Distributors for Australia & New Zealand

MOTION TECHNOLOGIES PTY LTD

Northumberland Road
Caringbah NSW 2229 Australia
Phone: (02) 9524 4785
Fax: (02) 9525 3878

Unit 13/54 Smith Road
Springvale VIC 3171 Australia
Phone: (03) 8555 3586
Fax: (03) 8555 3553

sales@motiontech.com.au
www.motiontech.com.au

© 11/6/17

ARC/HRC/ERC Standard 4-Row Ball Bearing Linear Guide
WRC Wide 4-Row Ball Bearing Linear Guide
ARR/HRR/LRR Standard 4-Row Roller-type Linear Guide

www.motiontech.com.au
Contents

ARC/HRC/ERC Standard 4-Row Ball Bearing Linear Guide
ARC/HRC/ERC Overview ................................................................. P01-P02
Product Design (Standard)............................................................. P03-P04
Product Design (Option)............................................................... P07-P10
Installation Notice......................................................................... P11
Technical Information................................................................. P12-P13
Ordering Information................................................................... P14
Dimensions Table......................................................................... P15-P22

AR/HR/ER Lightweight Ball Bearing Linear Guide
AR/HR/ER Overview .................................................................. P23
Technical Information................................................................. P24
Ordering Information................................................................... P24
Dimensions Table......................................................................... P25-P27

WRC Wide 4-Row Ball Bearing Linear Guide
Ordering Information................................................................... P28
Dimensions Table......................................................................... P28-P30

ARR/HRR/LRR 4-Row Roller-type Linear Guide
Product Design............................................................................... P31-P32
Ordering Information................................................................... P32
Dimensions Table......................................................................... P33-P40

Nipple Option
Nipple Option................................................................................ P41-P44

Lubrication Storages Pad Testing Report
Lubrication Storages Pad Testing Report........................................ P45
Contents

ARC/HRC/ERC Standard 4-Row Ball Bearing Linear Guide
- ARC/HRC/ERC Overview ................................................................. P01-P02
- Product Design (Standard) ............................................................. P03-P04
- Product Design (Option) ............................................................... P07-P10
- Installation Notice ......................................................................... P11
- Technical Information .................................................................... P12-P13
- Ordering Information ..................................................................... P14
- Dimensions Table ......................................................................... P15-P22

AR/HR/ER Lightweight Ball Bearing Linear Guide
- AR/HR/ER Overview ....................................................................... P23
- Technical Information .................................................................... P24
- Ordering Information ..................................................................... P24
- Dimensions Table ......................................................................... P25-P27

WRC Wide 4-Row Ball Bearing Linear Guide
- Ordering Information ..................................................................... P28
- Dimensions Table ......................................................................... P28-P30

ARR/HRR/LRR 4-Row Roller-type Linear Guide
- Product Design .............................................................................. P31-P32
- Ordering Information ..................................................................... P32
- Dimensions Table ......................................................................... P33-P40

Nipple Option
- Nipple Option ................................................................................ P41-P44

Lubrication Storages Pad Testing Report
- Lubrication Storages Pad Testing Report ........................................... P45
**Product Overview**

ARC/HRC/ERC Product Characteristics

The CPC ARC/HRC/ERC Linear Guide Series uses the O-type arrangement for the four row ball circulation design. The contact angle between the rail and ball is 45 degrees, and can realize the 4 directional load effects. CPC places special emphasis on strengthening the arm length (Lo), so when sustaining external force F, will have even higher Mr value to increase the rigidity and static moment capability. In addition, the runner block for the same size uses larger and more balls, so will outperform competitor’s models by 10% to 30% regarding load capabilities. The products have characteristics of high load, high moment, and high stiffness.

<table>
<thead>
<tr>
<th>Mode Code</th>
<th>Lo</th>
<th>Hc</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>12.4</td>
<td>9.35</td>
</tr>
<tr>
<td>20</td>
<td>16.4</td>
<td>12.5</td>
</tr>
<tr>
<td>25</td>
<td>19.5</td>
<td>14.5</td>
</tr>
<tr>
<td>30</td>
<td>24.0</td>
<td>17</td>
</tr>
<tr>
<td>35</td>
<td>30.4</td>
<td>19.5</td>
</tr>
<tr>
<td>45</td>
<td>38.2</td>
<td>24</td>
</tr>
<tr>
<td>55</td>
<td>43.1</td>
<td>28.5</td>
</tr>
</tbody>
</table>

F = Mr/Lo (Lx)

**Inner Lubrication storage Pad (Upper)**
- Length of the Runner Block will not be increased
- Full lubrication contact with balls, suitable for short stroke movement.

**End Cap**
- All-Round lubrication holes system
- High abrasion materials end seal
- Standard high dust proof seal
- Low friction seal

**Inner Lubrication storage Pad (Bottom)**
- High Dynamic Load and High Load capabilities
- Excellent dynamic performance: Reach V max x 10 m/s Reach a max x 450 m/s²
- Can provide counterbored holes from the top and tapped mounting holes from the bottom rail
- Can provide special surface treatment
ARC/HRC/ERC Product Characteristics

The CPC ARC/HRC/ERC Linear Guide Series uses the O-type arrangement for the four row ball circulation design. The contact angle between the rail and ball is 45 degrees, and can realize the 4 directional load effects. CPC places special emphasis on strengthening the Arm length (Lo), so when sustaining external force \( F \), will have even higher Mr value to increase the rigidity and static moment capability. In addition, the runner block for the same size uses larger and more balls, so will outperform competitor’s models by 10% to 30% regarding load capabilities. The products have characteristics of high load, high moment, and high stiffness.

\[
F = \frac{M_r}{L_o} (L_x)
\]

<table>
<thead>
<tr>
<th>Mode Code</th>
<th>Lo (mm)</th>
<th>Hc (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>12.4</td>
<td>9.35</td>
</tr>
<tr>
<td>20</td>
<td>16.4</td>
<td>12.5</td>
</tr>
<tr>
<td>25</td>
<td>19.5</td>
<td>14.5</td>
</tr>
<tr>
<td>30</td>
<td>24.0</td>
<td>17.0</td>
</tr>
<tr>
<td>35</td>
<td>30.4</td>
<td>19.5</td>
</tr>
<tr>
<td>45</td>
<td>38.2</td>
<td>24.0</td>
</tr>
<tr>
<td>55</td>
<td>43.1</td>
<td>28.5</td>
</tr>
</tbody>
</table>

- Inner Lubrication storage Pad (Upper)
  - Length of the Runner Block will not be increased
  - Full lubrication contact with balls, suitable for short stroke movement.

- End Cap
  - All-Round lubrication holes system

- Inner Lubrication storage Pad (Bottom)
  - High abrasion materials end seal
  - Standard high dust proof seal
  - Low friction seal

- Ball chain
  - Patented design of reverse operations
  - Quiet and prolong the service life

- stainless steel reinforcement plate
  - Total scraping of objects above 0.3mm
  - Increase X-axis direction force capacity

- High Dynamic Load and High Load capabilities
- Excellent dynamic performance: \( V_{\text{max}} \times 10 \text{ m/s} \) \( a_{\text{max}} \times 450 \text{ m/s}^2 \)
- Can provide counterbored holes from the top and tapped mounting holes from the bottom rail
- Can provide special surface treatment
**Average Friction of Block**

Below is the friction table for Block Body and End Seal under the condition of without any grease.

<table>
<thead>
<tr>
<th>Block Type</th>
<th>Friction caused from ball bearing</th>
<th>Bottom Seals + Inner Seals</th>
<th>End Seal (2 sides)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC/HRC/ERC</td>
<td>S-Type Standard</td>
<td>B-Type Low friction</td>
<td></td>
</tr>
</tbody>
</table>

### Applied example

- **ARC 25MN SZ V1N**
  - Block friction: $1.3 + 2.5 + 3 = 6.8N$
  - HRC 30FL BZ V0P
  - Block friction: $1.4 + 3 + 2 = 6.4N$

**Dustproof Design**

**Inner Seals**
The newly designed inner seals can protect foreign objects from entering the bottom and prevent lubrication from leaking out. With full sealing design, it reduces the amount of oil usage, prolonging the re-lubrication interval, and prolonging the service life.

