.
- The basic application should be rigid enough.

Size	Holding force ¹⁾ (N)	Tightening torque (Nm)	Weight (Kg)
15	1200	4	0.10
20	1200	5	0.20
25	1200	7	0.28
30	2000	12	0.64
35	2000	12	0.87
45	2000	15	0.98



Size	Dimensions (mm)													
	A	B	C	E ₁	E ₂	E ₃	H ³⁾	H ₁	h	L	L ₁	L ₂ ²⁾	N ₃	S ₂
15	37	24	19.5	17.0	17.0	3.5	24	19	4	44	30.0	33.0	5	M4
20	60	24	24.5	15.0	15.0	4.5	28	23	2	44	30.0	33.0	6	M5
25	68	28	28.0	20.0	20.0	4.0	33	26	3 / 7	64	38.0	41.0	8	M6
30	70	39	34.0	22.0	22.0	8.5	42	33	3	64	38.0	41.5	8	M6
35	96	39	38.0	24.0	24.0	7.5	48	39	7	78	46.5	50.5	10	M8
45	92	44	47.0	26.0	26.0	9.0	60	44	10	78	46.5	50.5	14	M10

1) This value is achievable by light oily rail

2) Hand level is not snap in place

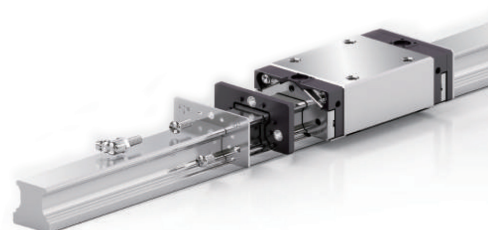
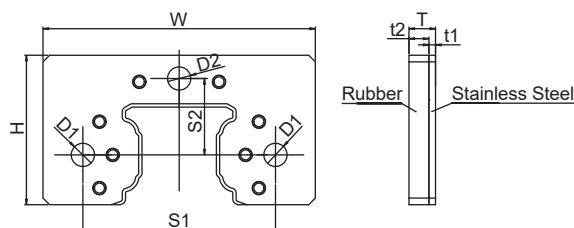
3) Height compensation with distance plate (h) according level of runner block.

Selection of Hand Clamps

Rail type	Hand clamp	Distance plate
HRC 15 MN	MC1501	MP1501 HRC
HRC 15 FN	MC1501	-
HRC 20 MN	MC2001	MP2001 HRC
HRC 20 ML	MC2001	MP2001 HRC
HRC 20 FN	MC2001	MP2001 HRC
HRC 20 FL	MC2001	MP2001 HRC
HRC 25 MN	MC2501	MP2501 HRC
HRC 25 ML	MC2501	MP2501 HRC
ERC 25 MN	MC2501	MP2501 ERC
ERC 25 ML	MC2501	MP2501 ERC
HRC 25 FN	MC2501	MP2501 ERC
HRC 25 FL	MC2501	MP2501 ERC
HRC 30 MN	MC3001	MP3001 HRC
HRC 30 ML	MC3001	MP3001 HRC
HRC 30 FN	MC3001	-
HRC 30 FL	MC3001	-
HRC 35 MN	MC3501	MP3501 HRC
HRC 35 ML	MC3501	MP3501 HRC
HRC 35 FN	MC3501	-
HRC 35 FL	MC3501	-
HRC 45 MN	MC4501	MP4501 HRC
HRC 45 ML	MC4501	MP4501 HRC
HRC 45 FN	MC4501	-
HRC 45 FL	MC4501	-

External NBR Seal with Metal Scraper

Available for applications under harsh environments. Dustproof solution for milling machining, machinery processing, wood-working or other outdoor applications. It demonstrates high dust-proof ability to prevent contamination from fine dust, iron scrap or dirt.

