cpc 直得科技股份有限公司
CHIEFTEK PRECISION CO., LTD.

ARC/HRC/ERC Standard 4-Row Ball Bearing Line ar Guide
WRC Wi d e 4-Row Ball Be arin g Lin e ar G uid e
ARR/HRR/LRR Standard 4-Row Roller-type Linear Guide

cpc CHIEFTEK PRECISION CO., LTD.

HEADQUARTERS
CHIEFTEK PRECISION CO., LTD.
No.3, Dali 1st Rd., Sinshih Township,
Tainan Science Park, 741-45 Tainan, Taiwan, R.O.C
TEL:+886-6-505 5858 Http://www.chieftek.com
E-mail:service@mail.chieftek.com

CHIEFTEK PRECISION USA
4881 Murietta Street.
Chino, CA. 91710
Tel: +1-909-628-9300
Fax: +1-909-628-7171

cpc Europa GmbH
Industriepark 314,
D-78244 Gottmadingen, Germany
TEL:+49-7731-59130-38
FAX:+49-7731-59130-28

CHIEFTEK MACHINERY KUNSHAN CO., LTD.
No.1188, Hongqiao Rd. Kunshan,
Jiangsu, P.R. China
TEL:+86-512-5525 2831
FAX:+86-512-5525 2851

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Contents

Product Overview

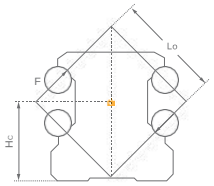
ARC/HRC/ERC Product Characteristics

Our standard **cpc** ARC / HRC / ERC Linear Guide Series uses the O-type arrangement for its four-row ball circulation design. The 45-degree contact angle between the rails and balls allows our product to realize a four-directional equivalent load effect. **cpc** has placed special emphasis on strengthening the arm length (Lo) of our product so that when sustaining external force (F), this can have an even higher Mr value, which increases its rigidity and torsion-resistant capabilities. The larger and more numberous balls in our products allows it to have a 10-30% greater load capacity than similarly sized competitor products. These and other charateristics are the source of our product's high load capacity, moment, and stiffness features.

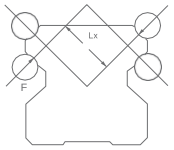
Unit:mm

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)



O-Type Arrangement



X-Type Arrangement

Inner Lubrication storage Pad (Upper)
- No need to increase the length of the runner block
- Full lubrication contact with balls, particularly suitable for short stroke movement.

End Cap
- All-around lubrication holes system

High abrasion resistant material end seal
- Standard contactless, low friction, high dust proof seal

Inner Lubrication storage Pad (Bottom)

Ball chain
- Patented design to enable reverse operations.
- Muted and prolonged service life

Stainless steel reinforcement plate
- Total scraping of external objects above 0.3mm
- Increased X-axis axial force capacity

- High Load and torque capabilities
- Excellent dynamic performance: Reach V_{max} 10 m/s Reach a_{max} 450 m/s²
- Can provide counterbored holes from the top and tapped mounting holes from the bottom rail
- Can provide specialized steel surface treatment

Product Design (Standard)

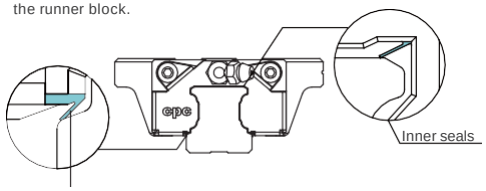
Dustproof design

Inner Seals

The newly d esigne d inner se als b oth prote ct the rails from foreign particles and keep the lubric ation inside the runner block, while maintaining a low fric tion profile.

Bottom Seals

The bottom seals work in conjuction with the inner seals to keep foreign particles out and lubriation from leaking out. Our c om prehensive se aling d esign signific antly reduces re-lubric ation needs and prolongs service life of the runner block.



End Seals

The end deals work in c onjuction with the bottom and inner se als to blo ck foreign particles out and prevent lubric ation leakage. Our engineering plastic has a strong firction resistance and is less prone to cracking than typical NBR plastics.

Standard Seals (S)

Our standard se als are in dire c t c onta c t with the rail surface, giving them increased dustproof and lubcric ation retenion capabilities. **cpc** recommends this class of seal for blo cks that operate in environments high in foreign particles, su c h as sawd ust, for lon g p erio ds of time. S-typ e seals will have a compratively higher fric tion then B-Type seals.

Low Fric tion Seals (B)

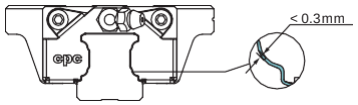
Our low-friction se als have slight c onta ct with the rail and are suitable for most environments, with both low fric tion and a scrap er function.

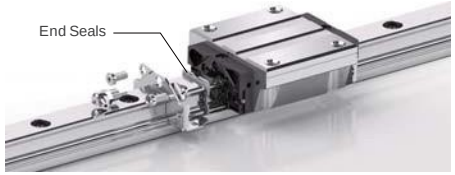
Seal type friction comparison

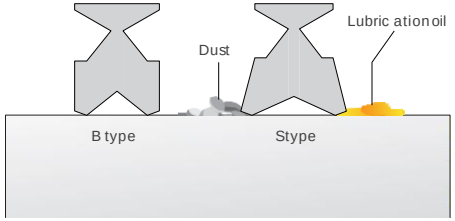
Friction levels will be the highest on new linear rails. But, after short p erio ds of o pera tion, su c h fri c tion will b e reduc ed to a c onstant level.

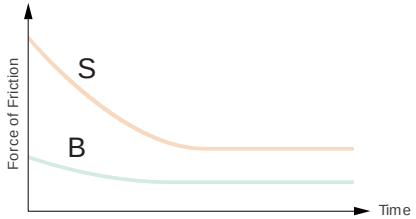
Stainless Steel Reinforcement Plate

The reinforc ement plate also func tions as a scrap er for larger particulates like iron fillings, and has no more than 0.3mm clearance between the plate and the rail.









Average Friction of Block

Below are the tables for the block body and end seal friction levels under greaseless conditions.

Unit: N

ARC/HRC/ERC							
Block Type	Friction c aused from ball bearing				Bottom Seals + Inner Seals	End Seals (2 sid es)	
	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
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

Unit: N

ARC/HRC/ERC							
Block Type	Friction c aused from ball bearing				Bottom Seals + Inner Seals	End Seals (2 sid es)	
	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
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 c aused from ball bearing				Bottom Seals + Inner Seals	End Seals (2 sid es)	
	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
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

Applie dexample

·Á . ARC25MN SZV1N

Block friction = 1.3+2.5+3 = 6.8N

Â. HR C30FL BZV0P

Block friction=1.4+3+2 = 6.4N

Friction c aused from ball bearing
Bottom Seals + Inner Seals
+) End Seals (2 sid es)
Block friction

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Product Design (Standard)

Saw wood dust Test

Test content

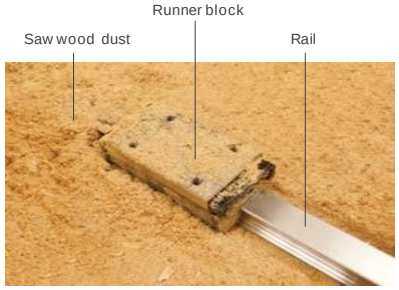
This test uses a total of 4 groups of pro du c ts (2 rails m at c he d with 2 lubric ation metho ds) which are put on a saw woo d dust surfa c e on which a ba ck and forth motion test is p erforme d.

Rail

1. Tapped from top rail plus hole plugs (AR)
2. Tapped from bottom rail (ARU)

Runner Block

1. Installation of standard c onta c t typ e se als (S), using grease
2. Installation of lubric ation storage Pad and standard contact type se als(SZ), using gre ase



Testing conditions

1. Stroke = 600mm
2. Total testing stroke = 30m

Test items

1. If saw wood dust enters the inner surfa ce of the runner block
2. If saw wood dust enters the ball bearing runner area

Test results

Tapped from bottom (oil)

Tapped from bottom (grease)

Checked Item / Installation status	If saw wood dust enters inner block surface	If saw wood dust enters ball bearing runner area
ARU Rail SZType Runner Block (oil lubrication)	No	No
ARU Rail SType Runner Block (grease lubrication)	No	No
AR Rail SZType Runner Block (oil lubrication)	Yes (belly area)	No
AR Rail SType Runner Block (grease lubrication)	Yes (belly area)	No

Test result

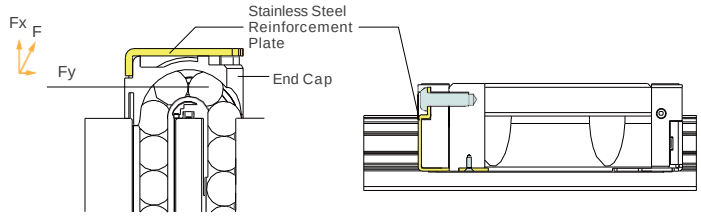
- The tapped from top rail has hole plugs, leading to rail unevenness, allowing some saw woo d dust to enter the runner blo ck bell y are a. The 2 sid es of the runner blo ck b elly are a are c om pletely prote cte d by stainless steel reinforc ement plates and end s e als, me aning that the ball bearing runner area is fully shielded from saw woo d dust.
- The tappe d from b ottom rail has an even rail surfa c e so that the ball bearing runner area is fully prote cte d from saw woo d dust .

Stainless steel reinforc ement plate (Patent)

Scraping function on both sides

Using 2 stainless steel reinforc ement plates, the Ltyp e d esign allows for screws to b e fastene d onto the to p and b ottom of the runner blo ck, reinforcing the rigidity and cladding of its c aps.

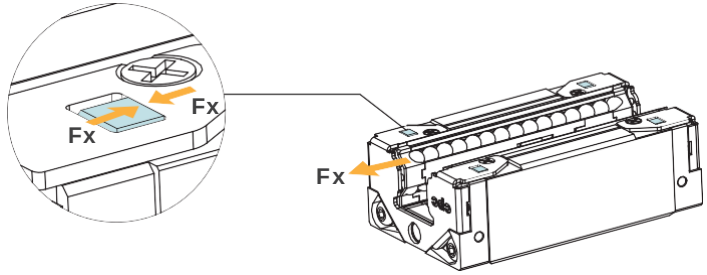
The clearance between the rail profile with the seal design is below 0.3mm, reinforcing the steel plates while enabling scraper functions.



Function of high speed operation

Our ARC/HRC/ERC type features stainless steel reinforcement plates and additional bottom latches, increasing its axial force and tolerance capacity to achieve faster operation speeds.

Vmax >10 m/s amax >450m/s²



Mutli-Directional Lubric ation Nozzles (All-dire ction Lubric ation Nozzles)

Our product features lubric ation ports on the top, bottom, and sid es, allowing installa tion of optional grease nipples for relu bric ation. The top port c omes with a O-ring seal to allow easy re-lucric ation from the top, and our diverse c omphrensive lubric ation injec tion design allows for lubric ation in both axis.

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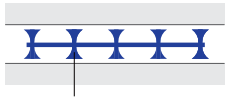
Product Design (Option)

Low noise, superior quality high speed ball chain (Patent)

Ordering code: C

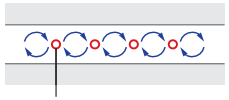
With traditional ball type linear guides, the spinning of balls in different directions leads to a two times faster contact speed. Such high friction greatly reduce the service life of such products. Additionally, the contact point between such balls also produces high pressure and noise levels while increasing the danger of oil film cladding damage.

Low noise ball chain



The contact point between the balls and ball chain leads to a low surface pressure level.

Traditional Ball type linear guide



Because the contact point of ball type linear guides is only between balls, the surface pressure is significantly higher.

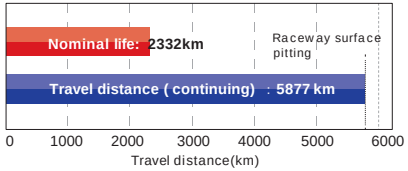
* The **cpc** ball chain provides a greater contact area between the balls and the ball chain. Because the film cladding will not be damaged easily and due to the lower noise volume, balls can move at a higher speed while product service life can also be extended significantly.
* The size of the ball chain design block is the same as that of linear guides without ball chains, allowing for same dimensions and use of identical guides.

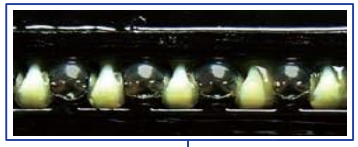
Heavy load test

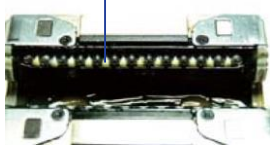
Condition

Model : ARC25MN SZC V1H
Velocity : 1m/sec
Load capacities : 7.44kN(0.3C)
Dynamic load rating C_{100}:24.8kN
Stroke : 960mm
Preload:0.05C

Rating Life $\left(\frac{C}{P}\right)^3 \times 100km = \left(\frac{C}{0.05C+0.3C}\right)^3 \times 100km = 2332km$



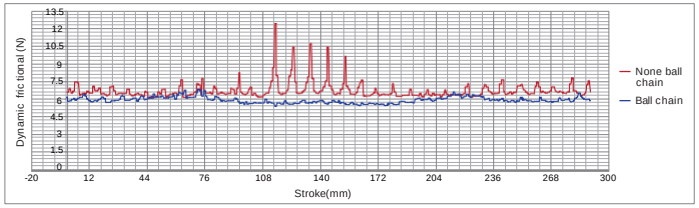




After testing, grease remains without anomalies.