**Bottom Seals**
The bottom seals prevent foreign objects from entering the bottom and prevent lubrication from leaking out. Full sealing design reduces the amount of oil usage, prolonging the re-lubrication interval, and prolonging the service life.

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

**Standard Seals (S)**
Directly in contact with the rail surface, having better dustproof and lubrication holding capabilities. CPC recommends using this type of seals in environments that are exposed for long durations to high dusts and sawdust, etc. The friction will be higher than B type seals (low friction seals).

**Low Friction Seals (B)**
Suitable for most conditions, with slight contact with the rail, and having both scraping function with low friction.

**Comparison of Friction of Seals**
The friction will be the highest on new linear rails. After short period of operation, friction will be reduced to a constant level.
Average Friction of Block

Below is the friction table for Block Body and End Seal under the condition of without any grease.

### Friction caused from ball bearing

<table>
<thead>
<tr>
<th>Block Type</th>
<th>Preload Class</th>
<th>Bottom Seals + Inner Seals</th>
<th>End Seal (2 sides)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC/HRC/ERC</td>
<td>VC</td>
<td>V0</td>
<td>V1</td>
</tr>
<tr>
<td>15MN/PN</td>
<td>0.30</td>
<td>0.05</td>
<td>0.85</td>
</tr>
<tr>
<td>20MN/PN</td>
<td>0.40</td>
<td>0.75</td>
<td>1.40</td>
</tr>
<tr>
<td>25MN/PN</td>
<td>0.60</td>
<td>0.95</td>
<td>1.30</td>
</tr>
<tr>
<td>30MN/PN</td>
<td>0.55</td>
<td>1.30</td>
<td>2.00</td>
</tr>
<tr>
<td>35MN/PN</td>
<td>0.65</td>
<td>1.25</td>
<td>2.50</td>
</tr>
<tr>
<td>45MN/PN</td>
<td>0.85</td>
<td>2.30</td>
<td>2.80</td>
</tr>
</tbody>
</table>

Unit: N

### Friction caused from ball bearing

<table>
<thead>
<tr>
<th>Block Type</th>
<th>Preload Class</th>
<th>Bottom Seals + Inner Seals</th>
<th>End Seal (2 sides)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC/HRC/ERC</td>
<td>VC</td>
<td>V0</td>
<td>V1</td>
</tr>
<tr>
<td>15MS/FS</td>
<td>0.30</td>
<td>0.60</td>
<td>0.80</td>
</tr>
<tr>
<td>20MS/FS</td>
<td>0.40</td>
<td>0.70</td>
<td>1.10</td>
</tr>
<tr>
<td>25MS/FS</td>
<td>0.50</td>
<td>0.90</td>
<td>1.20</td>
</tr>
<tr>
<td>30MS/FS</td>
<td>0.55</td>
<td>1.00</td>
<td>1.80</td>
</tr>
</tbody>
</table>

Unit: N

### Friction caused from ball bearing

<table>
<thead>
<tr>
<th>Block Type</th>
<th>Preload Class</th>
<th>Bottom Seals + Inner Seals</th>
<th>End Seal (2 sides)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC/HRC/ERC</td>
<td>VC</td>
<td>V0</td>
<td>V1</td>
</tr>
<tr>
<td>15ML/FL</td>
<td>0.40</td>
<td>0.70</td>
<td>0.90</td>
</tr>
<tr>
<td>20ML/FL</td>
<td>0.50</td>
<td>0.80</td>
<td>1.60</td>
</tr>
<tr>
<td>25ML/FL</td>
<td>0.70</td>
<td>1.20</td>
<td>1.80</td>
</tr>
<tr>
<td>30ML/FL</td>
<td>0.80</td>
<td>1.40</td>
<td>2.20</td>
</tr>
<tr>
<td>35ML/FL</td>
<td>0.90</td>
<td>1.60</td>
<td>2.70</td>
</tr>
<tr>
<td>45ML/FL</td>
<td>1.00</td>
<td>2.30</td>
<td>3.50</td>
</tr>
</tbody>
</table>

Unit: N

### Applied example

- **ARC** 25MN SZ V1N
  - Block friction: 1.3+2.5+3 = 6.8N
- **HRC** 30FL BZ V0P
  - Block friction: 1.4+3+2 = 6.4N

[(Diagram of Block Body and End Seal)](image)

### Dustproof Design

#### Inner Seals

The newly designed inner seals can prevent foreign objects from entering the rail and having both scraping function with low friction.

#### Bottom Seals

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

#### End Seals

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

### Standard Seals (S)

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

### Low friction Seals (B)

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

### Comparison of friction of seals

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

Saw wood dust Test

Test content

This test uses a total of 4 groups of products (using 2 rails match with 2 lubrication methods) by putting in saw wood dust and moving them within.

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

- Runner Block:
  1. Installation of standard seals (S), using grease
  2. Installation of lubrication storage Pad and standard seals (SZ), using grease

Testing conditions

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

Test items

1. If Saw wood dust enters the inner parts of the runner block
2. If Saw wood dust enters the ball raceway

Test results

<table>
<thead>
<tr>
<th>Checked Item</th>
<th>ARU Rail 5 Type Runner Block (Grease oil)</th>
<th>ARU Rail 5 Type Runner Block (Grease lubrication)</th>
<th>AR Rail 5 Type Runner Block (Grease oil)</th>
<th>AR Rail 5 Type Runner Block (Grease lubrication)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation status</td>
<td>No</td>
<td>No</td>
<td>Yes (belly area)</td>
<td>No</td>
</tr>
<tr>
<td>Saw wood dust enter inner part of runner block</td>
<td>No</td>
<td>No</td>
<td>Yes (belly area)</td>
<td>No</td>
</tr>
<tr>
<td>Saw wood dust enter ball bearing runner area</td>
<td>No</td>
<td>No</td>
<td>Yes (belly area)</td>
<td>No</td>
</tr>
</tbody>
</table>

Test result

- The tapped from top rail has hole plugs, leading to unevenness of rail, allowing some saw wood dust to enter the runner block belly area. The 2 sides of the runner block belly area is protected by stainless steel reinforcement plates and end seals that completely protect the ball bearing, so the ball bearing runner area is fully protected from Saw wood dust.
- The tapped from bottom rail has even rail surface, so the ball bearing runner area is fully protected from Saw wood dust.

Stainless steel reinforcement plate (Patent)

Both sides are available for scraping function

Using 2 stainless steel reinforcement plates, the L type design can fasten the screws onto the top and bottom of the runner block, reinforcing the rigidity of the end caps and cladding.

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

Function of high speed operation

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

\[ V_{max} > 10 \text{ m/s} \quad a_{max} > 450 \text{ m/s}^2 \]

All-direction Lubrication Nozzles

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

Saw wood dust Test

Test content

This test uses a total of 4 groups of products (using 2 rails match with 2 lubrications methods) by putting in saw wood dust and moving them within.

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

- Runner Block
  1. Installation of standard seals (S), using grease
  2. Installation of lubrication storage Pad and standard seals(SZ), using grease

Testing conditions

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

Test items

1. If Saw wood dust enters the inner parts of the runner block
2. If Saw wood dust enters the ball raceway

Test results

<table>
<thead>
<tr>
<th>Checked Item</th>
<th>Saw wood dust enter inner part of runner block</th>
<th>Saw wood dust enter ball bearing runner area</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARU Rail SZ Type Runner Block (Grease oil)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>ARU Rail S Type Runner Block (Grease lubrication)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>AR Rail SZ Type Runner Block (Grease OH)</td>
<td>Yes (belly area)</td>
<td>No</td>
</tr>
<tr>
<td>AR Rail S Type Runner Block (Grease Lubrication)</td>
<td>Yes (belly area)</td>
<td>No</td>
</tr>
</tbody>
</table>

Test result

- The Tapped from top rail has hole plugs, leading to unevenness of rail, allowing some saw wood dust to enter the runner block belly area. The 2 sides of the runner block belly area is protected by stainless steel reinforcement plates and end seals that completely protect the ball bearing, so the ball bearing runner area is fully protected from saw wood dust.
- The tapped from bottom rail has even rail surface, so the ball bearing runner area is fully protected from saw wood dust.