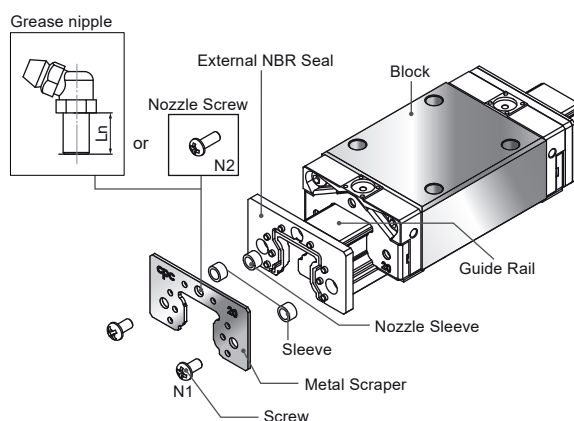


Model Code	Exterior Dimension					Bore Specification				Screw Specification		
	T	t1	t2	W	H	S1	S2	D1	D2	N1	N2	Ln
15	4	1	3	33	20.3	25	10.2	3.5	3.5	M3x0.35	M3x0.5	9
20	4	1	3	41	22.5	29	11.5	3.5	3.5	M3x0.35	M3x0.5	9
25	5.2	1.2	4	47	26.5	36.5	13.5	4.5	6.5	M4x0.5	M6x0.75	12
30	6	1.5	4.5	58	34.2	42.5	17.5	4.5	6.5	M4x0.5	M6x0.75	12
35	6	1.5	4.5	68	39.3	50	20.5	4.5	6.5	M4x0.5	M6x0.75	12
45	6	1.5	4.5	84	49.6	65	24.9	4.5	10	M4x0.5	PT1/8	15
55	6	1.5	4.5	98	57	73	28	5.5	6.5	M5x0.5	M6x0.75	16

Units in mm.

Installation

1. Set block on the rail before installing external NBR seal.
2. Make sure rubber part is fitted in the sleeve. If rubber parts fall off, please set the sleeve to the correspondent bore.
3. Overlap rubber part and metal scrapper with the corresponding salient point and the bore. cpc logo must be facing outward.
4. Slide the external NBR seal into rail from two sides and closely connect with the block.
5. Fasten screw into the correspondence bore. Make sure the seal is centre aligned with the rail while fastening. Do not make metal scraper contact with guide rail.



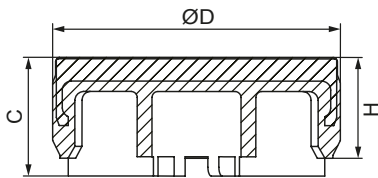
Metal-Plastic-Cap

The top of the cap is made of stainless steel and prevents dirt or scrap from piling up in the bolt hole, which may affect the end seal function.

The lower part of the cap is made of plastic and can be installed directly on the standard rail. There is no need to conduct other fine slot milling for bolt-hole.

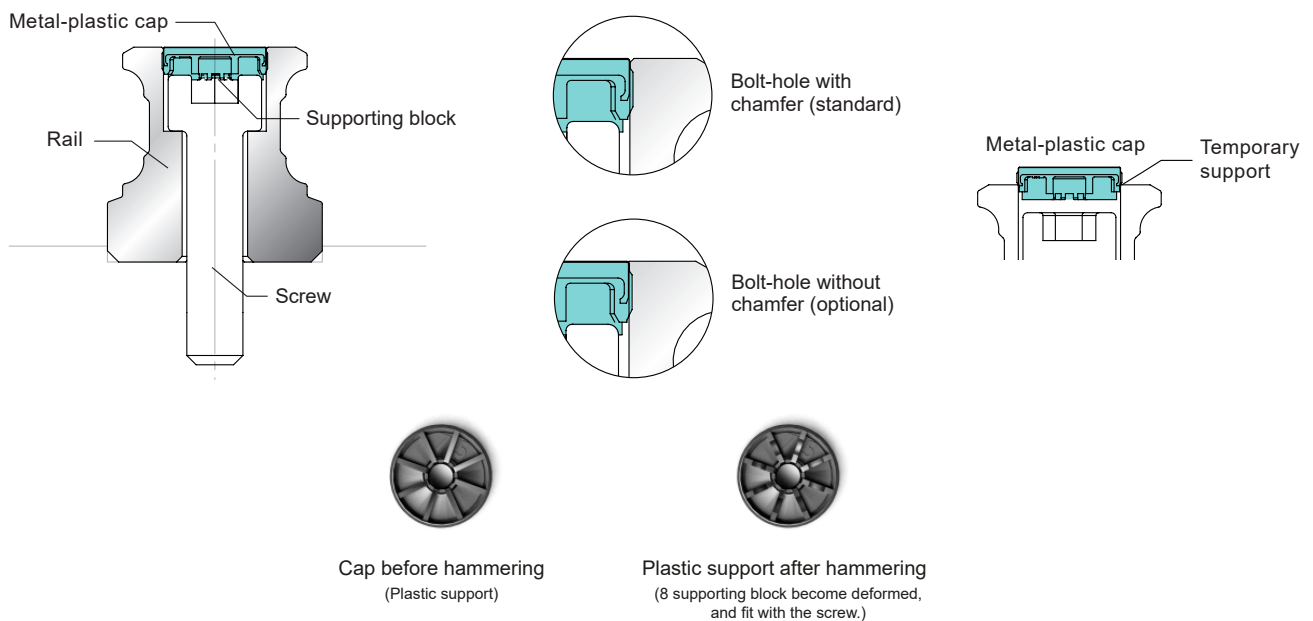
The bolt-hole chamfer for standard rail is C0.2 mm. A non-bolt-hole chamfer rail is available on request for absolutely dust-proof applications. Please contact us for more information.