Smoothness test

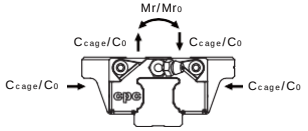
Model code : ARC25MNSV1N
Velocity : 10 mm/sec

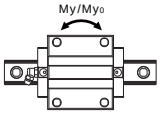


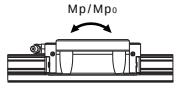
Load capacity of ball chain

There are three advantages of ARC /HRC /ERC ball chain series as compared with traditional, non-ball chain blocks :

1. The space block in the ball chain can prevent the oil film from rupturing by ball to ball contact and decrease friction induced wear.
2. The retainer block of the ball chain can maintain a reliable oil film layer by continuously applying grease on the moving part.
3. The ball chain provides the important function of leading steel ball motion. For traditional blocks without ball chains, its steel balls are pushed by the rotating back steel balls on the raceway, meaning that the contact angle between the balls and rail is less precise, causing vibration and an increased stress level between balls. In comparison, the balls in our ball chain product are led by the ball chain to ensure a correct fit and accurate contact angles. In this way, our product's ball chain design ensures that it can fit correctly when entering the raceway and that the contact angle will be accurate. This means that our Ball chain design provides for a smooth performance, lower vibration levels and less additional stress levels.







Dynamic rating load

The table on the right shows the C_{cage} and C_{ISO} values via different machine type testing. (According to ISO-14728 regulations)

Model Code		C_{ISO} (kN)	C_{cage}(kN)
ARC-MN C ARC-FN C HRC-MN C HRC-FN C ERC-MN C	15	9.4	11.8
	20	15.4	22.3
	25	22.4	33.6
	30	31.0	46.5
	35	43.7	65.6
	45	67.6	101.4
ARC-ML C HRC-ML C HRC-FL C ERC-ML C	15	12.5	15.6
	20	18.9	27.4
	25	28.5	42.8
	30	38.0	57.0
	35	50.6	75.9
	45	86.2	129.3
ARC-MS C ARC-FS C ERC-MS C	15	7.1	8.9
	20	11.6	16.8
	25	16.8	25.2
	30	21.3	32.0

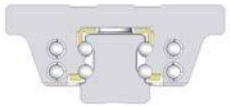
Static rating load & Static torque

The C type block of ARC/HRC /ERC will increase the pitch between balls on the operating profile. Therefore, the static rating load C_0 and the static rating torque M_{r0}, M_{p0} and M_{y0} values will be decreased.

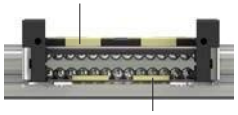
Model Code		Static rating load(kN)	Static torque(Nm)		
		C_0	M_{r0}	M_{p0}	M_{y0}
ARC-MN C ARC-FN C HRC-MN C HRC-FN C ERC-MN C	15	16.2	130	95	95
	20	25.7	275	200	200
	25	36.4	465	340	340
	30	49.6	780	530	530
	35	70.2	1575	1010	1010
	45	102.8	2955	1775	1775
ARC-ML C HRC-ML C HRC-FL C ERC-ML C	15	24.3	195	215	215
	20	34.3	370	350	350
	25	51.6	655	640	640
	30	66.1	1040	900	900
	35	94.7	1940	1575	1575
	45	159.7	4185	3280	3280
ARC-MS C ARC-FS C ERC-MS C	15	10.8	85	45	45
	20	17.1	185	85	85
	25	24.3	310	145	145
	30	28.9	455	205	205

(option)

Lubric ation Design (Ordering Code: Z) (ARC/HRC)



Upper Lubrication Storage Pad



Bottom Lubric ation Storage Pad

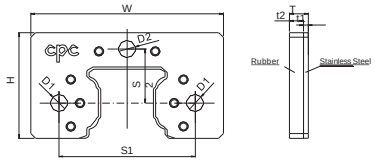
Inner oil storag e and oil supply system d esign

Our Inner PU Lubric ation Storage Pad design does not increase the length of the runner block and c an effectively lubric ate all balls. Customers c an inject lubric ation oil dire ctly through its lubric ation holes to ensure a sufficient storage in the PU Lubric ation storage pad. This not only enables long term lubric ation effects, but also a higher degree of ease at conforming to environment protection needs and lowering maintenance costs. For short stroke movements, this product allows for highly effective lubric ation.

External NBR Seal with Metal Scraper (Ordering Code: SN) (ARC /HRC / ARR/HRR/LRR)

Available for applic ations in harsh environments such as in grinding, glass processing, graphite processing and wood-working ma chinery, providing a highly effective dust and iron scrap proofing solution

Dimensions and Spe cific ations

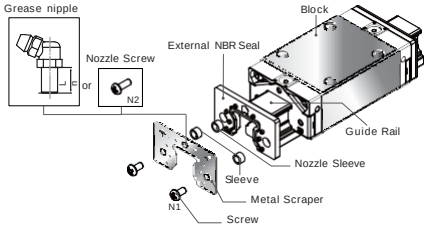


Unit: mm

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	3.5	6.5	M3x0.5	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

Installation M anual

1. When installing the external NBR seal, please ensure that the block is on the rail
2. Ensure that the rubber part is fitted in the sleeve. If the rubber part has fallen off, set the sleeve to the corresp onding bore.
3. Overlap the rubber part and metal scrapper with the corresp onding salient point and bore. The **c p c** logo must be fa cing outward.
4. Slid e the external NBR se al into the rail from two sid es and closely connect with the block.
5. Fasten the screw into the c orrespondenc e bore and align the seal with the c enter of the rail and properly fastened. Do not allow the metal scraper to make conta ct with the guide rail.



Metal-Plastic-Cap Patent Design for Standard Rail-Bolt-Hole (With patent)

(Ordering Code: MPC)

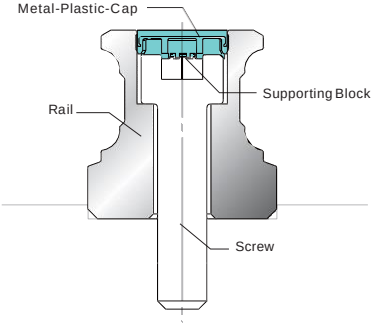
Metal Cap Features Introduction

The Most Convenient Metal C ap Use d in Industry

- The upp er part of the c ap is m ad e of st ainless steel whic h c a n prevent sharp foreign o bje c ts from piling up on the b olt-hole and affe c t the end seal function.
- The lower part of the c ap is m ade of plastic, and c an be installed dire ctly on a standard rail without the nee d for additional b olt-hole slot milling.
- The b olt-hole c ha mfer for standard rails is C0.2mm. For further dustproof requests, the non-bolt-hole chamfer rail is optional upon ordering. (order code: TR)

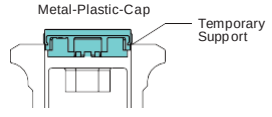
Bolt-Hole with Chamfer (standard)

Bolt-Hole without Chamfer (optional: /TR)



C ap c an b e Smoothly Installe d on Bolt-Hole

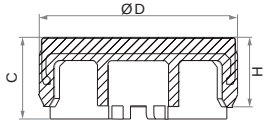
Bolt-hole c ap of c onventional line ar guid es, due to the difficulty of c ontrolling ha mmering strength, often result in c aps b ein g ha mmere d too d ee p or surfa c e unevenness whic h le ads to the a cc umulation of dirt or scrap iron. Our **cpc** c ap is esp e cially d esigne d with a supp orting blo ck to pro p up the c ap and to fix the screw stably, thus preventing such unne c essary sinking.



Cap before Hammering
(Plastic Supp ort)

Plastic Supp ort after Hammering
(The form of the 8 supp orting blo cks will be c ome altered to fit with the screw)

Dimensions and Specifications



Model Code	Screw	External Diameter D	Cup Height H	Block Height C	Rail
A4	M4	7.7	1.7	2.0	AR15, WRC21/15, WRC27/20
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
A8-R	M8	14.3	8.0	9.5	ARR35

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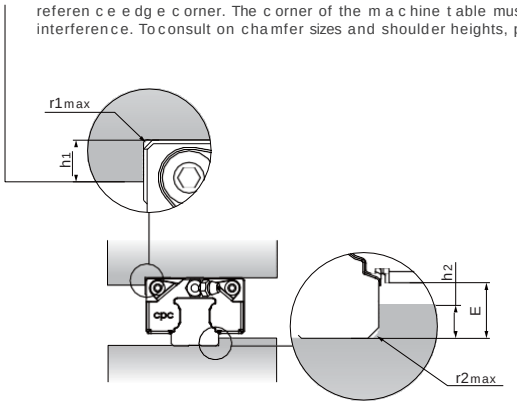
Dimension of reference edge

To ensure that the linear guide is precisely assembled with the machine table, **cpc** devices have a recessinstalled in the reference edge corner. The corner of the machine table must be smaller than the chamfer of the linear guide to avoid interference. To consult on chamfer sizes and shoulder heights, please refer to the table below.



Unit : mm

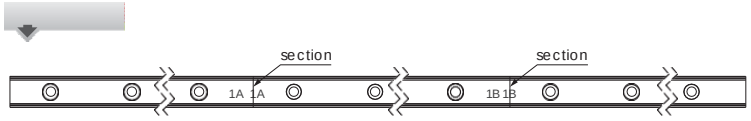
ARC/HRC/ERC					
Type	r1max	r2max	h1	h2	E
15	0.5	0.5	4.0	2.5	3.3
20	0.5	0.5	5.0	4.0	5.0
25	1.0	1.0	5.0	5.0	6.0
30	1.0	1.0	6.0	5.5	6.6
35	1.0	1.0	6.0	6.5	7.6
45	1.0	1.0	8.0	8.0	9.3
55	1.5	1.5	10.0	10.0	12.0

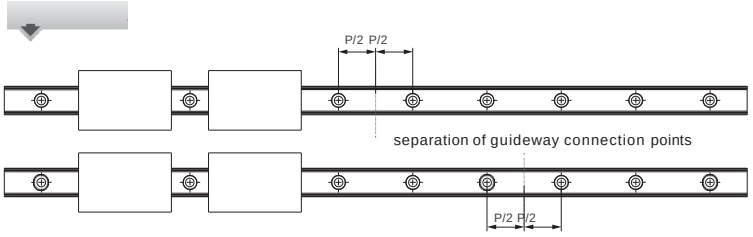
WRC					
Type	r1max	r2max	h1	h2	E
21/15	0.4	0.4	5.0	2.0	2.7
27/20	0.4	0.4	5.0	3.0	3.5

Rail Joint

The standard length of our large rails is 4 meters. If longer rails are required, **cpc** can provide a joint rail solution for which the joint number will be marked on the rail.

1. As shown in figure A, please follow the joint number to assemble.
2. For more than two units in each axis, to avoid accuracy effects from multiple blocks passing through the same connection point, we advise to use the connection points separately as shown on figure B.
3. Please use the slide as a connection point to tighten the slide before tightening the torques to fasten the screws from inside to outside.





Technical information

Screw tightening torque (Nm)

Screw grade 12.9 Alloy Steel Screw	Steel	Cast Iron	Non Iron Metal
M3	2.0	1.3	1.0
M4	4.1	2.7	2.1
M5	8.8	5.9	4.4
M6	13.7	9.2	6.9
M8	30	20	15
M10	68	45	33
M12	118	78	59
M14	157	105	78
M16	196	131	98

Preload and clerance

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

ARC/WRC										
Class	Description	Preload Value	Clearance (μm)							Application
			15	20	25	30	35	45	55	
			WRC21/15	WRC27/20						
VC	Clearance	0	+5~+0	+5~+0	+5~+0	+5~+0	+5~+0	+5~+0	+5~+0	Smooth motion, low friction
V0	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 and load capacity

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	Smooth motion, low friction
V0	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 and load capacity

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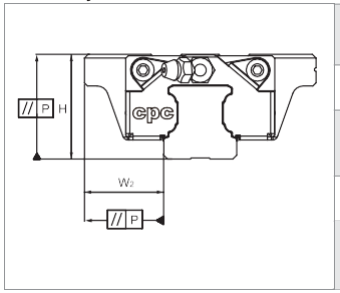
Technical information

Accuracy

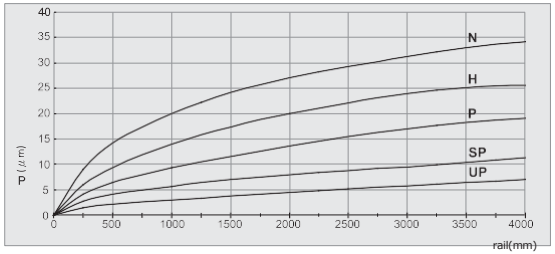
The ARC/HRC/ERC/WRC linear guides provide 5 different grades of precision : N, H, P, SP, and UP, Engineers can choose different grades depending on the machine applications.