Stainless steel reinforcement plate (Patent)

Both sides are available for scraping function

Using 2 stainless steel reinforcement plates, the L type design can fasten the screws onto the top and bottom of the runner block, reinforcing the rigidity of the end caps and cladding.

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

Function of high speed operation

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

\[ V_{max} > 10 \text{ m/s} \quad a_{max} > 450 \text{ m/s}^2 \]

All-direction Lubrication Nozzles

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

There are three advantages of ARC/HRC/ERC series with ball chain in compare with traditional block without ball chain:

1. The spaceblock of ball chain can prevent the oil film from rupturing by neighboring ball’s contact and decrease the wear by strong friction.
2. The retainer of ball chain can maintain good quality of oil film by continuously applying grease on the moving part.
3. The ball chain provides the function of the moving and leading the steel balls. The ball chain is pushed by the back steel balls while entering the raceway, so the contact angle between balls and rail is uncertain, and also easy to cause vibration and increase the stress. The block with ball chain, its balls are led by ball chain, so it can fit correctly while entering the raceway and the contact angle will be accurate. Ball chain provides smooth running, less vibration and less stress.

## Load capacity of ball chain

The attached right table shows the Ccage and Ccage/C0 value via testing from different type of machines.

(According to ISO-14728 regulations)

### Static load capacity

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Static rating load(kN)</th>
<th>Static rating torque(kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC-MN C</td>
<td>25</td>
<td>16.2</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>15.4</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>22.4</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>19.8</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>26.5</td>
</tr>
<tr>
<td>ERC-MN C</td>
<td>25</td>
<td>30.0</td>
</tr>
<tr>
<td>ARC-MN C</td>
<td>25</td>
<td>22.5</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>28.5</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>32.3</td>
</tr>
<tr>
<td>ERC-MN C</td>
<td>25</td>
<td>37.0</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>41.3</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>45.7</td>
</tr>
<tr>
<td>ARC-MN C</td>
<td>25</td>
<td>50.0</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>55.0</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>60.0</td>
</tr>
<tr>
<td>ARC-MN C</td>
<td>25</td>
<td>65.0</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>70.0</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>75.0</td>
</tr>
<tr>
<td>ARC-MN C</td>
<td>25</td>
<td>80.0</td>
</tr>
</tbody>
</table>

### Dynamic load capacity

The attached right table shows the Ccage and Ccage/C0 value via testing from different type of machines.

(According to ISO-14728 regulations)

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Dynamic load(kN)</th>
<th>Dynamic rating load torque(kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC-MN C</td>
<td>15</td>
<td>9.4</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>15.4</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>22.4</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>19.8</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>26.5</td>
</tr>
<tr>
<td>ERC-MN C</td>
<td>25</td>
<td>30.0</td>
</tr>
<tr>
<td>ARC-MN C</td>
<td>25</td>
<td>22.5</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>28.5</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>32.3</td>
</tr>
<tr>
<td>ERC-MN C</td>
<td>25</td>
<td>37.0</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>41.3</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>45.7</td>
</tr>
<tr>
<td>ARC-MN C</td>
<td>25</td>
<td>50.0</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>55.0</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>60.0</td>
</tr>
<tr>
<td>ARC-MN C</td>
<td>25</td>
<td>65.0</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>70.0</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>75.0</td>
</tr>
<tr>
<td>ARC-MN C</td>
<td>25</td>
<td>80.0</td>
</tr>
</tbody>
</table>

### Static torque

The C type block of ARC/HRC/ERC will increase the pitch between ballon the operating profile. Therefore, the static rating load Co and the static rating torque Mr, Mp0 and My0 value will be decreased.
**Product Design**

(Option)

Low noise, high quality and high speed design ball chain (Patent)

Ordering code: C

Traditional Ball type linear guide, producing double the speed of slide contact with neighboring balls in different directions for spinning effects. Extremely high friction greatly reduce service life; also, the contact point between balls produce high pressure and noise, and increase the possibility of damage of film cladding.

![Low noise ball chain](Image)

The contact point between balls and ball chain, so the surface pressure is high.

**Traditional Ball type linear guide**

Ball Chain can provide greater contact area between ball and ball chain, so film cladding will eliminate damage and lower noise volume. Balls can move at higher speed and extend its service life.

The size of the ball chain design block is the same as the normal type, and therefore it can use the same rail.

![Low noise ball chain](Image)

**Load capacity of ball chain**

There are three advantages of ARC/HRC/ERC series with ball chain in compare with traditional block without ball chain:

1. The space block of ball chain can prevent the oil film from rupturing by neighboring balls’ contact and decrease the wear by strong friction.
2. The retainer of ball chain can maintain the quality of oil film by continuously applying grease on the moving part.
3. The ball chain provides the function of the moving and leading the steel balls. The block with ball chain, its balls are pushed by the back steel balls while entering the raceway, so the contact angle between balls and rail is uncertain, and also easy to cause vibration and increase the stress. The block with ball chain, its balls are led by ball chain, so it can fit correctly while entering the raceway and the contact angle will be accurate. Ball chain provides smooth running, less vibration and less stress.

**Dynamic rating load**

The attached right table shows the C<sub>cape</sub> and C<sub>cage</sub> value via testing from different type of machines.

(Approximately ISO-14728 regulations)

**Static rating load & Static torque**

The C-type block of ARC/HRC/ERC will increase the pitch between ball on the operating profile. Therefore, the static rating load C0 and the static rating torque M<sub>s</sub>, M<sub>p</sub> and M<sub>y</sub> value will be decreased.

---

**Table:**

<table>
<thead>
<tr>
<th>Model Code</th>
<th>C&lt;sub&gt;cape&lt;/sub&gt; (kN)</th>
<th>C&lt;sub&gt;cage&lt;/sub&gt; (kN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC-MN C</td>
<td>15</td>
<td>9.4</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>20</td>
<td>15.4</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>25</td>
<td>22.4</td>
</tr>
<tr>
<td>HRC-FN C</td>
<td>30</td>
<td>31.0</td>
</tr>
<tr>
<td>ERC-MN C</td>
<td>35</td>
<td>43.7</td>
</tr>
<tr>
<td>ARC-ML C</td>
<td>45</td>
<td>67.6</td>
</tr>
<tr>
<td>HRC-ML C</td>
<td>50</td>
<td>101.4</td>
</tr>
<tr>
<td>ARC-FS C</td>
<td>60</td>
<td>125.7</td>
</tr>
<tr>
<td>ERC-FS C</td>
<td>75</td>
<td>156.0</td>
</tr>
<tr>
<td>ARC-MS C</td>
<td>80</td>
<td>184.2</td>
</tr>
<tr>
<td>HRC-MS C</td>
<td>95</td>
<td>215.0</td>
</tr>
<tr>
<td>ARC-FS C</td>
<td>100</td>
<td>243.0</td>
</tr>
<tr>
<td>ERC-FS C</td>
<td>110</td>
<td>275.0</td>
</tr>
<tr>
<td>ARC-MS C</td>
<td>120</td>
<td>309.0</td>
</tr>
<tr>
<td>HRC-MS C</td>
<td>130</td>
<td>340.0</td>
</tr>
<tr>
<td>ARC-ML C</td>
<td>150</td>
<td>370.0</td>
</tr>
<tr>
<td>HRC-ML C</td>
<td>170</td>
<td>410.0</td>
</tr>
<tr>
<td>ARC-MN C</td>
<td>200</td>
<td>450.0</td>
</tr>
<tr>
<td>HRC-MN C</td>
<td>220</td>
<td>500.0</td>
</tr>
<tr>
<td>ARC-FN C</td>
<td>250</td>
<td>550.0</td>
</tr>
<tr>
<td>ERC-FN C</td>
<td>300</td>
<td>600.0</td>
</tr>
<tr>
<td>ARC-ML C</td>
<td>350</td>
<td>650.0</td>
</tr>
<tr>
<td>HRC-ML C</td>
<td>400</td>
<td>700.0</td>
</tr>
<tr>
<td>ERC-ML C</td>
<td>450</td>
<td>750.0</td>
</tr>
</tbody>
</table>

---

**Nominal life:** 2332km

**Travel distance (continuous):** 5877 km

**Nominal life:** 5877 km
Product Design (option)

Lubrication Design (Ordering Code: 2) (ARC/HRC)

Inner oil storage and oil supply system design

Inner PU Lubrication Storage Pad design does not increase length of runner block and can contact directly with all balls. Customer can inject lubrication oil through lubrication holes and can save enough lubrication oil within the PU Lubrication storage pad to ensure long term lubrication effects, conforming to environment protection needs and lowering maintenance costs. Excellent performance when used in short stroke.