The cap is designed with supporting block to prop up the cap, fix the screw stably and prevent it from sinking.



Model Code	Screw	External Diameter D	Cup Height H	Block Height C	Rail
A4	M4	7.7	3.6	1.7	AR15 , WRC21/15
A5	M5	9.7	3.4	4.0	AR20
A6	M6	11.3	2.9	3.5	AR25
A8	M8	14.3	3.9	4.5	AR30 , AR35
A12	M12	20.4	5.0	5.6	AR45
A14	M14	24.4	6.0	6.5	AR55

Units in mm.



Linear Rail Ball Chain

ARC - U - 15 - 2 - M - N - B - Z - C - V1 - P - SN - 1480 - 20 - 20

Product type

ARC: Compact series
 HRC, ERC: Standard series
 (If only rail use HRC.)

Bottom mounting rail

U: Yes (If No, leave empty)

Size

15, 20, 25, 30, 35, 45, 55

Carriage quantity

Block width

M: Standard
 F: Flanged

Block length

L: Long
 N: Standard
 S: Short

Seal type*

B: Standard low friction
 S: Option tight seal

Lubrication storage pad

Z: Yes (If No, leave empty)

Ball Chain

C: Yes (If No, leave empty)

Preload class

VC, V0 standard, V1, V2

Accuracy grade

UP, SP, P, H, N standard

Customization code

J: Joint rail standard
 JK: Joint rail keyway + wedge
 SN: External NBR seal with metal scraper
 MPC: Metal-plastic caps for rail mounting holes
 BR**: Black chrome coating treatment on the rail
 BB**: Black chrome coating treatment on the block

Rail length (mm)

Starting hole pitch (mm)

End hole pitch (mm)

*For HRC 55 FN is only sealing type S available.

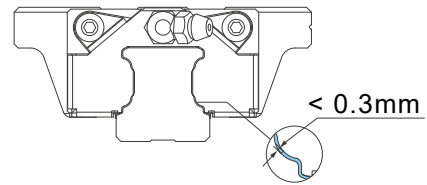
**Available on request.

Note: For customizations, please contact Rollco

Product Design

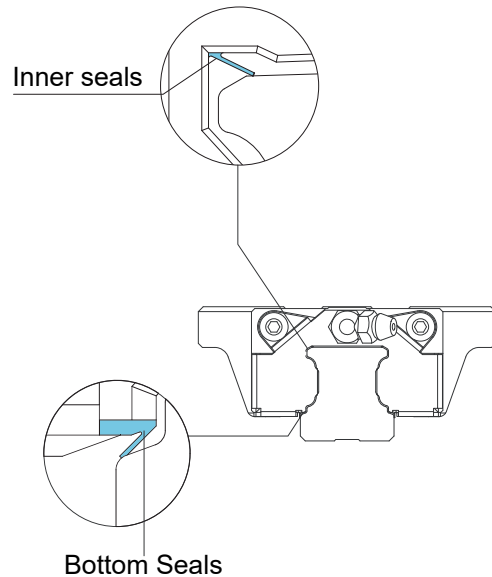
Stainless steel reinforcement plate

With clearance between rail profile of no more than 0.3 mm, the plate can scrape large items such as iron filings to protect the end seals.



Inner seals

The newly designed inner seals, can protect foreign objects from sliding into the rails while maintaining low friction. It can also allow the lubrication oil to be maintained inside the runner block and prolong the re-lubrication interval.

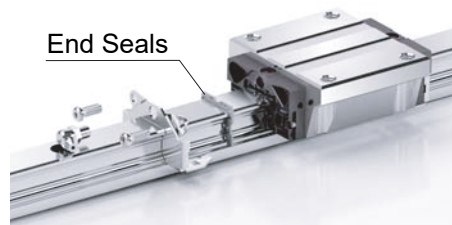


Bottom seals

The bottom seals can prevent foreign objects from entering the bottom and prevent lubrication from leaking out. With full sealing design, it reduces the amount of oil usage, prolong the re-lubrication interval, and prolong the service life.