Accuracy



Accuracy grades (μm)		UP	SP	P	H	N
Tolerance of dimension height H	H	±5	±10	±20	±40	±100
Variation of height for different runner blocks on the same position of Rail	ΔH	3	5	7	15	30
Tolerance of dimension width W2	W2	±5	±7	±10	±20	±40
Variation of width for different runner blocks on the same position of Rail	ΔW2	3	5	7	15	30

Runner block relative to linear guide, datum plane parallel motion precision



Application

class	Movement, Conveyance	Manufacturing Equipment	High Precision Manufacturing Equipment	Measuring Equipment
N	●	●		
H	●	●	●	
P		●	●	●
SP			●	●
UP				●
Examples	1. Conveyance system 2. Industrial robots 3. Office Machinery	1. Woodworking machine 2. Punching press 3. Injection Molding machine	1. Lathe/milling machine/ grinding machine 2. Electrical discharge machining (EDM) 3. CNC machining center	1. Three dimensional measuring instrument 2. Detection mirror/ head shaft 3. X-Y Table

Ordering information

ARC .5 N 2 C P -20 II /J

- Customization code
- Number of rails on the same moving axis
- Starting hole pitch (mm)
- Accuracy grade : UP, SP, P, H, N
- C: with ball chain (Available for size 15,20,25,30,35 and 45)
- Z: with lubrication storage pad (Available for size 15,20,25,30,35 and 45)
- Block quantity
- Block length : L: long N: standard S: short
- Block type : 15, 20, 25, 30, 35, 45, 55
- Product type : ARC: automation series HRC / ERC: heavy load series

Customization code(The meaning of suffix characters)

J : slide rail connection

G : customer designated lubricant I

: with Inspection report

S : special straightness requirements for rail B

: special processing for block

BL : with extension and contraction support layer.

SN : external NBR seal with metal scraper

R : special process for rail

VD : customized designated preload pressure value

OA : block install with grease nipple by cpc (Please contact cpc for direction of grease nipple installation)

DE : reference edges of block and rail on opposite sides

SG : installation of side grease holes and set screws

PC : with plastic caps for counter holes on the rail

MPC : with Metal-Plastic Caps for rail mounting holes.

TR : bolt-Hole without chamfer

BR : black chrome coating treatment on the rail

BB : black chrome coating treatment on the block

BRB : black chrome coating treatment on the block and rail

SB : with stainless steel ball bearings

NRB : nickel coating treatment on the block and rail

CR : clear chrome coating treatment on the rail

CB : clear chrome coating treatment on the block

CRB : clear chrome coating treatment on the block and rail

NR : nickel coating treatment on the rail

RR : raydent coating treatment on the rail

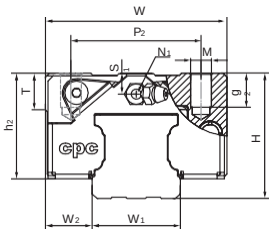
RB : raydent coating treatment on the block

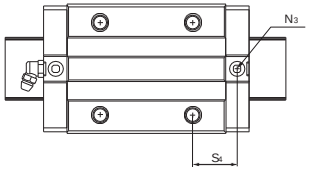
RRB : raydent coating treatment on the block and rail

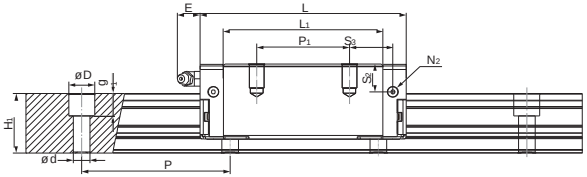
NB : nickel coating treatment on the block

Note: If there is a need for further customization or other special requirements, please contact cpc for more information.

Dimensions Table







ARC MS Series

Model Code	Mounting Dimensions		Rail Dimensions(mm)				Block Dimensions(mm)											Block Dimensions(mm)							Load Capacities (KN)		Static Moment (Nm)			Weight		Model Code
	H	W2	W1	H1	P	Dxdxg1	W	L	L1	h2	P1	P2	P3	Mxg2	M1	T	N1	N2	N3	E	S1	S2	S3	S4	C	C0	Mr0	Mp0	My0	Block(g)	Rail(g/m)	
ARC 15 MS	24	9.5	15	15	60	7.5x4.5x5.3	34	41.2	26	20.7	-	26	-	M4x7	-	6	M3x6.5	M3x6	P3	3.5	4.5	7.5	15.6	16.7	7.7	12.1	100	50	50	106	1290	ARC 15 MS
ARC 20 MS	28	11	20	20	60	9.5x6x8.5	42	49.2	32.2	23	-	32	-	M5x7	-	8	M3x7.5	M3x5.5	P4	10	4	7.4	19.1	19.8	12.5	19.3	205	100	100	170	2280	ARC 20 MS
ARC 25 MS	33	12.5	23	23	60	11x7x9	48	57.4	38.4	27	-	35	-	M6x9	-	8	M6x7.5	M3x6.5	P4	12	5	9.3	22.2	23.2	18.2	27.3	350	160	160	300	3020	ARC 25 MS
ARC 30 MS	42	16	28	27	80	14x9x12	60	68	44	35.2	-	40	-	M8x10	-	12	M6x8.5	M6x5	P5	12	7.5	12	27	26.7	23.3	33.1	520	230	230	560	4380	ARC 30 MS

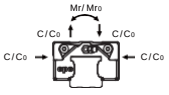
ARC MN Series

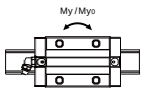
ARC 15 MN	24	9.5	15	15	60	7.5x4.5x5.3	34	55.5	40.3	20.7	26	26	-	M4x7	-	6	M3x6.5	M3x6	P3	3.5	4.5	7.5	9.8	10.9	9.9	17.5	140	105	105	158	1290	ARC 15 MN
ARC 20 MN	28	11	20	20	60	9.5x6x8.5	42	69	52	23	32	32	-	M5x7	-	8	M3x7.5	M3x5.5	P4	10	4	7.4	13	13.7	17.1	30.0	325	230	230	266	2280	ARC 20 MN
ARC 25 MN	33	12.5	23	23	60	11x7x9	48	81.2	62.2	27	35	35	-	M6x9	-	8	M6x7.5	M3x6.5	P4	12	5	9.3	16.6	17.6	24.8	42.5	540	385	385	420	3020	ARC 25 MN
ARC 30 MN	42	16	28	27	80	14x9x12	60	95.5	71.5	35.2	40	40	-	M8x10	-	12	M6x8.5	M6x5	P5	12	7.5	12	20.8	20.5	32.8	53.7	845	565	565	800	4380	ARC 30 MN
ARC 35 MN	48	18	34	32	80	14x9x12	70	111.2	86.2	40.4	50	50	-	M8x13	-	14	M6x10	M6x7	P5	12	8	15	23.4	24.1	45.9	82.9	1700	1080	1080	1120	6790	ARC 35 MN
ARC 45 MN	60	20.5	45	39	105	20x14x17	86	135.5	102.5	50.7	60	60	-	M10x17	-	14	PT1/8x12.5	M6x10.5	P5	14	11.1	18.1	27.3	27.2	71.3	122.1	3200	1910	1910	2120	10530	ARC 45 MN
ARC 55 MN	70	23.5	53	45.7	120	24x16x20	100	168.5	126.5	58	75	75	-	M12x20	-	16	M6x10	M6x13	P5	12	13.5	23.5	34.8	33.8	128	186	4949	3278	3278	4200	14000	ARC 55 MN

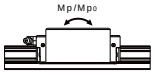
ARC ML Series

ARC 15 ML	24	9.5	15	15	60	7.5x4.5x5.3	34	76.2	61	20.7	34	26	-	M4x7	-	6	M3x6.5	M3x6	P3	3.5	4.5	7.5	16.1	17.2	13.4	26.9	215	235	235	240	1290	ARC 15 ML
ARC 20 ML	28	11	20	20	60	9.5x6x8.5	42	87.2	70.2	23	45	32	-	M5x7	-	8	M3x7.5	M3x5.5	P4	10	4	7.4	15.6	16.3	20.4	38.5	415	390	390	330	2280	ARC 20 ML
ARC 30 ML	42	16	28	27	80	14x9x12	60	118	94	35.2	60	40	-	M8x10	-	12	M6x8.5	M6x5	P5	12	8.7	12	21.7	21.7	39.6	70.2	1105	950	950	1138	4380	ARC 30 ML
ARC 35 ML	48	18	34	32	80	14x9x12	70	136.6	111.6	40.4	72	50	-	M8x13	-	14	M6x10	M6x7	P5	12	8	15	25.1	25.8	54.7	106.5	2185	1755	1755	1536	6790	ARC 35 ML
ARC 45 ML	60	20.5	45	39	105	20x14x17	86	171.5	138.5	50.7	80	60	-	M10x17	-	14	PT1/8x12.5	M6x10.5	P5	14	11.1	18.1	35	35	89.5	169.1	4430	3460	3460	3160	10530	ARC 45 ML
ARC 55 ML	70	23.5	53	45.7	120	24x16x20	100	202	160	58	95	75	-	M12x20	-	16	M6x10	M6x13	P5	12	13.5	23.5	41.5	40.5	147	226	6472	5284	5284	5083	14000	ARC 55 ML

1. The load capacities is for full-ball type (without ball chain)
2. N2 = Injecting holes
3. N3 = O-ring size for lubrication from above
4. N2.N3 will be sealed before shipmant, please open it when first using the product.

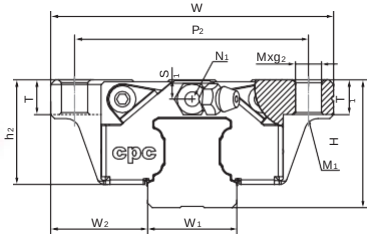


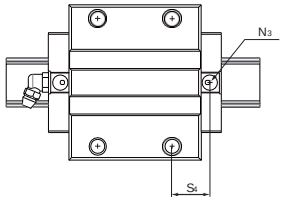


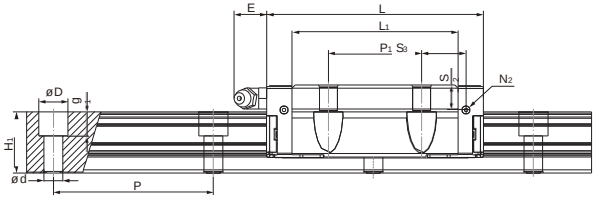


The above rating load capacities and static moments are calculated according to the ISO14728 standard. The rating life for basic dynamic load ratings is defined as the total 100km travel distance for 90% of a group of identical linear guides, under the same conditions and free from any material damage caused by rolling fatigue. If a standard of 50km travel distance is applied to measure the average product lifespan, the above basic dynamic load rating C should be multiplied by 1.26 for an accurate conversion.

Dimensions Table







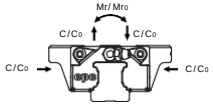
ARC FS Series

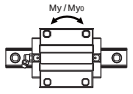
Model Code	Mounting Dimensions		Rail Dimensions(mm)				Block Dimensions(mm)												Block Dimensions(mm)							Load Capacities (KN)		Static Moment (Nm)			Weight		Model Code
	H	W2	W1	H1	P	Dxdxg1	W	L	L1	h2	P1	P2	P3	Mxg2	M1	T	T1	N1	N2	N3	E	S1	S2	S3	S4	C	C0	Mr0	Mp0	My0	Block(g)	Rail(g/m)	
ARC 15 FS	24	18.5	15	15	60	7.5x4.5x5.3	52	41.2	26	20.7	-	41	-	M5x7	M4	7	7	M3x6.5	M3x6	P3	3.5	4.5	7.5	15.6	16.7	7.7	12.1	100	50	50	132	1290	ARC 15 FS
ARC 20 FS	28	19.5	20	20	60	9.5x6x8.5	59	49.2	32.2	23	-	49	-	M6x10	M5	10	10	M3x7.5	M3x5.5	P4	10	4	7.4	19.1	19.8	12.5	19.3	205	100	100	210	2280	ARC 20 FS
ARC 25 FS	33	25	23	23	60	11x7x9	73	57.4	38.4	27	-	60	-	M8x12	M6	12	12	M6x7.5	M3x6.5	P4	12	5	9.3	22.2	23.2	18.2	27.3	350	160	160	345	3020	ARC 25 FS
ARC 30 FS	42	31	28	27	80	14x9x12	90	68	44	35.2	-	72	-	M10x12	M8	12	12	M6x8.5	M6x5	P5	12	7.5	12	27	26.8	23.3	33.1	520	230	230	750	4380	ARC 30 FS

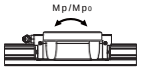
ARC FN Series

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	7	M3x6.5	M3x6	P3	3.5	4.5	7.5	8.9	10.9	9.9	17.5	140	105	105	200	1290	ARC 15 FN
ARC 20 FN	28	19.5	20	20	60	9.5x6x8.5	59	69	52	23	32	49	-	M6x10	M5	10	10	M3x7.5	M3x5.5	P4	10	4	7.4	13	13.7	17.1	30.0	325	230	230	336	2280	ARC 20 FN
ARC 25 FN	33	25	23	23	60	11x7x9	73	81.2	62.2	27	35	60	-	M8x12	M6	12	12	M6x7.5	M3x6.5	P4	12	5	9.3	16.6	17.6	24.8	42.5	540	385	385	524	3020	ARC 25 FN
ARC 30 FN	42	31	28	27	80	14x9x12	90	95.5	71.5	35.2	40	72	-	M10x12	M8	12	12	M6x8.5	M6x5	P5	12	7.5	12	20.8	20.5	32.8	53.7	845	565	565	1200	4380	ARC 30 FN
ARC 35 FN	48	33	34	32	80	14x9x12	100	111.2	86.2	40.4	50	82	-	M10x12	M8	12	12	M6x10	M6x7	P5	12	8	15	23.4	24.1	45.9	82.9	1700	1080	1080	1580	6790	ARC 35 FN

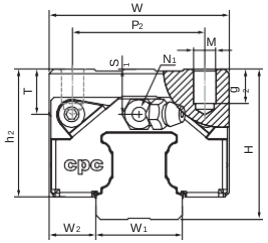
1. The load capacities is for full-ball type (without ball chain)
2. N2 = Injecting holes
3. N3 = O-ring size for lubrication from above
4. N2 .N3 will be sealed before shipmant, please open it when first using the product.