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

Available for applications in harsh environment such as grinding machine, glass working machine, graphite machine, wood-working machinery, dust-proof solution

Dimensions and Specifications

Installation manual

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


The Most Convenient Metal Cap Used in Industry

- The upper part of the cap is made of stainless steel, and can prevent sharp foreign objects from piling up on the bolt-hole, resulting in affecting the end seal function.
- The lower part of the cap is made of plastic, and can directly be installed on standard rail, no need to conduct other fine slot milling for bolt-hole.
- The bolt-hole chamfer for standard rail is C0.2mm. For further strict dustproof request, non-bolt-hole chamfer rail is optional upon ordering.

Cap can be Smoothly Installed on Bolt-Hole

Bolt-hole cap of conventional linear guides, due to not having good control in hammering, results in cap being hammered too deep or unevenness, and will accumulate dirt or scrap iron easily. CPC cap is especially designed with supporting block to prop up the cap, fixing with the screw stably, and thus prevent sinking.
**Product Design (option)**

**Lubrication Design** (Ordering Code: Z) (ARC/HRC)

Inner oil storage and oil supply system design

Inner PU Lubrication Storage Pad design does not increase length of runner block and can contact directly with all balls. Customer can inject lubrication oil through lubrication holes and can save enough lubrication oil within the PU Lubrication storage pad to ensure long term lubrication effects, conforming to environment protection needs and lowering maintenance costs. Excellent performance when used in short stroke.

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

Available for applications in harsh environment such as grinding machine, glass working machine, graphite machine, wood-working machinery, dust-proof solution

**Dimensions and Specifications**

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Exterior Dimension</th>
<th>Bore Specification</th>
<th>Screw Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>T I Q W H</td>
<td>S1 S2 D1 D2</td>
<td>N1 N2 Ln</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>20</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>25</td>
<td>5.2</td>
<td>1.2</td>
<td>4</td>
</tr>
<tr>
<td>30</td>
<td>6</td>
<td>1.5</td>
<td>4.5</td>
</tr>
<tr>
<td>35</td>
<td>6</td>
<td>1.5</td>
<td>4.5</td>
</tr>
<tr>
<td>45</td>
<td>6</td>
<td>1.5</td>
<td>4.5</td>
</tr>
</tbody>
</table>

**Installation manual**

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


**Metal-Plastic-Cap Features Introduction**

The Most Convenient Metal Cap Used in Industry

- The upper part of the cap is made of stainless steel, and can prevent sharp foreign objects from piling up on the bolt-hole, resulting in affecting the end seal function.
- The lower part of the cap is made of plastic, and can directly be installed on standard rail, no need to conduct other fine slot milling for bolt-hole.
- The bolt-hole chamfer for standard rail is C0.2mm. For further strict dustproof request, non-bolt-hole chamfer rail is optional upon ordering.

**Cap can be Smoothly Installed on Bolt-Hole**

Bolt-hole cap of conventional linear guides, due to not having good control in hammering, results in cap being hammered too deep or unevenness, and will accumulate dirt or scrap iron easily. cpc cap is especially designed with supporting block to prop up the cap, fixing with the screw stably, and thus prevent sinking.

**Dimensions and Specifications**

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Screw</th>
<th>External Diameter</th>
<th>Cup Height</th>
<th>Block Height</th>
<th>Rail</th>
</tr>
</thead>
<tbody>
<tr>
<td>A4</td>
<td>M4</td>
<td>7.7</td>
<td>1.7</td>
<td>3.0</td>
<td>AR35, WRC21/15, WRC27/20</td>
</tr>
<tr>
<td>A5</td>
<td>M5</td>
<td>9.7</td>
<td>3.4</td>
<td>4.0</td>
<td>AR20</td>
</tr>
<tr>
<td>A6</td>
<td>M6</td>
<td>11.3</td>
<td>2.9</td>
<td>3.5</td>
<td>AR25</td>
</tr>
<tr>
<td>A8</td>
<td>M8</td>
<td>14.3</td>
<td>3.9</td>
<td>4.5</td>
<td>AR38, AR35</td>
</tr>
<tr>
<td>A12</td>
<td>M12</td>
<td>20.4</td>
<td>5.0</td>
<td>5.6</td>
<td>AR45</td>
</tr>
<tr>
<td>A8-R</td>
<td>M8</td>
<td>14.3</td>
<td>8.0</td>
<td>9.5</td>
<td>AR35</td>
</tr>
</tbody>
</table>

Cap before Hammering (Plastic Support)  Plastic Support after Hammering (8 supporting block become deformed, and fit with the screw)
**Installation Notice**

**Dimension of reference edge**

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

**Rail Joint**

The standard length of rail is 4 meter, [CPC] provides rail joint solution. The joint number will be laser mark on the rail.

1. Follow the joint number to assemble. (Shown in figure A)
2. In the case of two or more numbers of rail on the same moving axis, [CPC] suggests to set the joint in different position to avoid the change in accuracy. (Shown in figure B)
3. Follow the recommend tightening torques to fasten the screws from inside to outside.

**Technical Information**

**Screw tightening torque (Nm)**

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

**Preload and Clearance**

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

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
<th>Preload Value</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC</td>
<td>Clearance</td>
<td>0 0.02C 0.05C</td>
<td>Smooth motion, low friction</td>
</tr>
<tr>
<td>V0</td>
<td>Light Preload</td>
<td>0.02C</td>
<td>For precision situations, smooth motion</td>
</tr>
<tr>
<td>V1</td>
<td>Medium Preload</td>
<td>0.05C</td>
<td>High stiffness, precision, high load situations</td>
</tr>
<tr>
<td>V2</td>
<td>Heavy Preload</td>
<td>0.08C</td>
<td>Super high stiffness, precision, super high load situations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
<th>Preload Value</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC</td>
<td>Clearance</td>
<td>0 0.02C 0.05C</td>
<td>Smooth motion, low friction</td>
</tr>
<tr>
<td>V0</td>
<td>Light Preload</td>
<td>0.02C</td>
<td>For precision situations, smooth motion</td>
</tr>
<tr>
<td>V1</td>
<td>Medium Preload</td>
<td>0.08C</td>
<td>High stiffness, precision, high load situations</td>
</tr>
<tr>
<td>V2</td>
<td>Heavy Preload</td>
<td>0.13C</td>
<td>Super high stiffness, precision, super high load situations</td>
</tr>
</tbody>
</table>
**Installation Notice**

Dimension of reference edge

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

1. Follow the joint number to assemble. (Shown in figure A)
2. In the case of two more numbers of rail on the same moving axis, CPC suggests to set the joint in different position to avoid the change in accuracy. (Shown in figure B)
3. Follow the recommend tightening torques to fasten the screws from inside to outside.