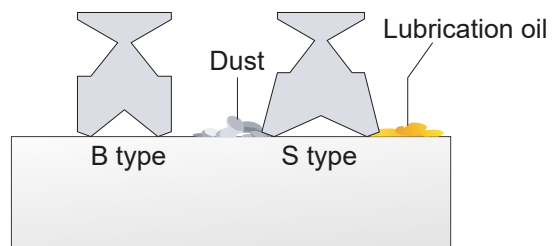
End seals

The double lips type end seals can prevent foreign objects from entering from the side and preventing lubrication oil and grease from leaking. The flexibility of the engineering plastic material has better friction resistance ability and better prevents cracking characteristics than typical NBR plastic.



Tight seals (S) option

Directly in contact with the rail surface, having better dustproof and lubrication holding capabilities. We recommends using this type of seals in environments that is exposed for long durations to high dusts and saw wood dust, etc. The friction will be higher than standard seals.

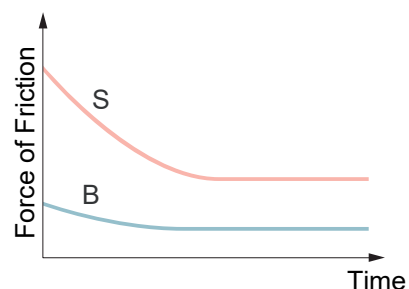


Low friction seals (B) standard

Suitable for most conditions, with slight contact with the rail, and having both scraping function with low friction.

Comparison of friction of seals

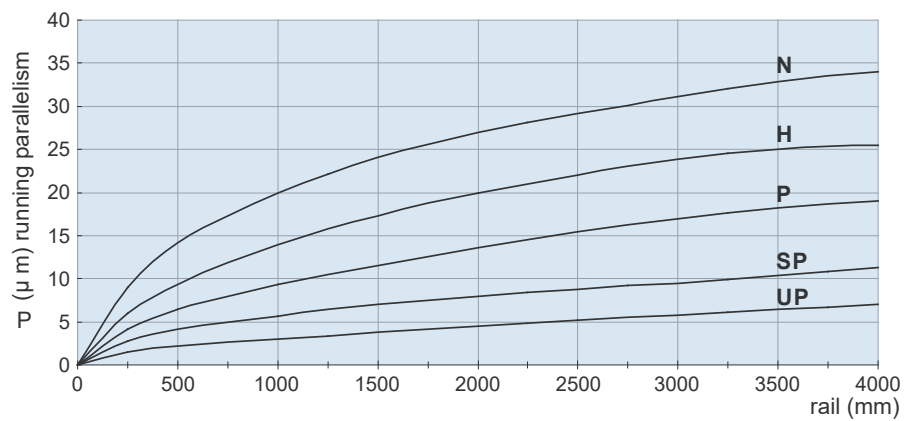
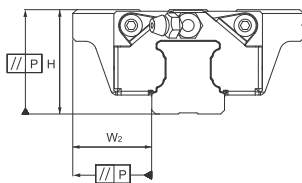
The friction will be highest on new linear rails. After short period of operation, friction will be reduced to a constant level.



Accuracy

The ARC/HRC/ERC linear guides provide 5 different grades of precision : N, H, P, SP, and UP. Engineers can choose different grades depend on the machine applications.

Accuracy grades (μm)		UP	SP	P	H	N standard
Tolerance of dimension height H	H	± 5	± 10	± 20	± 40	± 100
Variation of height for different runner block on the same position of rail	ΔH	3	5	7	15	30
Tolerance of dimension width W_2	W_2	± 5	± 7	± 10	± 20	± 40
Variation of width for different runner block on the same position of rail	ΔW_2	3	5	7	15	30



Speed

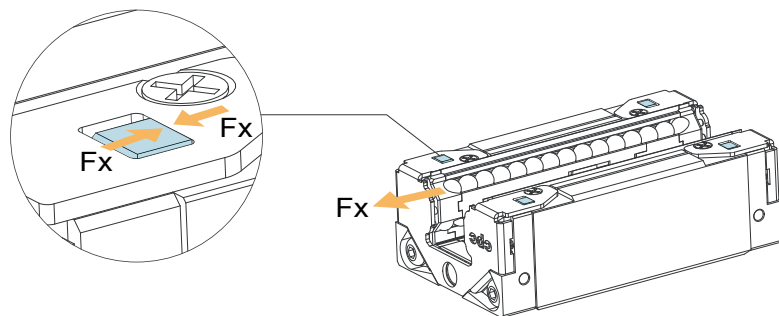
The ARC/HRC/ERC type uses the stainless steel reinforcement plates to strengthen the bottom latches, while increasing X-axis direction force capacity, and increasing operation speed.