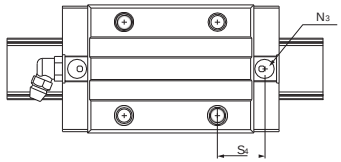


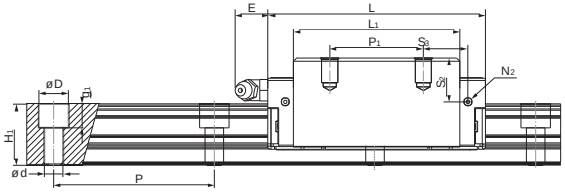




The above rating load capacities and static moments are calculated according to the ISO14728 standard. The rating life for basic dynamic load ratings is defined as the total 100km travel distance for 90% of a group of identical linear guides, under the same conditions and free from any material damage caused by rolling fatigue. If a standard of 50km travel distance is applied to measure the average product lifespan, the above basic dynamic load rating C should be multiplied by 1.26 for an accurate conversion.







HRC MN Series

Model Code	Mounting Dimensions		Rail Dimensions(mm)				Block Dimensions(mm)											Block Dimensions(mm)							Load Capacities (KN)		Static Moment (Nm)			Weight		Model Code
	H	W2	W1	H1	P	D x d x g1	W	L	L1	h2	P1	P2	P3	M x g2	M1	T	N1	N2	N3	E	S1	S2	S3	S4	C	C0	Mr0	Mp0	My0	Block(g)	Rail(g/m)	
HRC 15 MN	28	9.5	15	15	60	7.5x4.5x5.3	34	55.5	40.3	24.7	26	26	-	M4x7	-	6	M3x6.5	M3x6	P3	3.5	8.5	11.5	9.8	10.9	9.9	17.5	140	105	105	200	1290	HRC 15 MN
HRC 20 MN	30	12	20	20	60	9.5x6x8.5	44	69	52	25	36	32	-	M5x8.5	-	8	M3x7.5	M3x5.5	P4	10	6	9.4	11	11.7	17.1	30.0	325	230	230	318	2280	HRC 20 MN
HRC 25 MN	40	12.5	23	23	60	11x7x9	48	81.2	62.2	34	35	35	-	M6x9	-	12	M6x7.5	M3x6.5	P4	12	12	16.3	16.6	17.6	24.8	42.5	540	385	385	578	3020	HRC 25 MN
HRC 30 MN	45	16	28	27	80	14x9x12	60	95.5	71.5	38.4	40	40	-	M8x12	-	12	M6x8.5	M6x5	P5	12	10.5	15	20.8	20.5	32.8	53.7	845	565	565	896	4380	HRC 30 MN
HRC 35 MN	55	18	34	32	80	14x9x12	70	111.2	86.2	47.4	50	50	-	M8x13	-	14	M6x10	M6x7	P5	12	15	22	23.4	24.1	45.9	82.9	1700	1080	1080	1430	6790	HRC 35 MN
HRC 45 MN	70	20.5	45	39	105	20x14x17	86	135.5	102.5	60.7	60	60	-	M10x20	-	14	PT1/8x12.5	M6x10.5	P5	14	21.1	28.1	27.3	27.3	71.3	122.1	3200	1910	1910	2794	10530	HRC 45 MN
HRC 55 MN	80	23.5	53	45.7	120	24x16x20	100	168.5	126.5	68	75	75	-	M12x25	-	16	M6x10	M6x13	P5	12	23.5	33.5	34.8	33.8	128	186	4949	3278	3278	5110	14000	HRC 55 MN

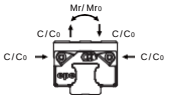
HRC ML Series

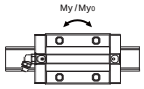
HRC 15 ML	28	9.5	15	15	60	7.5x4.5x5.3	34	76.2	61	24.7	26	26	-	M4x7	-	6	M3x6.5	M3x6	P3	3.5	8.5	11.5	20.1	21.2	13.4	26.9	215	235	235	300	1290	HRC 15 ML
HRC 20 ML	30	12	20	20	60	9.5x6x8.5	44	87.2	70.2	25	50	32	-	M5x8.5	-	8	M3x7.5	M3x5.5	P4	10	6	9.4	13.1	13.8	20.4	38.5	415	390	390	400	2280	HRC 20 ML
HRC 25 ML	40	12.5	23	23	60	11x7x9	48	105	86	34	50	35	-	M6x9	-	12	M6x7.5	M3x6.5	P4	12	12	16.3	21	22	30.7	57.7	735	710	710	685	3020	HRC 25 ML
HRC 30 ML	45	16	28	27	80	14x9x12	60	118	94	38.4	60	40	-	M8x12	-	12	M6x8.5	M6x5	P5	12	10.5	15	21.7	21.8	39.6	70.2	1105	950	950	1150	4380	HRC 30 ML
HRC 35 ML	55	18	34	32	80	14x9x12	70	136.6	111.6	47.4	72	50	-	M8x13	-	14	M6x10	M6x7	P5	12	15	22	25.1	25.8	54.7	106.5	2185	1755	1755	1953	6790	HRC 35 ML
HRC 45 ML	70	20.5	45	39	105	20x14x17	86	171.5	138.5	60.7	80	60	-	M10x20	-	14	PT1/8x12.5	M6x10.5	P5	14	21.1	28.1	35	35	89.5	169.1	4430	3460	3460	4060	10530	HRC 45 ML
HRC 55 ML	80	23.5	53	45.7	120	24x16x20	100	202	160	68	95	75	-	M12x25	-	16	M6x10	M6x13	P5	12	23.5	33.5	41.5	40.5	147	226	6472	5284	5284	6243	14000	HRC 55 ML

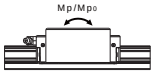
ERC Series

ERC 25 MS	36	12.5	23	23	60	11x7x9	48	57.4	38.4	30	-	35	-	M6x9	-	8	M6x7.5	M3x6.5	P4	12	8	12.3	22.2	23.2	18.2	27.3	350	160	160	315	3020	ERC 25 MS
ERC 25 MN	36	12.5	23	23	60	11x7x9	48	81.2	62.2	30	35	35	-	M6x9	-	8	M6x7.5	M3x6.5	P4	12	8	12.3	16.6	17.6	24.8	42.5	540	385	385	470	3020	ERC 25 MN
ERC 25 M L	36	12.5	23	23	60	11x7x9	48	105	86	30	50	35	-	M6x9	-	8	M6x7.5	M3x6.5	P4	12	8	12.3	21	22	30.7	57.7	735	710	710	610	3020	ERC 25 M L

1. The load capacities is for full-ball type (without ball chain)
2. N2 = Injecting holes
3. N3 = O-ring size for lubrication from above
4. N2 .N3 will be sealed before shipmant, please open it when first using the product.



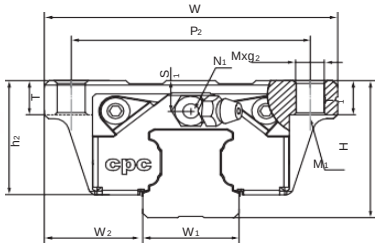


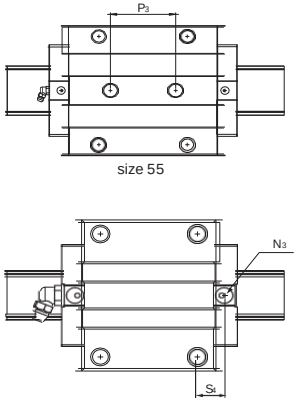


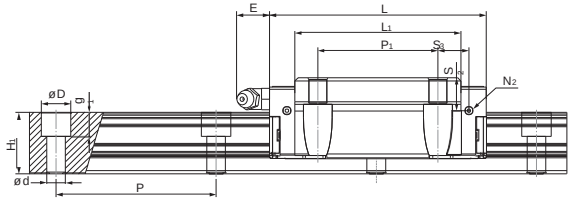
The above rating load capacities and static moments are calculated according to the ISO14728 standard. The rating life for basic dynamic load ratings is defined as the total 100km travel distance for 90% of a group of identical linear guides, under the same conditions and free from any material damage caused by rolling fatigue. If a standard of 50km travel distance is applied to measure the average product lifespan, the above basic dynamic load rating C should be multiplied by 1.26 for an accurate conversion.

METROFA
MECHATRONICS SOLUTIONS

Dimensions Table







Model Code	Mounting Dimensions		Rail Dimensions(mm)				Block Dimensions(mm)											Block Dimensions(mm)							Load Capacities (KN)		Static Moment (Nm)			Weight		Model Code
	H	W2	W1	H1	P	Dxdxg1	W	L	L1	h2	P1	P2	P3	Mxg2	M1	T	T1	N1	N2	N3	E	S1	S2	S3	S4	C	C0	Mr0	Mp0	My0	Block(g)	Rail(g/m)	
HRC 15 FN	24	16	15	15	60	7.5x4.5x5.3	47	55.5	40.3	20.7	30	38	-	M5x7	M4	7	7	M3x6.5	M3x6	P3	3.5	4.5	7.5	7.8	8.9	9.9	17.5	140	105	105	190	1290	HRC 15 FN
HRC 20 FN	30	21.5	20	20	60	9.5x6x8.5	63	69	52	25	40	53	-	M6x10	M5	10	10	M3x7.5	M3x5.5	P4	10	6	9.4	9	9.7	17.1	30.0	325	230	230	396	2280	HRC 20 FN
HRC 25 FN	36	23.5	23	23	60	11x7x9	70	81.2	62.2	30	45	57	-	M8x12	M6	12	12	M6x7.5	M3x6.5	P4	12	8	12.3	11.6	12.6	24.8	42.5	540	385	385	626	3020	HRC 25 FN
HRC 30 FN	42	31	28	27	80	14x9x12	90	95.5	71.5	35.2	52	72	-	M10x12	M8	12	12	M6x8.5	M6x5	P5	12	7.5	12	14.8	14.5	32.8	53.7	845	565	565	1110	4380	HRC 30 FN
HRC 35 FN	48	33	34	32	80	14x9x12	100	111.2	86.2	40.4	62	82	-	M10x12	M8	12	12	M6x10	M6x7	P5	12	8	15	17.4	18.1	45.9	82.9	1700	1080	1080	1550	6790	HRC 35 FN
HRC 45 FN	60	37.5	45	39	105	20x14x17	120	135.5	102.5	50.7	80	100	-	M12x15	M10	15	15	PT1/8x12.5	M6x10.5	P5	14	11.1	18.1	17.3	17.3	71.3	122.1	3200	1910	1910	2747	10530	HRC 45 FN
HRC 55 FN	70	43.5	53	45.7	120	24x16x20	140	168.5	126.5	58	95	116	70	M14x18	M12	18	18	M6x10	M6x13	P5	12	13.5	23.5	24.8	23.8	128	186	4949	3278	3278	5440	14000	HRC 55 FN