![Figure A](image)

![Figure B](image)

**Technical Information**

Screw tightening torque (Nm)

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

**Preload and Clearance**

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

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
<th>Preload Value</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>45</th>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC</td>
<td>Clearance</td>
<td>0</td>
<td>-4</td>
<td>0</td>
<td>-4</td>
<td>0</td>
<td>-2</td>
<td>0</td>
<td>-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>V0</td>
<td>Light Preload</td>
<td>0.02C</td>
<td>-2</td>
<td>0</td>
<td>-2</td>
<td>0</td>
<td>-1</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>V1</td>
<td>Medium Preload</td>
<td>0.05C</td>
<td>-1</td>
<td>0</td>
<td>-1</td>
<td>0</td>
<td>-0</td>
<td>0</td>
<td>-0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>V2</td>
<td>Heavy Preload</td>
<td>0.08C</td>
<td>-0</td>
<td>0</td>
<td>-0</td>
<td>0</td>
<td>-0</td>
<td>0</td>
<td>-0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

**Application**

- Smooth motion, low friction
- For precision situations, smooth motion
- High stiffness, precision, high load situations
- Super high stiffness, precision, super high load situations

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
<th>Preload Value</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>45</th>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC</td>
<td>Clearance</td>
<td>0</td>
<td>-4</td>
<td>0</td>
<td>-4</td>
<td>0</td>
<td>-2</td>
<td>0</td>
<td>-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>V0</td>
<td>Light Preload</td>
<td>0.02C</td>
<td>-2</td>
<td>0</td>
<td>-2</td>
<td>0</td>
<td>-1</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>V1</td>
<td>Medium Preload</td>
<td>0.05C</td>
<td>-1</td>
<td>0</td>
<td>-1</td>
<td>0</td>
<td>-0</td>
<td>0</td>
<td>-0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>V2</td>
<td>Heavy Preload</td>
<td>0.08C</td>
<td>-0</td>
<td>0</td>
<td>-0</td>
<td>0</td>
<td>-0</td>
<td>0</td>
<td>-0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

**Application**

- Smooth motion, low friction
- For precision situations, smooth motion
- High stiffness, precision, high load situations
- Super high stiffness, precision, super high load situations
**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.

<table>
<thead>
<tr>
<th>Accuracy grades (μm)</th>
<th>UP</th>
<th>SP</th>
<th>P</th>
<th>H</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerance of dimension height H</td>
<td>±5</td>
<td>±10</td>
<td>±10</td>
<td>±40</td>
<td>±100</td>
</tr>
<tr>
<td>Variation of height for different runner block on the same position of Rail</td>
<td>±0.03</td>
<td>±0.05</td>
<td>±0.07</td>
<td>±0.15</td>
<td>±0.30</td>
</tr>
<tr>
<td>Tolerance of dimension width W</td>
<td>±5</td>
<td>±10</td>
<td>±10</td>
<td>±20</td>
<td>±40</td>
</tr>
<tr>
<td>Variation of width for different runner block on the same position of Rail</td>
<td>±0.03</td>
<td>±0.05</td>
<td>±0.07</td>
<td>±0.15</td>
<td>±0.30</td>
</tr>
</tbody>
</table>

**Accuracy of the running parallelism**

![Graph showing accuracy of the running parallelism]

**Application**

<table>
<thead>
<tr>
<th>Class</th>
<th>Movement, Conveyance</th>
<th>Manufacturing Equipment</th>
<th>High Precision Manufacturing Equipment</th>
<th>Measuring Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Examples**

1. Conveyance system
2. Industrial robots
3. Office Machinery
4. Woodworking machine
5. Punching press
6. Injection Molding machine
7. Lathes/milling machine
8. Grinding machine
9. Cutting machine
10. Three dimensional measuring instrument
11. Detection sensor
12. Head shaft
13. X-Y Table

**Note:** If there is any customization need, please contact CPC for more information.
### 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 grades

<table>
<thead>
<tr>
<th>Accuracy grade</th>
<th>UP</th>
<th>SP</th>
<th>P</th>
<th>H</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerance of dimension height ( H )</td>
<td>±15</td>
<td>±10</td>
<td>±7</td>
<td>±5</td>
<td>±3</td>
</tr>
<tr>
<td>Variation of height for different runner block on the same position of Rail ( \pm )</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Tolerance of dimension width ( W )</td>
<td>±15</td>
<td>±10</td>
<td>±7</td>
<td>±5</td>
<td>±3</td>
</tr>
<tr>
<td>Variation of width for different runner block on the same position of Rail ( \pm )</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>15</td>
</tr>
</tbody>
</table>

#### Accuracy of the running parallelism

![Accuracy of the running parallelism graph]

#### Application

<table>
<thead>
<tr>
<th>Class</th>
<th>Movement, Conveyance</th>
<th>Manufacturing Equipment</th>
<th>High Precision Manufacturing Equipment</th>
<th>Measuring Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>SP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>UP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

#### Examples

- 1. Conveyance system
- 2. Industrial robots
- 3. Office Machinery
- 4. Woodworking machine
- 5. Punching press
- 6. Injection Molding machine
- 7. Lathe/milling machine/ grinding machine
- 8. Electrical discharge machining (EDM)
- 9. CNC machining center
- 10. Three dimensional measuring instrument
- 11. Detection mirror head shaft
- 12. X-Y Table

### Ordering information

#### Model code

<table>
<thead>
<tr>
<th>Model code</th>
<th>ARC</th>
<th>U</th>
<th>15</th>
<th>M</th>
<th>N</th>
<th>B</th>
<th>2</th>
<th>Z</th>
<th>C</th>
<th>V1</th>
<th>P</th>
<th>-1480L</th>
<th>-20</th>
<th>-20</th>
<th>H</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Customization code (The meaning of suffix characters)

- J: Butt-jointing back rail
- G: Customer designated lubricant
- I: With Inspection report
- S: Special straightness for rail
- B: Special process for block
- BL: With bellow for the rail
- 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

#### Specifications

- Accuracy grades: UP, SP, P, H, N
- Preload classes: VC, V0, V1, V2
- Rail length: Available for size 15, 20, 25, 30, 35 and 45
- Block quantity
- Block type: 15, 20, 25, 30, 35, 45, 55
- U: Rail (tapped from the bottom)

#### Notes

- If there is any customization need, please contact CPC for more information.
1. The load capacities is for full-ball type (without ball chain).
2. N2 = Injecting holes

### ARC MS Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (N·m)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 15 MS</td>
<td>24</td>
<td>9.5 15 15 60</td>
<td>7.5x4.5x6.5</td>
<td>34 41.2 26 20.7 -  26 - 6 M4x7 - 6 M3x6.5</td>
<td>M3x6 P3 3.5 4.5 7.5 15.6 16.7 7.7 12.1 100 50 100</td>
<td>106 1290 ARC 15 MS</td>
</tr>
<tr>
<td>ARC 20 MS</td>
<td>28</td>
<td>11 20 20 60</td>
<td>9.5x6x8.5</td>
<td>42 49.2 32.2 23 - 32 - 8 M3x7.5 - 8 M3x5.5</td>
<td>M3x6 P4 10 4 7.4 19.1 19.8 12.5 19.3 205 100 200</td>
<td>170 2280 ARC 20 MS</td>
</tr>
<tr>
<td>ARC 25 MS</td>
<td>33</td>
<td>12.5 23 23 60</td>
<td>11x7x9</td>
<td>48 57.4 38.4 27 - 35 - 16 M6x7 - 16 M6x5</td>
<td>M3x6 P4 12 5 9.3 22.2 23.2 18.2 27.3 350 160 160</td>
<td>300 3020 ARC 25 MS</td>
</tr>
<tr>
<td>ARC 30 MS</td>
<td>42</td>
<td>16 28 27 80</td>
<td>14x9x12</td>
<td>60 68 44 35.2 - 40 - 12 M8x10 - 16 M8x5</td>
<td>M6x6 P5 12 7.5 12 27 26.7 23.3 33.1 520 230 230</td>
<td>560 4380 ARC 30 MS</td>
</tr>
</tbody>
</table>