Normal

$V_{\text{max}} \leq 10\text{m/s}$
 $a_{\text{max}} \leq 450\text{m/s}^2$

Ball chain

$V_{\text{max}} \leq 3\text{m/s}$
 $a_{\text{max}} \leq 250\text{m/s}^2$



Average Friction of Block

ARC/HRC/ERC

Block type	Friction caused from ball bearing				Bottom seals + inner seals	End seals (2 sides)	
	Preload class					S-type Standard	B-type Low frictions
	VC	V0	V1	V2			
15MN/FN	0.30	0.65	0.85	1.10	1.5	2.0	0.5
20MN/FN	0.40	0.75	1.40	1.60	2.0	2.5	1.0
25MN/FN	0.60	0.95	1.30	1.95	2.5	3.0	1.5
30MN/FN	0.55	1.10	2.00	3.10	3.0	5.0	2.0
35MN/FN	0.65	1.25	2.50	3.25	3.0	8.0	3.0
45MN/FN	0.85	2.10	2.80	4.00	4.0	11.0	4.0
55MN	1.60	4.10	5.50	7.95	2.0	13.0	-

Unit N

ARC/HRC/ERC

Block type	Friction caused from ball bearing				Bottom seals + inner seals	End seals (2 sides)	
	Preload class					S-type Standard	B-type Low frictions
	VC	V0	V1	V2			
15MS/FS	0.30	0.60	0.80	1.00	1.5	2.0	0.5
20MS/FS	0.40	0.70	1.10	1.40	2.0	2.5	1.0
25MS/FS	0.50	0.90	1.20	1.80	2.5	3.0	1.5
30MS/FS	0.50	1.00	1.80	2.30	3.0	5.0	2.0

Unit N

ARC/HRC/ERC

Block type	Friction caused from ball bearing				Bottom seals + inner seals	End seals (2 sides)	
	Preload class					S-type Standard	B-type Low frictions
	VC	V0	V1	V2			
15ML/FL	0.40	0.70	0.90	1.40	1.5	2.0	0.5
20ML/FL	0.50	0.80	1.60	1.80	2.0	2.5	1.0
25ML/FL	0.70	1.20	1.80	2.00	2.5	3.0	1.5
30ML/FL	0.80	1.40	2.20	2.80	3.0	5.0	2.0
35ML/FL	0.90	1.60	2.70	3.50	3.0	8.0	3.0
45ML/FL	1.00	2.30	3.50	4.55	4.0	11.0	4.0
55ML	1.90	4.30	6.60	8.60	2.0	13.0	-

Unit N

Preload and Clearance

The ARC/HRC/ERC linear guides provide 4 different preload class VC, V0, V1, V2.

ARC:

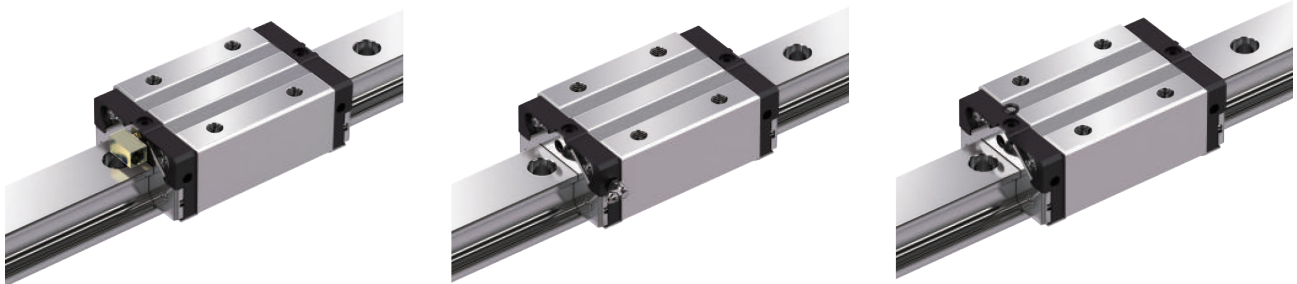
Class	Description	Preload value	Clearance (µm)							Application	
			15	20	25	30	35	45	55		
VC	Clearance	0	+5~+0	+5~+0	+5~+0	+5~+0	+5~+0	+5~+0	+5~+0	+5~+0	Smooth motion low friction
V0 standard	Light preload	0.02C	+0~-4	+0~-5	+0~-6	+0~-7	+0~-8	+0~-10	+0~-12		For precision situations, smooth motion
V1	Medium preload	0.05C	-4~-10	-5~-12	-6~-15	-7~-18	-8~-20	-10~-24	-12~-28		High stiffness, precision, high load situations
V2	Heavy preload	0.08C	-10~-16	-12~-18	-15~-23	-18~-27	-20~-31	-24~-36	-28~-45		Super high stiffness, precision, super high load situations