HRC 20 FL	30	21.5	20	20	60	9.5x6x8.5	63	87.2	70.2	25	40	53	-	M6x10	M5	10	10	M3x7.5	M3x5.5	P4	10	6	9.4	18.1	18.8	20.4	38.5	415	390	390	504	2280	HRC 20 FL
HRC 25 FL	36	23.5	23	23	60	11x7x9	70	105	86	30	45	57	-	M8x12	M6	12	12	M6x7.5	M3x6.5	P4	12	8	12.3	23.5	24.5	30.7	57.5	735	710	710	870	3020	HRC 25 FL
HRC 30 FL	42	31	28	27	80	14x9x12	90	118	94	35.2	52	72	-	M10x12	M8	12	12	M6x8.5	M6x5	P5	12	7.5	12	25.7	25.8	39.6	70.2	1105	950	950	1385	4380	HRC 30 FL
HRC 35 FL	48	33	34	32	80	14x9x12	100	136.6	111.6	40.4	62	82	-	M10x12	M8	12	12	M6x10	M6x7	P5	12	8	15	30.1	30.8	54.7	106.5	2185	1755	1755	2000	6790	HRC 35 FL
HRC 45 FL	60	37.5	45	39	105	20x14x17	120	171.5	138.5	50.7	80	100	-	M12x15	M10	15	15	PT1/8x12.5	M6x10.5	P5	14	11.1	18.1	35	35	89.5	169.1	4430	3460	3460	4280	10530	HRC 45 FL
HRC 55 FL	70	43.5	53	45.7	120	24x16x20	140	202	160	58	95	116	70	M14x18	M12	18	18	M6x10	M6x13	P5	12	13.5	23.5	41.5	40.5	147	226	6472	5284	5284	6963	14000	HRC 55 FL

1. The load capacities is for full-ball type (without ball chain)
2. N2 = Injecting holes
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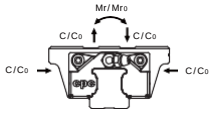

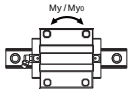

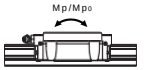

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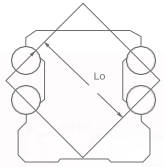
Pro duc t Overview

AR/HR/ER Lightweight Linear Guide Product Chara cteristics

The **cpc** lightweight Ball Type Linear Guide Series adopts a unique O-type arrangement and four row ball circulation design, featuring high lo ad c apa cities and stiffness. The c onta ct angle between the rail and the ball is 45 degrees and enables an equal load capacity in all 4 directions.
Among the AR/HR/ER Lightweight Line ar Guides, two of the four circulation channels are positione d within the plastic accessorie s, reducing the block weight by 10~20%.
Our Stainless steel reinforcement plate has scraper functions while our L design fastens the screws onto the top and bottom of the runner block, reinforcing the rigidity of both the end c aps and cladding; thereby further enabling the high speed movement of products. Our AR/HR/ER Lightweight Linear Guide also provides preload classes of VC and V0 etc.
This is to enhanc e the dimension toleranc e and to further satisfy the c onvenienc e for our customers pro c essed c omponent requirements and to further reduce the cost for such manufa cturing work.

- High velocity tolerance
- Four directional load c apacity.
- Utilizing the same rail as ARC /HRC /ERC
- Lightweight steel block reflow hole design
- Processed acc essories m atch dimension tolerance
- vertic al (downward) and reverse (upward) bolting tra ck railsavailable.



All-directional lubrication nozzles and replenishment system

- Available for special surfa ce treatment
- Excellent dynamic performance: Rea ch Vmax > 5m/s Reach amax > 300m/s²
- Dust protection of double wipe blade design in the end seal; equipped aseither standard or extra reinforcement type

Accuracy

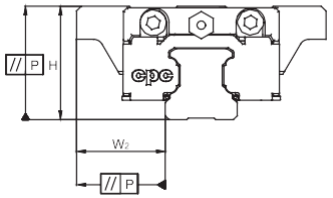


Table of accuracy

Accura cygrades (μm)		H	N
Admissible tolerance for dimension height H	H	±40	±100
Variation of height for different runner blocks on the same rail position	ΔH	15	30
Tolerance of dimension width W2	W2	±20	±40
Variation of width for different runner blocks on the same rail position	ΔW2	15	30

For parallel datum plane motion a ccura cy of runner blo ck in c ontrast to the line ar guid e, ple ase refer to P13

Preload and clerance

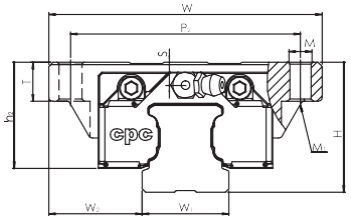
AR/HR/ER						
Class	Description	Preload Value	Clearance (μm)			Application
			15	20	25	
VC	Clearance	0	+10~+2	+10~+2	+11~+3	Extremely Smooth motion, low friction
V0	Light preload	0.02C	+2~-4	+2~-5	+3~-6	For precision applic ations, smooth motion

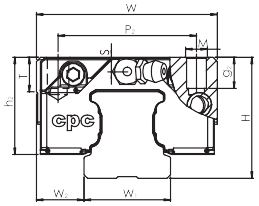
Ordering information

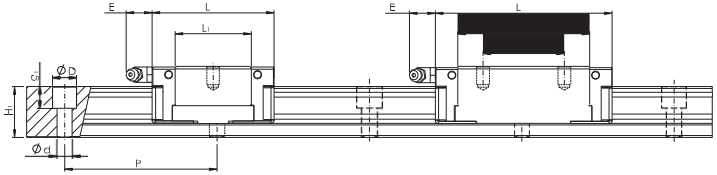
	U		M		B		Z		H		-20		II	/J

- /J: Customization code (Ple ase refer to P14)
- II: Number of rails on thesame moving axis
- -20: End hole pit ch (mm)
- Starting hole pitch (mm)
- Rail length (mm)
- H: Accura cy grad e : H, N
- Prelo ad class : VC, V0
- Z: with lubric ation storag e pad
- Blo ck quantity
- Seal typ e : B: Low friction S: Standard
- Blo ck length : L: long N: standard S: short
- M: Blo ck width : M: standard F: flang e d
- Blo ck typ e : 15, 20, 25
- U: rail (tapp e d from the bottom)
- Pro duc t typ e : AR: autom ation series HR/ ER: he avy lo ad series

Dimensions Table







AR Series

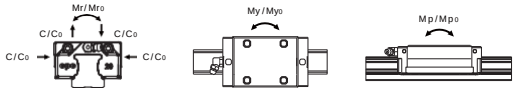
Model Code	Mounting Dimensions		Rail Dimensions(mm)				Block Dimensions(mm)							Block Dimensions(mm)				Load Capacities (KN)			Static Moment (Nm)			Weight		Model Code
	H	W2	W1	H1	P	Dx dx g1	W	L	L1	h2	P1	P2	E	M x g2	M1	S	T	Ciso 100km	Ciso 50km	C0	Mr0	Mp0	My0	Block(g)	Rail(g/m)	
AR 15 FS	24	18.5	15	15	60	7.5x4.5x5.3	52	40.8	24.2	20.1	-	41	4.5	M5x7	M4	4	7	6.4	8.1	10.8	80	40	40	120	1290	AR 15 FS
AR 15 FN	24	18.5	15	15	60		52	56.1	39.5	20.1	26	41	4.5	M5x7	M4	4	7	9.0	11.3	17.5	140	100	100	180		AR 15 FN
AR 20 MS	28	11	20	20	60	9.5x6x8.5	42	48.2	30	22.5	-	32	12	M5x7	-	3.5	8	10.9	13.7	16.3	170	80	80	148	2280	AR 20 MS
AR 20 FS	28	19.5	20	20	60		59	48.2	30	22.5	-	49	12	M6x9	M5	3.5	9	10.9	13.7	16.3	170	80	80	185		AR 20 FS
AR 20 FN	28	19.5	20	20	60		59	70.2	52	22.5	32	49	12	M6x9	M5	3.5	9	15.6	19.7	29.8	310	220	220	299		AR 20 FN
AR 25 MS	33	12.5	23	23	60	11x7x9	48	57.2	37	26.6	-	35	12	M6x9	-	5	8	12.3	15.5	21.2	220	110	110	285	3020	AR 25 MS
AR 25 MN	33	12.5	23	23	60		48	80.2	60	26.6	35	35	12	M6x9	-	5	8	18.8	23.7	36.4	410	300	300	380		AR 25 MN
AR 25 FS	33	25	23	23	60		73	57.2	37	26.6	-	60	12	M8x10	M6	5	10	12.3	15.5	21.2	220	110	110	325		AR 25 FS

HR Series

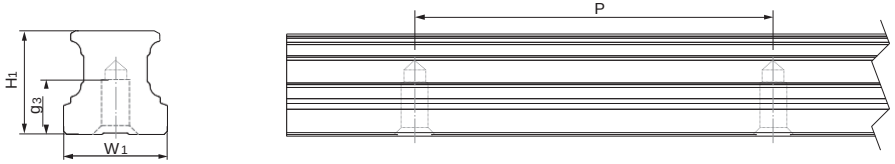
HR 20 FL	30	21.5	20	20	60	9.5x6x8.5	63	90.2	72	24.5	40	53	12	M6x9	M5	5.5	9	20.8	26.2	43.3	430	420	420	496	2280	HR 20 FL
HR 25 MN	40	12.5	23	23	60	11x7x9	48	80.2	60	33.6	35	35	12	M6x9	-	12	12	18.8	23.7	36.4	410	300	300	530	3020	HR 25 MN
HR 25 FL	36	23.5	23	23	60		70	100.2	80	29.6	45	57	12	M8x10	M6	8	10	23.4	29.5	48.5	560	520	520	585		HR 25 FL

ER Series

ER25 MN	36	12.5	23	23	60	11x7x9	48	80.2	60	29.6	35	35	12	M6x9	-	8	8	18.8	23.7	36.4	410	300	300	432	3020	ER25 MN



The above rating load capacities and static moments are calculated according to the ISO14728 standard. The rating life for basic dynamic load ratings is defined as the total 100km travel distance for 90% of a group of identical linear guides, under the same conditions and free from any material damage caused by rolling fatigue. If a standard of 50km travel distance is applied to measure the average product lifespan, the above basic dynamic load rating C should be multiplied by 1.26 for an accurate conversion.

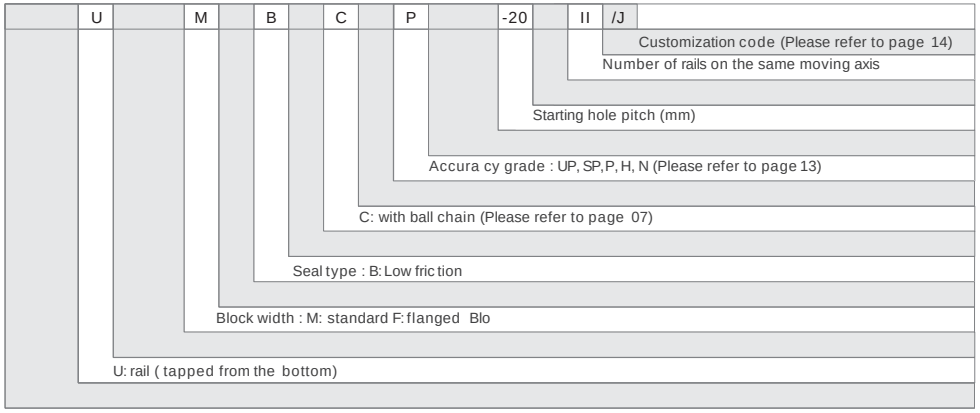


Rail (tapped from the bottom)

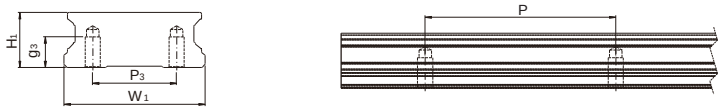
Model Code	W1	H1	P	Mxg3	Lmax	Rail(g/m)
ARU 15	15	15	60	M5x8	4000	1290
ARU 20	20	20	60	M6x10	4000	2280
ARU 25	23	23	60	M6x12	4000	3020
ARU 30	28	27	80	M8x15	4000	4380
ARU 35	34	32	80	M8x15	4000	6790
ARU 45	45	39	105	M12x19	4000	10530
ARU 55	53	45.7	120	M14x24	4000	14060

Type			Nipple size		Grease nipple	Optional			
			Section	Side	Standard	Straight adapter	Tube diameter	L-Type adapter	Tube diameter
ARC15	HRC15	-	M3	M3	A-M3	OA-M3-D4	-	OB-M3-M6	-
ARC20	HRC20	-	M3	M3	B-M3	OA-M3-D4	-	OB-M3-M6	-
ARC25	HRC25	ERC25	M6	M3	B-M6	OA-M6-M8	Ø4	OB-M6-M8	Ø4
ARC30	HRC30	-	M6	M6	B-M6	OA-M6-M8	Ø4	OB-M6-M8	Ø4
						OA-M6-PT1/8	-	OB-M6-PT1/8	-
						OA-M6-G1/8	Ø6		
ARC35	HRC35	-	M6	M6	B-M6	OA-M6-M8	Ø4	OB-M6-M8	-
						OA-M6-PT1/8	-	OB-M6-PT1/8	-
						OA-M6-G1/8	Ø6		
ARC45	HRC45	-	PT1/8	M6	B-PT1/8	OA-PT1/8-M8	Ø4	OB-PT1/8-M8	Ø4
						OA-PT1/8-PT1/8	-	OB-PT1/8-PT1/8	-
						OA-PT1/8-G1/8	Ø6		
ARC55	HRC55	-	M6	M6	B-M6	OA-M6-M8	Ø4	OB-M6-M8	Ø4
						OA-M6-PT1/8	-	OB-M6-PT1/8	-
						OA-M6-G1/8	Ø6		