### ARC MN Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (N·m)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 15 MN</td>
<td>24</td>
<td>9.5 15 15 60</td>
<td>7.5x4.5x6.5</td>
<td>34 55.5 40.3 20.7 26 - 26 - 6 M4x7 - 6 M3x6.5</td>
<td>M3x6 P3 3.5 4.5 7.5 10.9 10.9 9.9 10.5 140 105 105</td>
<td>158 1290 ARC 15 MN</td>
</tr>
<tr>
<td>ARC 20 MN</td>
<td>28</td>
<td>11 20 20 60</td>
<td>9.5x6x8.5</td>
<td>42 69 52 23 32 - 32 - 8 M3x7.5 - 8 M3x5.5</td>
<td>M3x6 P4 10 4 7.4 13 13.7 13.7 14.0 295 230 230</td>
<td>266 2280 ARC 20 MN</td>
</tr>
<tr>
<td>ARC 25 MN</td>
<td>33</td>
<td>12.5 23 23 60</td>
<td>11x7x9</td>
<td>48 81.2 62.2 27 35 35 - 16 M6x7 - 16 M6x5</td>
<td>M6x6 P4 12 5 9.3 16.6 17.6 24.8 24.5 540 365 365</td>
<td>420 3200 ARC 25 MN</td>
</tr>
<tr>
<td>ARC 30 MN</td>
<td>42</td>
<td>16 28 27 80</td>
<td>14x9x12</td>
<td>60 95.5 71.5 35.2 40 40 - 16 M8x10 - 16 M8x5</td>
<td>M6x6 P5 12 7.5 12 20.8 20.5 32.8 33.7 845 555 555</td>
<td>800 4380 ARC 30 MN</td>
</tr>
<tr>
<td>ARC 35 MN</td>
<td>48</td>
<td>18 34 34 80</td>
<td>14x9x12</td>
<td>70 111.2 86.2 40.4 50 50 - 16 M8x13 - 16 M8x10</td>
<td>M6x7 P5 12 8 15 23.4 24.1 45.9 42.9 1700 1080 1080</td>
<td>1120 6790 ARC 35 MN</td>
</tr>
<tr>
<td>ARC 45 MN</td>
<td>60</td>
<td>20.5 45 39 105</td>
<td>20x14x17</td>
<td>86 135.5 102.5 50.7 60 60 - M10x17 - 14 P7/8x12.5</td>
<td>M6x10.5 P5 14 11.1 18.1 27.3 27.2 71.3 122.1 5200 1910 1910</td>
<td>2120 10530 ARC 45 MN</td>
</tr>
<tr>
<td>ARC 55 MN</td>
<td>70</td>
<td>23.5 53 45.7 120</td>
<td>24x16x20</td>
<td>100 168.5 126.5 58 75 75 - M12x20 - 16 M6x10</td>
<td>M6x13 P5 12 11.5 23.5 34.8 33.8 128 186 4949 3278 3278</td>
<td>4200 14000 ARC 55 MN</td>
</tr>
</tbody>
</table>

### ARC ML Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (N·m)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 15 ML</td>
<td>24</td>
<td>9.5 15 15 60</td>
<td>7.5x4.5x6.5</td>
<td>34 78.2 63 20.7 34 26 - 6 M4x7 - 6 M3x6.5</td>
<td>M3x6 P3 3.5 4.5 7.5 16.1 17.2 13.4 26.9 215 235 235</td>
<td>240 1290 ARC 15 ML</td>
</tr>
<tr>
<td>ARC 20 ML</td>
<td>28</td>
<td>11 20 20 60</td>
<td>9.5x6x8.5</td>
<td>42 87.2 70.2 23 45 32 - 8 M3x7.5 - 8 M3x5.5</td>
<td>M3x6 P4 10 4 7.4 15.6 16.3 20.4 20.8 415 390 390</td>
<td>330 2280 ARC 20 ML</td>
</tr>
<tr>
<td>ARC 30 ML</td>
<td>32</td>
<td>16 28 27 80</td>
<td>14x9x12</td>
<td>60 118 94 35.2 60 40 - 16 M8x10 - 16 M8x5</td>
<td>M6x6 P5 12 8.7 12 21.7 21.7 39.6 70.2 1105 950 950</td>
<td>1138 4380 ARC 30 ML</td>
</tr>
<tr>
<td>ARC 35 ML</td>
<td>48</td>
<td>18 34 34 80</td>
<td>14x9x12</td>
<td>70 136.6 111.6 40.4 72 50 - 16 M8x13 - 16 M8x10</td>
<td>M6x7 P5 12 8 15 25.1 25.8 54.7 106.3 2185 1755 1755</td>
<td>1536 6790 ARC 35 ML</td>
</tr>
<tr>
<td>ARC 45 ML</td>
<td>60</td>
<td>20.5 45 39 105</td>
<td>20x14x17</td>
<td>86 171.5 138.5 50.7 80 60 - M10x17 - 14 P7/8x12.5</td>
<td>M6x10.5 P5 14 11.1 18.1 35 35 89.5 169.3 4430 3460 3460</td>
<td>3160 10530 ARC 45 ML</td>
</tr>
<tr>
<td>ARC 55 ML</td>
<td>70</td>
<td>23.5 53 45.7 120</td>
<td>24x16x20</td>
<td>100 202 160 58 95 75 - M12x20 - 16 M6x10</td>
<td>M6x13 P5 12 11.5 23.5 41.5 40.5 147 226 6472 5284 5284</td>
<td>5083 14000 ARC 55 ML</td>
</tr>
</tbody>
</table>

1. The load capacities is for full-ball type (without ball chain).
2. N2 = Injecting holes
3. No = O-ring for lubrication from above
4. No = No seal before shipment, open it when using product.

The above rating load capacities and static moment are calculated according to ISO 14138 standard. The rating life for basic dynamic load rating is defined as the total 100km travel distance that 90% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50km travel distance is applied, the above basic dynamic load rating C of ISO 14138 should be multiplied by 1.26 for conversion.
## Dimensions Table

### ARC MS Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 15 MS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 20 MS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 25 MS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 30 MS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ARC MN Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 15 MN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 20 MN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 25 MN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 30 MN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ARC ML Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 15 ML</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 20 ML</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 30 ML</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 35 ML</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 45 ML</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 55 ML</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. The load capacities are for full-circle type (without ball chain).
2. N2 = Injecting holes
3. N3 = O-ring size for lubrication from above
4. N2, N3 will be seal before shipment, open it when using product.

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

### ARC FS Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions (mm)</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight (Nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 15 FS</td>
<td>24 18.5 15 15 60 7.5x6.5x5.5 52 45.4 40.3 20.7 26 41 - M5x7 M4 7 7 M3x6.5 M3x6 P3 3.5 4.5 7.5 15.6 16.7 17.7 12.1 100 50 50 49 329 1340 20 120 320 1290 ARC 15 FS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 20 FS</td>
<td>28 19.5 20 20 60 9.5x8x8.5 59 49.2 32 22 23 - 49 - M6x10 M5 10 10 M3x7.5 M3x6.5 P4 10 4 7.4 19.1 19.8 12.5 19.3 105 200 100 210 2280 ARC 20 FS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 25 FS</td>
<td>33 25 23 23 60 11x7x9 73 57.4 38.4 27 - 60 - M8x12 M6 12 12 M6x7.5 M3x6.5 P14 12 5 9.3 22.2 23.2 18.2 27.3 350 160 160 345 3020 ARC 25 FS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 30 FS</td>
<td>42 31 28 27 80 14x9x12 90 68 44 35.2 - 72 - M10x12 M8 12 12 M6x8.5 M6x5 P7 12 7.5 12 27 26.8 23.3 33 520 230 230 750 4380 ARC 30 FS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ARC FN Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions (mm)</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight (Nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 15 FN</td>
<td>24 18.5 15 15 60 7.5x6.5x5.5 52 45.4 40.3 20.7 26 41 - M5x7 M4 7 7 M3x6.5 M3x6 P3 3.5 4.5 7.5 15.6 16.7 17.7 12.1 100 50 50 49 329 1340 20 120 320 1290 ARC 15 FN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 20 FN</td>
<td>28 19.5 20 20 60 9.5x8x8.5 59 49.2 32 22 23 - 49 - M6x10 M5 10 10 M3x7.5 M3x6.5 P4 10 4 7.4 19.1 19.8 12.5 19.3 105 200 100 210 2280 ARC 20 FN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 25 FN</td>
<td>33 25 23 23 60 11x7x9 73 57.4 38.4 27 - 60 - M8x12 M6 12 12 M6x7.5 M3x6.5 P14 12 5 9.3 22.2 23.2 18.2 27.3 350 160 160 345 3020 ARC 25 FN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC 30 FN</td>
<td>42 31 28 27 80 14x9x12 90 68 44 35.2 - 72 - M10x12 M8 12 12 M6x8.5 M6x5 P7 12 7.5 12 27 26.8 23.3 33 520 230 230 750 4380 ARC 30 FN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 seal before shipment, open it when using product.