HRC/ERC:

Class	Description	Preload value	Clearance (µm)							Application	
			15	20	25	30	35	45	55		
VC	Clearance	0	+5~+0	+5~+0	+5~+0	+5~+0	+5~+0	+5~+0	+5~+0	+5~+0	Smooth motion low friction
V0 standard	Light preload	0.02C	+0~-4	+0~-5	+0~-6	+0~-7	+0~-8	+0~-10	+0~-12		For precision situations, smooth motion
V1	Medium preload	0.08C	-4~-12	-5~-14	-6~-16	-7~-19	-8~-22	-10~-25	-12~-29		High stiffness, precision, high load situations
V2	Heavy preload	0.13C	-11~-19	-14~-23	-16~-26	-19~-31	-22~-35	-25~-40	-29~-46		Super high stiffness, precision, super high load situations

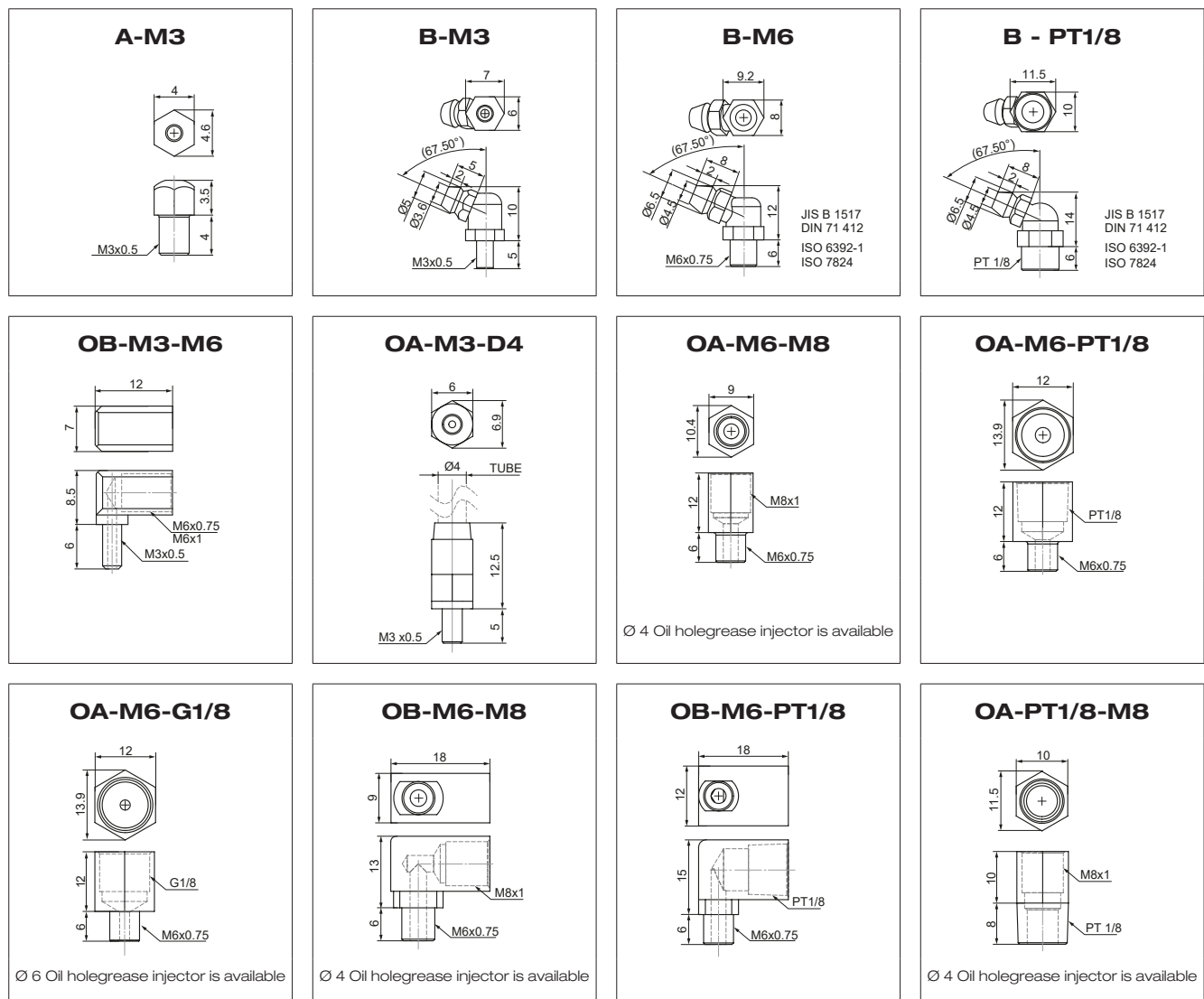
All-direction Lubrication Nozzles

On the top, bottom, and sides, there are oil injection nozzles. The upper runner block comes with O-ring seal, and easily complete the oiling from top. Diversified comprehensive oil injection methods, suitable for installation axial and oil injection methods.

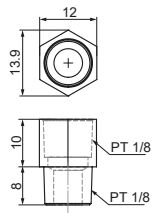


Options - Grease Nipple / Oil Piping Joint

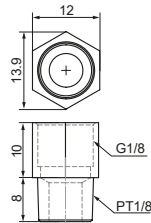
L type nipple is for ball bearing external seal (SN) and roller type.



OA-PT1/8-PT1/8

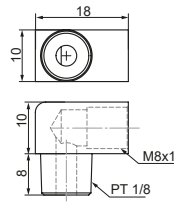