Model code



WRU Series Rail (tapped from the bottom)



Model Code	W1	H1	P	P3	Mxg3	Lmax	Rail(g/m)
WRU 21/15	37	14.4	50	22	M4x8	4000	3596
WRU 27/20	42	18.5	60	24	M5x7.5	4000	5259

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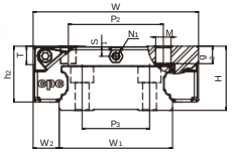
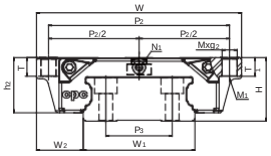
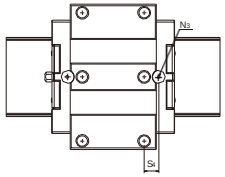
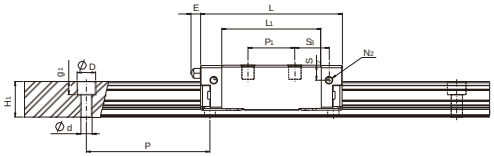


WRC MN



WRC FN





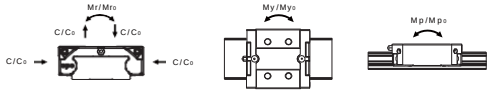
WRC Series

Model Code	Mounting Dimensions		Rail Dimensions(mm)					Block Dimensions(mm)										Block Dimensions(mm)							Load Capacities (KN)			Static Moment (Nm)			Weight		Model Code
	H	W_2	W_1	H_1	P	P_3	Dxdxg1	W	L	L_1	h_2	P_1	P_2	Mxg2	M_1	T	T_1	N_1	N_2	N_3	E	S_1	S_2	S_3	S_4	C_{ISO} 100km	C_{ISO} 50km	C_0	Mr_0	Mp_0	My_0	Block(g)	Rail(g/m)	
WRC 21/15MN	21	8.5	37	14.4	50	22	7.5x4.5x5.3	54	57.5	40.3	18.3	19	31	M5x5	-	6	-	M3	M3x3	P3	3.5	3.3	6.1	13.9	11.9	9.9	12.5	17.5	315	105	105	160	3596	WRC 21/15MN
WRC 21/15 FN	21	15.5	37	14.4	50	22	7.5x4.5x5.3	68	57.5	40.3	18.3	29	60	M5x6	M4	6	6	M3	M3x3	P3	3.5	3.3	6.1	8.9	6.9	9.9	12.5	17.5	315	105	105	198	3596	WRC 21/15 FN
WRC 27/20MN	27	10	42	18.5	60	24	7.5x4.5x5.3	62	70	52	23.5	32	46	M6x6	-	10	-	M3	M3x4	P4	3.5	4.5	8	13.2	11.5	17.1	21.5	30	634	230	230	320	5259	WRC 27/20MN
WRC 27/20 FN	27	19	42	18.5	60	24	7.5x4.5x5.3	80	70	52	23.5	40	70	M6x9	M5	9	9	M3	M3x4	P4	3.5	4.5	8	9.2	7.5	17.1	21.5	30	634	230	230	553	5259	WRC 27/20 FN

The above rating load capacities and static moments are calculated according to the ISO14728 standard. The rating life for basic dynamic load ratings is defined as the total 100km travel distance for 90% of a group of identical linear guides under the same conditions and free from any material damage caused by rolling fatigue. If a standard of 50km travel distance is applied to measure the average product lifespan, the above basic dynamic load rating C should be multiplied by 1.26 for an accurate conversion.

WRC...C Series Ball chain type

Model Code	Mounting Dimensions		Rail Dimensions(mm)					Block Dimensions(mm)										Block Dimensions(mm)							Load Capacities (KN)			Static Moment (Nm)			Weight		Model Code
	H	W_2	W_1	H_1	P	P_3	Dxdxg1	W	L	L_1	h_2	P_1	P_2	Mxg2	M_1	T	T_1	N_1	N_2	N_3	E	S_1	S_2	S_3	S_4	C_{cage} 100km	C_{cage} 50km	C_0	Mr_0	Mp_0	My_0	Block(g)	Rail(g/m)	
WRC21/15MN...C	21	8.5	37	14.4	50	22	7.5x4.5x5.3	54	57.5	40.3	18.3	19	31	M5x5	-	6	-	M3	M3x3	P3	3.5	3.3	6.1	13.9	11.9	11.8	14.9	16.2	295	95	95	159	3596	WRC21/15MN...C
WRC21/15FN...C	21	15.5	37	14.4	50	22	7.5x4.5x5.3	68	57.5	40.3	18.3	29	60	M5x6	M4	6	6	M3	M3x3	P3	3.5	3.3	6.1	8.9	6.9	11.8	14.9	16.2	295	95	95	197.5	3596	WRC21/15FN...C
WRC27/20MN...C	27	10	42	18.5	60	24	7.5x4.5x5.3	62	70	52	23.5	32	46	M6x6	-	10	-	M3	M3x4	P4	3.5	4.5	8	13.2	11.5	22.3	28.1	25.7	535	200	200	318	5259	WRC27/20MN...C
WRC27/20FN...C	27	19	42	18.5	60	24	7.5x4.5x5.3	80	70	52	23.5	40	70	M6x9	M5	9	9	M3	M3x4	P4	3.5	4.5	8	9.2	7.5	22.3	28.1	25.7	535	200	200	550	5259	WRC27/20FN...C

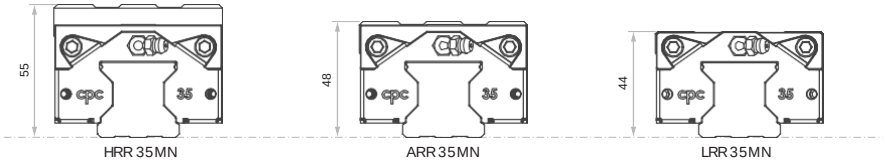


The dynamic load rating value with ball chain Ccage is the measured value (please refer to page 08). The above static load rating and the static moment are calculated according to the ISO 14728 standard.

Product Overview

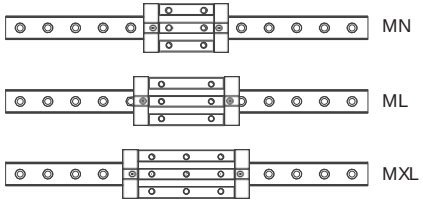
LRR Extremely Low Profile Type

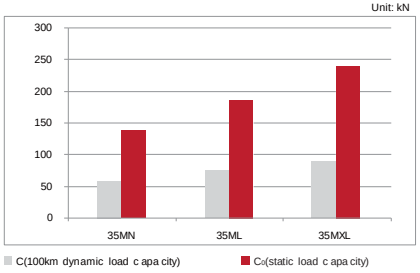
Suitable for conditions where a lower external torque and inertial force is required, this product combines a low height and center of gravity to provide a more compact product. ARR, HRR and LRRs blocks all share the same rail with a similar load capacity and service life.

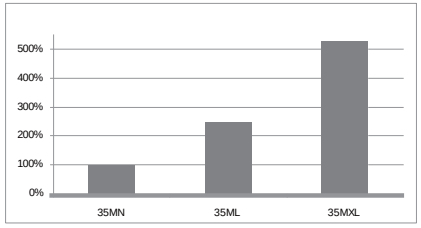


MXL Ultra Long Block Type

Compared to the industry's ML lengthened block, the MXL model's much lengthened block features a greater load, rigidity and shock reduction capability. This makes this model most suitable for machine tools that require super high rigidity and accuracy.







Parts information

Low Noise Roller Chain (Optional)

Our Ball chain design effectively lowers high frequency noise volumes while sliding and enhancing smoothness.
Additionally, the ball chain spacer between steel rollers continuously replenishes the oil film cladding to maintain a better lubrication effect.

(For more information please refer to page 07)

Full Cover Seal (Standard Feature)

All model type are equipped with an "end seal", "bottom seal", and "inner seal" to effectively prevent foreign objects from sliding into the block or lubrication from leaking out.

(For more information please refer to page 03)

High Rigidity Stainless Steel Reinforcement Plate (Standard Feature)

Our L-shaped design is locked with end and bottom screws on the block body. The bottom of the body is equipped with an integrated bolt, which allows for the tight fixing of the reinforcement plate to prevent unnecessary block damage from cracking the plastic mountings.

(For more information please refer to page 06)

Metal-Plastic-Cap (Standard Feature)

Stainless steel covers can demonstrate excellent friction resistance under harsh environments. Inside, the hole plug is equipped with fixed plastic support, enabling for easy installation and direct installation on a standard rail. Contact between the unit support part and stigma screws can prevent overly deep fastening during installation, while also preventing cap indentation and foreign objects from sticking while sliding.

(For more information please refer to page 10)

NBR Seal (Optional)

The seal demonstrates a high dustproof ability to be used in high dust particle working environments, being ideally placed in wood-working machines, glass processing machines, graphite processing machines and grinders. On the outer side of the seal is equipped a stainless steel scraper, with the clearance between the inner and rail contour measuring at only 0.2~0.3mm. This can prevent comparatively large foreign objects from damaging the rubber seal.

(For more information please refer to page 09)

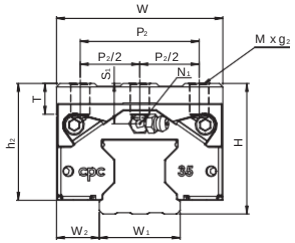
Ordering Information

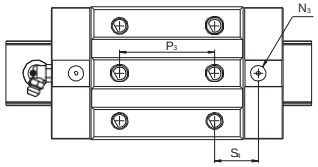
Model Code

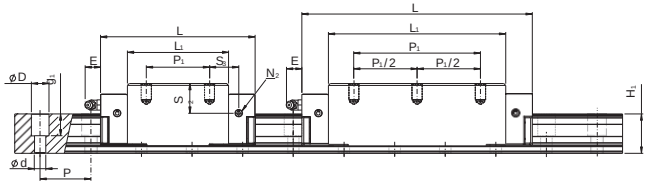
ARR	U	35	M	N	S	2	C	V1	P	-1480L	-20	-20	II	/J

- /J: Customization code (please refer to page 14)
- II: Number of rails on the same moving axis
- -20: End hole pitch(mm)
- -20: Starting hole pitch(mm)
- -1480L: Rail length(mm)
- P: Accuracy grade: UP, SP, P, H (please refer to page 13)
- V1: Preload class: V0, V1, V2
- C: with ball chain (please refer to page 07)
- 2: Block quantity
- S: Seal type: S:standard
- N: Block length: N:standard L:long XL:extra long
- M: Block width: M:standard F:flanged
- 35: Block type: 35
- U: Rail (tapped from the bottom)

Product type: ARR: Low Profile Type HRR: High Profile Type LRR: Extremely Low Profile Type







ARR MN/ ML/ MXL Series

Model Code	Mounting Dimensions		Rail Dimensions(mm)				Block Dimensions(mm)											Block Dimensions(mm)								Load Capacities (KN)		Static Moment (Nm)			Weight		Model Code
	H	W2	W1	H1	P	Dxdxg1	W	L	L1	h2	P1	P1/2	P2	P2/2	P3	Mxg2	M1	T	N1	N2	N3	E	S1	S2	S3	S4	CISO 100km	C0	Mr0	Mp0	My0	Block(g)	Rail(g/m)	
ARR 35MN	48	18	34	31	40	14x9x17	70	122	84	42	50	-	50	25	50	M8x13	-	13	M6x12	M6x8	P5	12	10	16.4	25	25	57	154	2742	1946	1946	1200	5740	ARR 35MN
ARR 35ML	48	18	34	31	40	14x9x17	70	147.5	109.5	42	72	-	50	25	72	M8x13	-	13	M6x12	M6x8	P5	12	10	16.4	26.7	26.7	68.9	196	3525	3226	3226	1750	5740	ARR 35ML

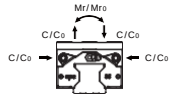
HRR MN/ ML/ MXL Series

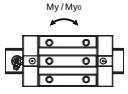
HRR 35MN	55	18	34	31	40	14x9x17	70	122	84	49	50	-	50	25	50	M8x16	-	13	M6x12	M6x8	P5	12	17	23.4	25	25	57	154	2742	1946	1946	1720	5740	HRR 35MN
HRR 35ML	55	18	34	31	40	14x9x17	70	147.5	109.5	49	72	-	50	25	72	M8x16	-	13	M6x12	M6x8	P5	12	17	23.4	26.7	26.7	68.9	196	3525	3226	3226	2100	5740	HRR 35ML
HRR35MXL	55	18	34	31	40	14x9x17	70	177.5	139.5	49	100	50	50	25	100	M8x16	-	13	M6x12	M6x8	P5	12	17	23.4	27.7	27.7	82	245	4439	5111	5111	2700	5740	HRR35MXL

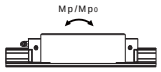
LRR MN/ ML/ MXL Series

LRR 35MN	44	18	34	31	40	14x9x17	70	122	84	38	50	-	50	25	50	M8x9	-	9	M6x12	M6x8	P5	12	6	12.4	25	25	57	154	2742	1946	1946	1100	5740	LRR 35MN
LRR 35 ML	44	18	34	31	40	14x9x17	70	147.5	109.5	38	72	-	50	25	72	M8x9	-	9	M6x12	M6x8	P5	12	6	12.4	26.7	26.7	68.9	196	3525	3226	3226	1500	5740	LRR 35 ML
LRR35MXL	44	18	34	31	40	14x9x17	70	177.5	139.5	38	100	50	50	25	100	M8x9	-	9	M6x12	M6x8	P5	12	6	12.4	27.7	27.7	82	245	4439	5111	5111	1900	5740	LRR35MXL

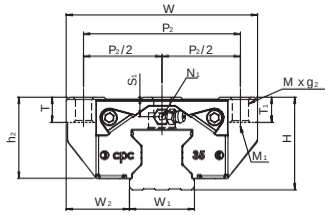
1. The load capacity is measured for the full-ball type (without ball chain)
2. N2 = Injecting holes
3. N3 = O-ring size for lubrication from above
4. N2 .N3 will be sealed before shipmant, please open it when first using the product.