The above rating load capacities and static moment are calculated according to ISO14728 standard. The rating life for basic dynamic load rating is defined as the total 1000h travel distance for 90% of a group of identical linear guides that can be operated continuously under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50h travel distance is applied, the above basic dynamic load rating C of ISO 14728 should be multiplied by 1.56 for conversion.
The load capacities is for full-ball type (without ball chain)

### Model Code
- **ARC 15 FN**: ARC 15 FN
- **ARC 30 FN**: ARC 30 FN
- **ARC 20 FN**: ARC 20 FN
- **ARC 25 FN**: ARC 25 FN
- **ARC 30 FS**: ARC 30 FS
- **ARC 20 FS**: ARC 20 FS
- **ARC 15 FS**: ARC 15 FS

### Dimensions Table

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 15 FS</td>
<td>24 18.5 15 15 60</td>
<td>7.5x4.5x5.3</td>
<td>-</td>
<td>16.7</td>
<td>100 100 100</td>
<td>1290</td>
</tr>
<tr>
<td>ARC 30 FN</td>
<td>24 18.5 15 15 60</td>
<td>7.5x4.5x5.3</td>
<td>-</td>
<td>16.7</td>
<td>100 100 100</td>
<td>1290</td>
</tr>
<tr>
<td>ARC 20 FN</td>
<td>24 18.5 15 15 60</td>
<td>7.5x4.5x5.3</td>
<td>-</td>
<td>16.7</td>
<td>100 100 100</td>
<td>1290</td>
</tr>
<tr>
<td>ARC 25 FN</td>
<td>24 18.5 15 15 60</td>
<td>7.5x4.5x5.3</td>
<td>-</td>
<td>16.7</td>
<td>100 100 100</td>
<td>1290</td>
</tr>
<tr>
<td>ARC 30 FS</td>
<td>24 18.5 15 15 60</td>
<td>7.5x4.5x5.3</td>
<td>-</td>
<td>16.7</td>
<td>100 100 100</td>
<td>1290</td>
</tr>
<tr>
<td>ARC 20 FS</td>
<td>24 18.5 15 15 60</td>
<td>7.5x4.5x5.3</td>
<td>-</td>
<td>16.7</td>
<td>100 100 100</td>
<td>1290</td>
</tr>
<tr>
<td>ARC 15 FS</td>
<td>24 18.5 15 15 60</td>
<td>7.5x4.5x5.3</td>
<td>-</td>
<td>16.7</td>
<td>100 100 100</td>
<td>1290</td>
</tr>
</tbody>
</table>

The above rating load capacities and static moment are calculated according to ISO 14738 standard. The rating life for basic dynamic load rating is defined as the total 100 km travel distance that 90% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50 km travel distance is applied, the above basic dynamic load rating C of ISO 14738 should be multiplied by 1.26 for conversion.
## Dimensions Table

### HRC MN Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRC 15 MN</td>
<td>28 9.5 35 15 60 7.5x4.5x5.3</td>
<td>34 76.2 61 24.7 26 26</td>
<td>M4x7</td>
<td>M3x6</td>
<td>M3x6.5</td>
<td>P3 3.5</td>
</tr>
<tr>
<td>HRC 20 MN</td>
<td>30 12 20 20 60 9.5x6.85</td>
<td>44 69 52 25 36 32</td>
<td>M5x8.5</td>
<td>M3x7.5</td>
<td>M3x8.5</td>
<td>P4 10</td>
</tr>
</tbody>
</table>

### HRC ML Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRC 15 ML</td>
<td>28 9.5 35 15 60 7.5x4.5x5.3</td>
<td>34 76.2 61 24.7 26 26</td>
<td>M4x7</td>
<td>M3x6</td>
<td>M3x6.5</td>
<td>P3 3.5</td>
</tr>
<tr>
<td>HRC 20 ML</td>
<td>30 12 20 20 60 9.5x6.85</td>
<td>44 69 52 25 36 32</td>
<td>M5x8.5</td>
<td>M3x7.5</td>
<td>M3x8.5</td>
<td>P4 10</td>
</tr>
</tbody>
</table>

### ERC Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERC 25 MS</td>
<td>36 12.5 23 23 60 11x90</td>
<td>48 57.4 38.4 30</td>
<td>M8x9</td>
<td>M8x8.5</td>
<td>M8x8.5</td>
<td>P4 12</td>
</tr>
<tr>
<td>ERC 25 MN</td>
<td>36 12.5 23 23 60 11x90</td>
<td>48 57.4 38.4 30</td>
<td>M8x9</td>
<td>M8x8.5</td>
<td>M8x8.5</td>
<td>P4 12</td>
</tr>
</tbody>
</table>

1. The load capacities is for full-ball type (without ball chain)  
2. N2 = Injecting holes  
3. N3 = Design variant  
4. N3 = Design variant  
5. N3 = Design variant

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

### Dimensions Table

#### HRC MN Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRC 15 MN</td>
<td>28 9.5 35 15 60</td>
<td>7.5x4.5x5.3</td>
<td>34 55.5 40.3 24.7</td>
<td>26 26 M4x7 M3x6.5</td>
<td>M3x6 P4 3.5 8.5</td>
<td>11.5 10.9</td>
<td>9.9 17.5</td>
</tr>
<tr>
<td>HRC 20 MN</td>
<td>30 12 20 20 60</td>
<td>9.5x6x8.5</td>
<td>44 69 52 25 36 32</td>
<td>M5x8.5 M3x7.5</td>
<td>M3x5.5 P4 10 6</td>
<td>9.4 11 11.7 17.1 30.0</td>
<td>325 230 230 318 2280</td>
</tr>
<tr>
<td>HRC 25 MN</td>
<td>40 12.5 23 23 60</td>
<td>11x7x9</td>
<td>48 81.2 62.2 34 35</td>
<td>M6x9 M6x7.5</td>
<td>M3x6.5 P4 12 12 16 16.6 17.6</td>
<td>24.8 42.5</td>
<td>540 385 385 578 3020</td>
</tr>
<tr>
<td>HRC 30 MN</td>
<td>45 16 28 27 80</td>
<td>14x8x12</td>
<td>60 95.3 71.5 38.4</td>
<td>M8x12 M6x6.5</td>
<td>M6x5 P5 12 10.5 15 20.8 20.5</td>
<td>15.2 32.8 53.7</td>
<td>845 565 565 896 4380</td>
</tr>
<tr>
<td>HRC 35 MN</td>
<td>55 18 34 32 80</td>
<td>14x9x12</td>
<td>70 111.2 86.2 47.4</td>
<td>M8x13 M8x10</td>
<td>M6x7 P5 12 15 12 23 23.4</td>
<td>24.1 45.9 82.9</td>
<td>1700 1080 1080 1430 6790</td>
</tr>
<tr>
<td>HRC 45 MN</td>
<td>70 20.5 45 39 105</td>
<td>20x14x17</td>
<td>86 135.5 102.5 60.7</td>
<td>M10x20 M8x12.5</td>
<td>M6x10.5 P5 14 21.1 28.1 27.3 27.1</td>
<td>71.3 122.1</td>
<td>1320 1910 1910 2794 10530</td>
</tr>
<tr>
<td>HRC 55 MN</td>
<td>80 23.5 53 45.7 120</td>
<td>24x14x20</td>
<td>100 168.5 126.5 68 75 75</td>
<td>M12x25 M6x10</td>
<td>M6x13 P5 12 23.5 33.5 34.8 33.8 128</td>
<td>816 4649 3278 3278 5110</td>
<td>14000 6000 6000 18000 140000</td>
</tr>
</tbody>
</table>