OA-PT1/8-G1/8



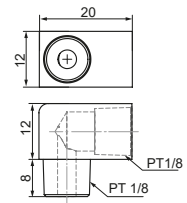
Ø 6 Oil holegrease injector is available

OB-PT1/8-M8

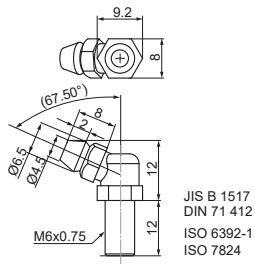


Ø 4 Oil holegrease injector is available

OB-PT1/8-PT1/8

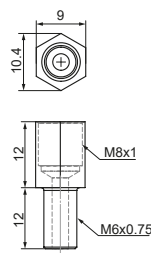


B-M6-L



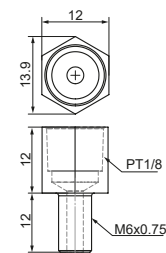
JIS B 1517
DIN 71 412
ISO 6392-1
ISO 7824

OA-M6-M8-L

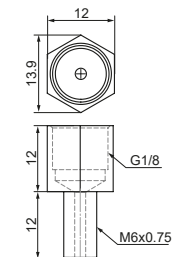


Ø 4 Oil holegrease injector is available

OA-M6-PT1/8-L

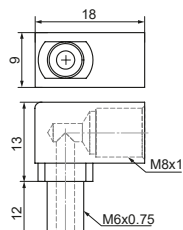


OA-M6-G1/8-L



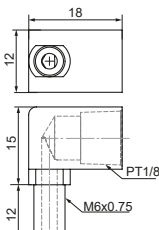
Ø 6 Oil holegrease injector is available

OB-M6-M8-L

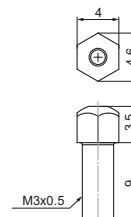


Ø 4 Oil holegrease injector is available

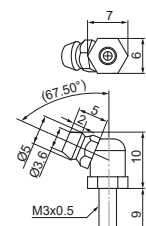
OB-M6-PT1/8-L



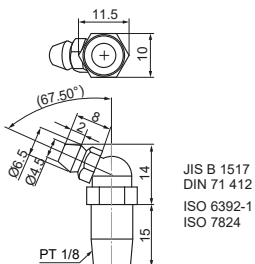
A-M3-L



B-M3-L



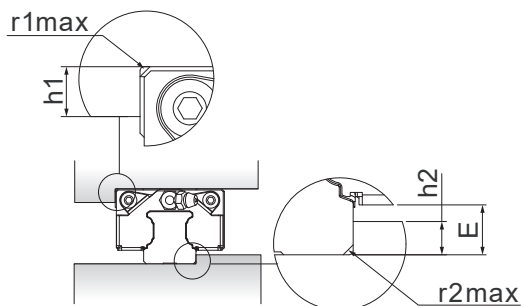
B-PT1/8-L



JIS B 1517
DIN 71 412
ISO 6392-1
ISO 7824

Dimension of Reference Edge

To ensure the linear guide is precisely assembled with machine table, Rollco machines a recess in the reference edge corner. The corner of the machine table must be smaller than the chamfer of the linear guide to avoid interference.