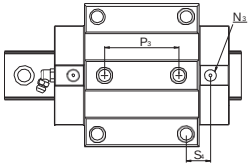


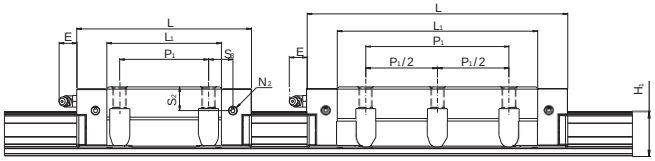




The above rating load capacities and static moments are calculated according to the ISO14728 standard. The rating life for basic dynamic load ratings is defined as the total 100km travel distance for 90% of a group of identical linear guides, under the same conditions and free from any material damage caused by rolling fatigue. If a standard of 50km travel distance is applied to measure the average product lifespan, the above basic dynamic load rating C should be multiplied by 1.26 for an accurate conversion.







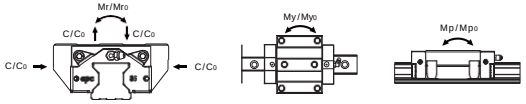
HRR FN/FL/FXL Series

Model Code	Mounting Dimensions		Rail Dimensions(mm)				Block Dimensions(mm)												Block Dimensions(mm)								Load Capacities (KN)		Static Moment (Nm)			Weight		Model Code
	H	W2	W1	H1	P	Dxdxg1	W	L	L1	h2	P1	P1/2	P2	P2/2	P3	Mxg2	M1	T	T1	N1	N2	N3	E	S1	S2	S3	S4	CISO 100km	C0	Mr0	Mp0	My0	Block(g)	Rail(g/m)	
HRR 35FN	48	33	34	31	40	14x9x17	100	122	84	42	62	-	82	41	52	M10x13	M8	13	13	M6x12	M6x8	P5	12	10	16.4	19	19	57	154	2742	1946	1946	1700	5740	HRR 35FN
HRR 35FL	48	33	34	31	40	14x9x17	100	147.5	109.5	42	62	-	82	41	52	M10x13	M8	13	13	M6x12	M6x8	P5	12	10	16.4	31.7	31.7	68.9	196	3525	3226	3226	2400	5740	HRR 35FL
HRR 35FXL	48	33	34	31	40	14x9x17	100	177.5	139.5	42	100	50	82	41	100	M10x13	M8	13	13	M6x12	M6x8	P5	12	10	16.4	27.7	27.7	82	245	4439	5111	5111	3100	5740	HRR 35FXL

LRR FN/FL/FXL Series

LRR 35FN	44	33	34	31	40	14x9x17	100	122	84	38	62	-	82	41	52	M10x9	M8	9	9	M6x12	M6x8	P5	12	6	12.4	19	19	57	154	2742	1946	1946	1550	5740	LRR 35FN
LRR 35FL	44	33	34	31	40	14x9x17	100	147.5	109.5	38	62	-	82	41	52	M10x9	M8	9	9	M6x12	M6x8	P5	12	6	12.4	31.7	31.7	68.9	196	3525	3226	3226	2200	5740	LRR 35FL
LRR 35FXL	44	33	34	31	40	14x9x17	100	177.5	139.5	38	100	50	82	41	100	M10x9	M8	9	9	M6x12	M6x8	P5	12	6	12.4	27.7	27.7	82	245	4439	5111	5111	2800	5740	LRR 35FXL

1. The load capacity is measured for the full-ball type (without ball chain)
2. N2 = Injecting holes
3. N3 = O-ring size for lubrication from above
4. N2 .N3 will be sealed before shipmant, please open it when first using the product.



The above rating load capacities and static moments are calculated according to the ISO14728 standard. The rating life for basic dynamic load ratings is defined as the total 100km travel distance for 90% of a group of identical linear guides, under the same conditions and free from any material damage caused by rolling fatigue. If a standard of 50km travel distance is applied to measure the average product lifespan, the above basic dynamic load rating C should be multiplied by 1.26 for an accurate conversion.

METROFA
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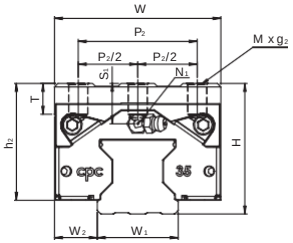
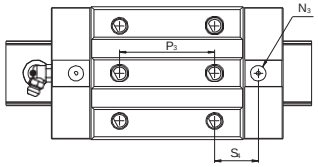
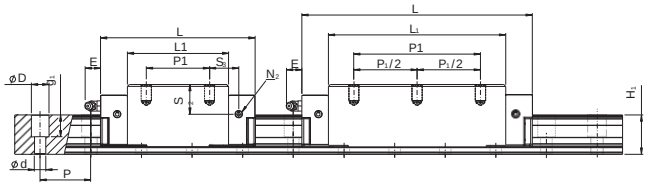






ARR MN/ ML/ MXL...C Series (Ball chain type)

Model Code	Mounting Dimensions		Rail Dimensions(mm)				Block Dimensions(mm)											Block Dimensions(mm)								Load Capacities (KN)		Static Moment (Nm)			Weight		Model Code
	H	W2	W1	H1	P	Dxdxg1	W	L	L1	h2	P1	P1/2	P2	P2/2	P3	Mxg2	M1	T	N1	N2	N3	E	S1	S2	S3	S4	C cage 100km	C0	Mr0	Mp0	My0	Block(g)	Rail(g/m)	
ARR 35MN	48	18	34	31	40	14x9x17	70	122	84	42	50	-	50	25	50	M8x13	-	13	M6x12	M6x8	P5	12	10	16.4	25	25	71.3	133	2350	1710	1710	1200	5800	ARR 35MN
ARR 35ML	48	18	34	31	40	14x9x17	70	147.5	109.5	42	72	-	50	25	72	M8x13	-	13	M6x12	M6x8	P5	12	10	16.4	26.7	26.7	86.1	175	3133	2881	2881	1750	5850	ARR 35ML

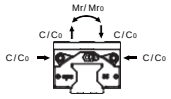
HRR MN/ ML/ MXL...C Series (Ball chain type)

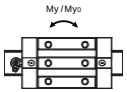
HRR 35MN	55	18	34	31	40	14x9x17	70	122	84	49	50	-	50	25	50	M8x16	-	13	M6x12	M6x8	P5	12	17	23.4	25	25	71.3	133	2350	1710	1710	1720	5721	HRR 35MN
HRR 35ML	55	18	34	31	40	14x9x17	70	147.5	109.5	49	72	-	50	25	72	M8x16	-	13	M6x12	M6x8	P5	12	17	23.4	26.7	26.7	86.1	175	3133	2881	2881	2100	5850	HRR 35ML
HRR35MXL	55	18	34	31	40	14x9x17	70	177.5	139.5	49	100	50	50	25	100	M8x16	-	13	M6x12	M6x8	P5	12	17	23.4	27.7	27.7	102.5	224	4047	4695	4695	2700	5850	HRR35MXL

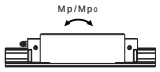
LRR MN/ ML/ MXL...C Series (Ball chain type)

LRR 35MN	44	18	34	31	40	14x9x17	70	122	84	38	50	-	50	25	50	M8x9	-	9	M6x12	M6x8	P5	12	6	12.4	25	25	71.3	133	2350	1710	1710	1100	5850	LRR 35MN
LRR 35 ML	44	18	34	31	40	14x9x17	70	147.5	109.5	38	72	-	50	25	72	M8x9	-	9	M6x12	M6x8	P5	12	6	12.4	26.7	26.7	86.1	175	3133	2881	2881	1500	5850	LRR 35 ML
LRR35MXL	44	18	34	31	40	14x9x17	70	177.5	139.5	38	100	50	50	25	100	M8x9	-	9	M6x12	M6x8	P5	12	6	12.4	27.7	27.7	102.5	224	4047	4695	4695	1900	5850	LRR35MXL

1. N2 = Injecting holes
2. N3 = O-ring size for lubric ation from above
3. N2 .N3 will be sealed before shipmant, please open it when first using the product.

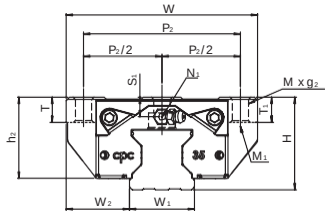


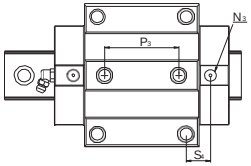


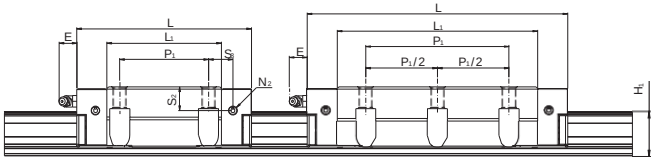


The me asure d value is the dyna mic lo ad rating value with ball chain Cc age. The above static load rating and the static moment are c alculated a ccording to the ISO 14728standard.

METROFA
MECHATRONICS SOLUTIONS







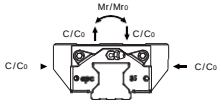
HRR FN/FL/FXL...C Series (Ball chain type)

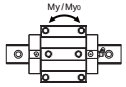
Model Code	Mounting Dimensions		Rail Dimensions(mm)				Block Dimensions(mm)												Block Dimensions(mm)							Load Capacities (KN)		Static Moment (Nm)			Weight		Model Code
	H	W_2	W_1	H_1	P	Dxdxg$_1$	W	L	L_1	h_2	P_1	$P_1/2$	P_2	$P_2/2$	P_3	Mxg$_2$	M_1	T	T_1	N_1	N_2	N_3	E	S_1	S_2	S_3	S_4	$C_{cage\ 100km}$	C_0	Mr_0	Mp_0	My_0	Block(g)	Rail(g/m)	
HRR 35FN	48	33	34	31	40	14x9x17	100	122	84	42	62	-	82	41	52	M10x13	M8	13	13	M6x12	M6x8	P5	12	10	16.4	19	19	71.3	133	2350	1710	1710	1700	5800	HRR 35FN
HRR 35FL	48	33	34	31	40	14x9x17	100	147.5	109.5	42	62	-	82	41	52	M10x13	M8	13	13	M6x12	M6x8	P5	12	10	16.4	31.7	31.7	86.1	175	3133	2881	2881	2400	5800	HRR 35FL
HRR 35FXL	48	33	34	31	40	14x9x17	100	177.5	139.5	42	100	50	82	41	100	M10x13	M8	13	13	M6x12	M6x8	P5	12	10	16.4	27.7	27.7	102.5	224	4047	4695	4695	3100	5800	HRR 35FXL

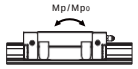
LRR FN/FL/FXL...C Series (Ball chain type)

LRR 35FN	44	33	34	31	40	14x9x17	100	122	84	38	62	-	82	41	52	M10x9	M8	9	9	M6x12	M6x8	P5	12	6	12.4	19	19	71.3	133	2350	1710	1710	1550	5800	LRR 35FN
LRR 35FL	44	33	34	31	40	14x9x17	100	147.5	109.5	38	62	-	82	41	52	M10x9	M8	9	9	M6x12	M6x8	P5	12	6	12.4	31.7	31.7	86.1	175	3133	2881	2881	2200	5800	LRR 35FL
LRR 35FXL	44	33	34	31	40	14x9x17	100	177.5	139.5	38	100	50	82	41	100	M10x9	M8	9	9	M6x12	M6x8	P5	12	6	12.4	27.7	27.7	102.5	224	4047	4695	4695	2800	5800	LRR 35FXL

1. N_2 = Injecting holes
2. N_3 = O-ring size for lubric ation from above
3. N_2 .N_3 will be sealed before shipmant, please open it when first using the product.







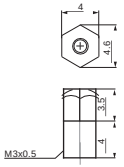
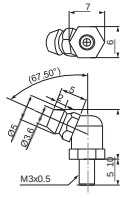
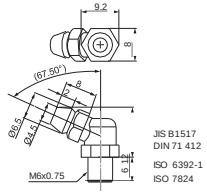
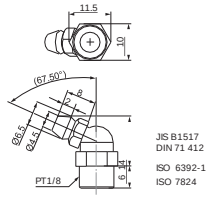
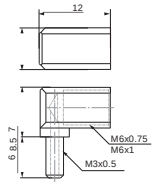
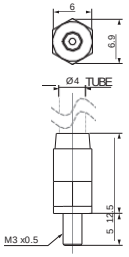
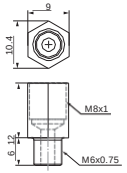
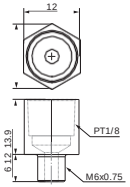
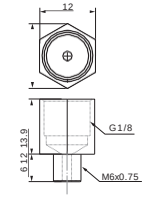
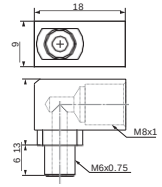
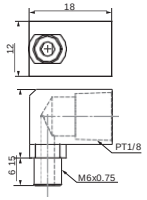
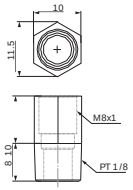
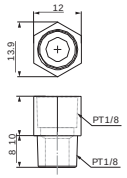
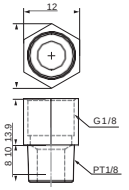
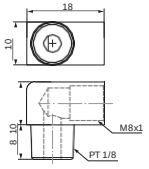
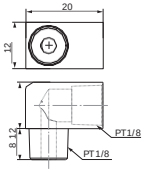
The me asure d value isthe dyna mic lo ad rating value with ball chain Cc age. The above static load rating and the static moment are c alculated a ccording to the ISO 14728standard.

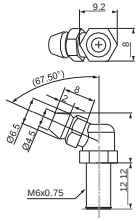
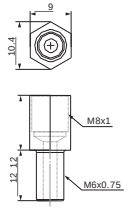
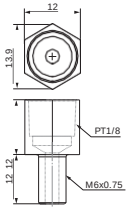
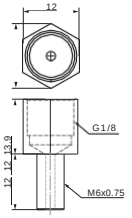
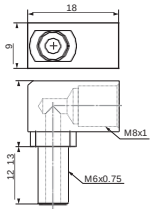
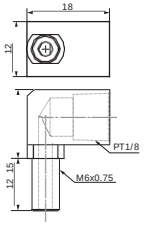
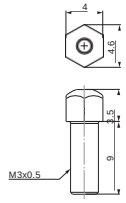
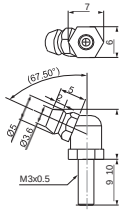
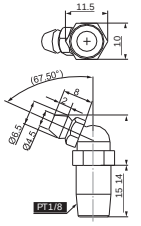
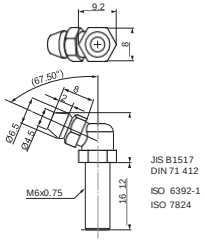
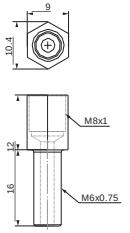
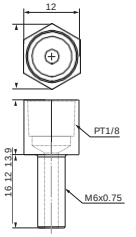
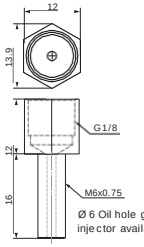
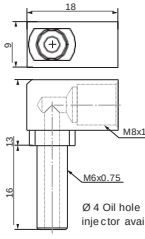
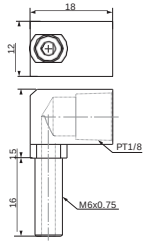
Nipple Option

Grease nipple / Oil piping joint

- The L type nipple is for both ball bearing and roller type external seals (SN)
- The XL type nipple is for the roller type external seal (SN)

Note: in case of need for customization or special requirements, please contact **cpc**

A - M3	B- M3	B- M6	B-P T1/8
			
OB-M3-M6	**OA-M3-D4**	**OA-M6-M8**	**OA-M6-PT1/8**
		 Ø 4 Oil hole grease injector available	
OA-M6-G1/8	**OB-M6-M8**	**OB-M6-PT1/8**	**OA-PT1/8-M8**
 Ø 6 Oil hole grease injector available	 Ø 4 Oil hole grease injector available		 Ø 4 Oil hole grease injector available
OA-PT1/8-PT1/8	**OA-PT1/8-G1/8**	**OB-PT1/8-M8**	**OB-PT1/8-PT1/8**
	 Ø 6 Oil hole grease injector available	 Ø 4 Oil hole grease injector available	

B- M6-L	OA-M6-M8-L	OA-M6-PT1/8-L	OA-M6-G1/8-L
	 Ø 4 Oil hole grease injector available		 Ø 6 Oil hole grease injector available
OB-M6-M8-L	**OB-M6-PT1/8-L**	**A - M3-L**	**B- M3-L**
 Ø 4 Oil hole grease injector available			
B-P T1/8-L	**B- M6-XL**	**OA-M6-M8-XL**	**OA-M6-PT1/8-XL**
		 Ø 4 Oil hole grease injector available	
OA-M6-G1/8-XL	**OB-M6-M8-XL**	**OB-M6-PT1/8-XL**	
 Ø 6 Oil hole grease injector available	 Ø 4 Oil hole grease injector available		

Lubric ation Kit and Grease Gun

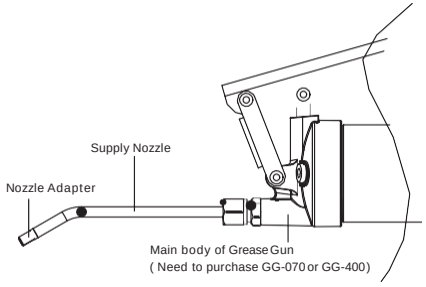
The **cpc** Lubric ation Unit isa supply nozzle with 3 different sizes of nozzle adaptors. These nozzle adaptors are suitable for differently size d gre ase nipples on different size d line ar blo cks.

Nipple Option

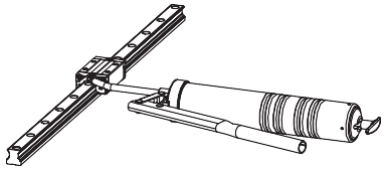
Type			Nipple Size		Nipple Type
			Section	Side	Standard
ARC15	HRC15	-	M3	M3	A-M3
ARC20	HRC20	-	M3	M3	B-M3
ARC25	HRC25	ERC25	M6	M3	B-M6
ARC30	HRC30	-	M6	M6	B-M6
ARC35	HRC35	-	M6	M6	B-M6
ARC45	HRC45	-	PT1/8	M6	B-PT1/8
ARC55	HRC55	-	M6	M6	B-M6

GP-PT1/8-01 Lubric ation Kit

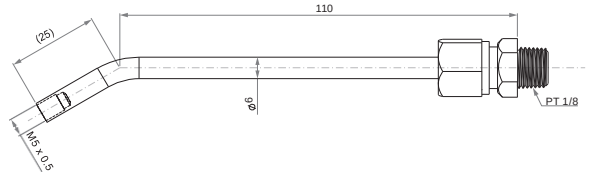
The Lubric ation Kit comes equipped with a supply nozzle (GT-1/8-M5) and three kinds of different nozzle adaptors (GH-M5-MR, GH-M5-06, GH-M5-08).
The supply nozzle can be mounted on the main body of the common manual or pneumatic grease gun with PT1/8 tapped connectors widely available on the market.



Greasing Diagram

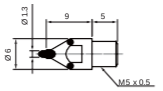
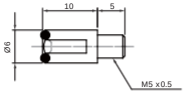
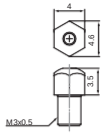
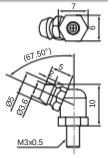
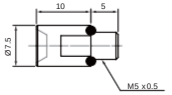
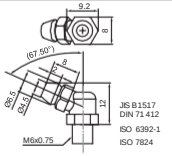
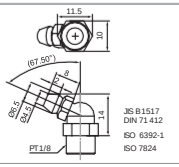


Supply Nozzle

Type	Dimension
GT-PT1/8-M5	

Nozzle Adapter

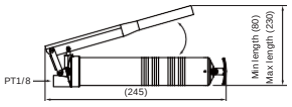
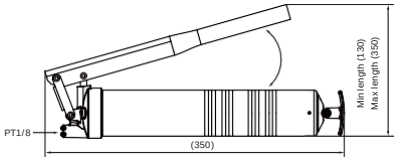
Unit: mm

Type	Dimension	Grease Nipple	
GH-M5-MR		MR series Min a ture line ar g uide size MR-15M> MR-15W MR-12M> MR-12W	
GH-M5-06		A- M 3 A-M3X	
		B- M 3 B-M3X	
GH-M5-08		B- M 6 B-M6X	
		B-PT1/8 B-PT1/8X	

Main body of Grease Gun

O p tion for the m ain b o d y of the Gre ase Gun: GG-070 for 70 g volume gre ase pa ck a n d GG-400 for 400 g volume gre ase pa ck.

Unit: mm

Type	Dimension	Feature
GG-070		1. Pressure: 27Mpa 2. Output Volume: 0.5~0.7 c.c/stroke 3. Gre ase: Suitable for 70g volume gre ase pack or bulk lo ading
GG-400		1.Pressure: 62Mpa 2.Output Volume: 1.0~1.2 c.c/stroke 3 . Gre ase: Suitable for 400gvolume gre ase pa ck or bulk loading

cpc AR/HR Z Series Lubric ation Storage Pad Testing Report

A line ar guide is a c ategory of rolling guidance systems. By using unlimite d recirc ulating stainless steel balls that operate b etween the ra ceways of the rail and the runner blo ck, the c arriag e a chieves high pre cision and low fric tion line ar movement. If the line ar guid es d o not have sufficient lubric ation, rolling fric tion will increase, c ausing wear and shortened linear guide lifespan.

cpc has added and embedded PU lubric ant storage pads to prolong the life of the linear guide; the pads dire ctly c onta ct and lubric ate the rolling balls. Thisdesign supplies sufficient lubric ation even in short stroke operations.

cpc 's d esign, due to the em b e dd e d pads absorption and retention c apabilities, results in a pro duc t that fe atures a long o p eration life and long-term lubric ation.

Following are the results of **cpc**'s in-house testing.

AR15 Lubric ation Storage Pad Testing Data

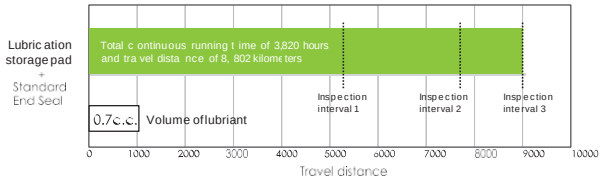
Tested products: AR15 blocks with lubric ation storage pads, 8 pieces, and AR15 rails, N a ccura cy grade, 1500mm Length, 4 pieces

Testing condition	
Rating load capacities(each Block)	1.8KN(C=9KN、C0=17.5KN)
Stroke	0.96m
Max running speed	1m/s
Lubricant	DAPHNE SUPER MULTI 68 (Viscosity64.32 CST 40OC)
Lubrication period	No lubrication added during testing period

Testing equipment

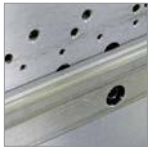
Testing result

Dried lubric ant residue started appearing on rail profile, PUpads, and ball retainer of the tested blocks



Test results at inspection intervals

Inspection intervals 1 and 2 Inspection interval 3



No wear on rail profile

Some rail profiles have dried lubric ant present.

Inspection intervals 1 and 2: Lubric ation Maintained

- Upward lubric ation storage pads in good condition.
- Lubric ant supply in good condition.
- No wear on the running profile of the rail.

- Downward lubric ation storage pads in good condition.
- Lubricant supply in good condition.

Inspection interval 3: Lubric ant residue

Dried lubric ant residueand breakage on the upward lubric ation storage pads

Drie d lubric ant residue and breakage on the downward lubric ation storage pads.

Plastic parts and end seal in good condition

Plastic parts in good condition

End seal in good condition

Test Summary

Total continuous running time of 3820 hours and travel distanc e of 8802 kilometers.
Out of eight test blo cks, drie d lubric ant residue appeared on 2 blocks and 1 rail.
Drie d lubric ant residue isindicative of a need for relubric ation and thus lengthens the o p erational life of the line ar guide.

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