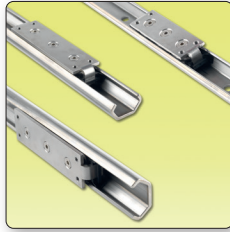


Type	r1max	r2max	h1	h2	E
15	0.5	0.5	4.0	2.5	3.3
20	0.5	0.5	5.0	4.0	5.0
25	1.0	1.0	5.0	5.0	6.0
30	1.0	1.0	6.0	5.5	6.6
35	1.0	1.0	6.0	6.5	7.6
45	1.0	1.0	8.0	8.0	9.3
55	1.5	1.5	10.0	10.0	12.0

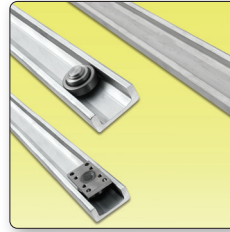
Rollco Products



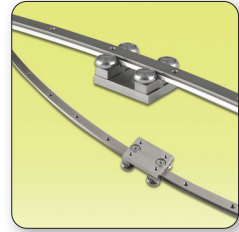
COMPACT RAIL



C-RAIL



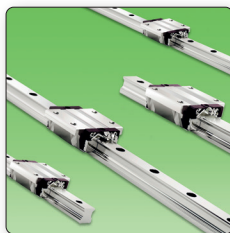
U-RAIL



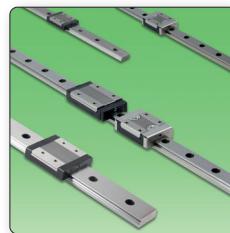
CURVI LINE



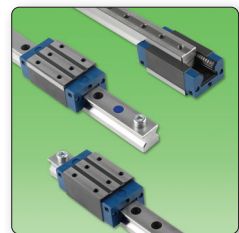
LINEAR RAIL SBI



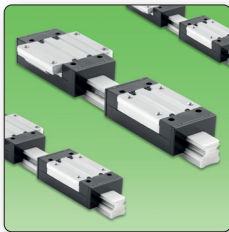
**LINEAR RAIL
BALL CHAIN**



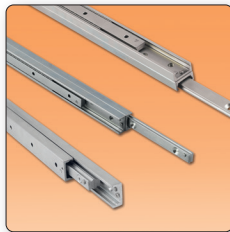
**LINEAR MINIATURE
GUIDE**



**LINEAR ROLLER
GUIDE**



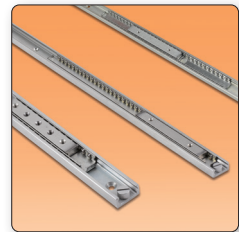
**LINEAR RAIL
ALUMINIUM**



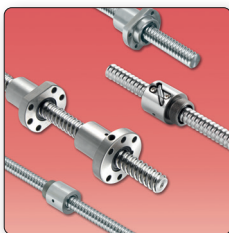
**TELESCOPIC RAIL
HEAVY**



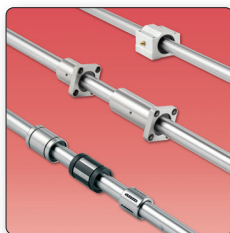
**TELESCOPIC RAIL
LIGHT**



EASYSLIDE



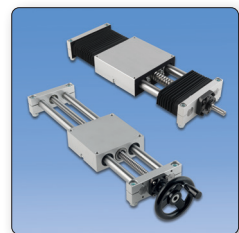
BALL SCREWS



**BALL BEARINGS
& STEEL SHAFTS**



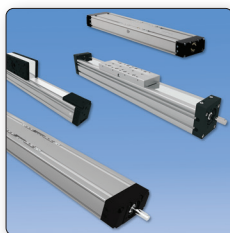
LINEAR UNIT RHL



LINEAR UNIT QME



LINEAR UNIT E-SMART



LINEAR UNITS CT & MT



ALUMINIUM PROFILES



BELT CONVEYORS

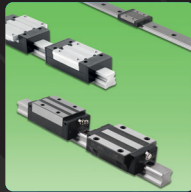
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