#### HRC ML Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRC 15 ML</td>
<td>28 9.5 35 15 60</td>
<td>7.5x4.5x5.3</td>
<td>34 76.2 61 24.7</td>
<td>26 26 M4x7 M3x6.5</td>
<td>M3x6 P3 3.5 8.5</td>
<td>11.5 10.9</td>
<td>9.9 17.5</td>
</tr>
<tr>
<td>HRC 20 ML</td>
<td>30 12 20 20 60</td>
<td>9.5x6x8.5</td>
<td>44 87.2 70.2 25 30</td>
<td>M5x8.5 M3x7.5</td>
<td>M3x5.5 P4 10 6</td>
<td>9.4 11 11.7 17.1 30.0</td>
<td>325 230 230 318 2280</td>
</tr>
<tr>
<td>HRC 25 ML</td>
<td>40 12.5 23 23 60</td>
<td>11x7x9</td>
<td>48 105 86 34 35 35</td>
<td>M6x9 M6x7.5</td>
<td>M3x6.5 P4 12 12 16 16.6 17.6</td>
<td>24.8 42.5</td>
<td>540 385 385 578 3020</td>
</tr>
<tr>
<td>HRC 30 ML</td>
<td>45 16 28 27 80</td>
<td>14x8x12</td>
<td>60 118.4 93.8 38.4</td>
<td>M8x12 M6x6.5</td>
<td>M6x5 P5 12 10.5 15 20.8 20.5</td>
<td>15.2 32.8 53.7</td>
<td>845 565 565 896 4380</td>
</tr>
<tr>
<td>HRC 35 ML</td>
<td>55 18 34 32 80</td>
<td>14x9x12</td>
<td>70 136.8 111.6 47.4</td>
<td>M8x13 M8x10</td>
<td>M6x7 P5 12 15 12 23 23.4</td>
<td>24.1 45.9 82.9</td>
<td>1700 1080 1080 1430 6790</td>
</tr>
<tr>
<td>HRC 45 ML</td>
<td>70 20.5 45 39 105</td>
<td>20x14x17</td>
<td>86 171.5 138.5 60.7</td>
<td>M10x20 M8x12.5</td>
<td>M6x10.5 P5 14 21.1 28.1 27.3 27.1</td>
<td>71.3 122.1</td>
<td>1320 1910 1910 2794 10530</td>
</tr>
<tr>
<td>HRC 55 ML</td>
<td>80 23.5 53 45.7 120</td>
<td>24x14x20</td>
<td>100 192.5 126.5 68 75 75</td>
<td>M12x25 M6x10</td>
<td>M6x13 P5 12 23.5 33.5 34.8 33.8 128</td>
<td>816 4649 3278 3278 5110</td>
<td>14000 6000 6000 18000 140000</td>
</tr>
</tbody>
</table>

#### ERC Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERC 25 MS</td>
<td>36 12.5 23 23 60</td>
<td>11x7x9</td>
<td>48 57.4 38.4 30 35 50</td>
<td>M6x9 M6x7.5</td>
<td>M3x6.5 P4 12 8</td>
<td>12.3 22.2 18.2 27.3</td>
<td>350 180 180 315 3020</td>
</tr>
<tr>
<td>ERC 25 MN</td>
<td>36 12.5 23 23 60</td>
<td>11x7x9</td>
<td>48 81.2 62.2 30 35 50</td>
<td>M6x9 M6x7.5</td>
<td>M3x6.5 P4 12 8</td>
<td>12.3 22.2 18.2 27.3</td>
<td>350 180 180 315 3020</td>
</tr>
<tr>
<td>ERC 25 ML</td>
<td>36 12.5 23 23 60</td>
<td>11x7x9</td>
<td>48 105 86 30 35 50 50</td>
<td>M6x9 M6x7.5</td>
<td>M3x6.5 P4 12 8</td>
<td>12.3 22.2 18.2 27.3</td>
<td>350 180 180 315 3020</td>
</tr>
</tbody>
</table>

### Notes:
1. The load capacities is for full-ball type (without ball chain).
2. N2 = Injecting holes
3. N3 = Ø12 drilling holes for lubrication
4. M6/A2 ISO 4762 should be multiplexed by 1.26 for conversion.
**Dimensions Table**

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (kN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H W1 W2 W3 W4 W5</td>
<td>D x x g</td>
<td>W1 L1 L2 h1 h2</td>
<td>P1 P2 P3 M1 M2 M3</td>
<td>T1 T2 T3</td>
<td>N1 N2 N3</td>
<td>E S1 S2 S3 S4</td>
<td>C C0</td>
</tr>
<tr>
<td>HRC 15 FN</td>
<td>24 16 15 16 15</td>
<td>7.5 4.5</td>
<td>0.3</td>
<td>12</td>
<td>47 57.5 40.3 20.7 30 38</td>
<td>-</td>
<td>M5x8</td>
<td>7 7</td>
</tr>
<tr>
<td>HRC 20 FN</td>
<td>30 21.5 20 20 20</td>
<td>9.5 6</td>
<td>8.5</td>
<td>63 69 52 25 40 53</td>
<td>-</td>
<td>M6x10</td>
<td>5 10</td>
<td>10</td>
</tr>
<tr>
<td>HRC 25 FN</td>
<td>36 23.5 23 23 23</td>
<td>11x7</td>
<td>9 70 81 2.2</td>
<td>30</td>
<td>45 57</td>
<td>-</td>
<td>M8x12</td>
<td>6</td>
</tr>
<tr>
<td>HRC 30 FN</td>
<td>42 31 28 27 80</td>
<td>14x6</td>
<td>12 90 95.5 71.5 35.2 52 72</td>
<td>-</td>
<td>M10x12</td>
<td>6</td>
<td>12</td>
<td>M8x8.5</td>
</tr>
<tr>
<td>HRC 35 FN</td>
<td>48 33 34 32 80</td>
<td>14x6</td>
<td>12 100 111.2 86.2 40.4 62 82</td>
<td>-</td>
<td>M12x12</td>
<td>6</td>
<td>12</td>
<td>M10x8.5</td>
</tr>
<tr>
<td>HRC 45 FN</td>
<td>60 37.5 45 39 105 20x14</td>
<td>x7</td>
<td>120 135 102.5 50.7 80 100</td>
<td>-</td>
<td>M12x15</td>
<td>M10</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>HRC 55 FN</td>
<td>70 43.5 53 45.7 120 24x16</td>
<td>x20</td>
<td>140 168.5 126.5 58 95 116</td>
<td>70</td>
<td>M14x18</td>
<td>M12</td>
<td>18</td>
<td>18</td>
</tr>
</tbody>
</table>

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 seal before shipment, open it when using product.

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

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (kN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRC 15 FN</td>
<td>24</td>
<td>16</td>
<td>15</td>
<td>60</td>
<td>7.5x4.5x5.3</td>
<td>47</td>
<td>55.5</td>
<td>40.3</td>
</tr>
<tr>
<td>HRC 20 FN</td>
<td>30</td>
<td>21.5</td>
<td>20</td>
<td>60</td>
<td>9.5x6x8.5</td>
<td>63</td>
<td>69</td>
<td>52</td>
</tr>
<tr>
<td>HRC 25 FN</td>
<td>36</td>
<td>23.5</td>
<td>23</td>
<td>60</td>
<td>11x7x9</td>
<td>70</td>
<td>81.2</td>
<td>62.2</td>
</tr>
<tr>
<td>HRC 30 FN</td>
<td>42</td>
<td>31</td>
<td>28</td>
<td>80</td>
<td>14x6x12</td>
<td>90</td>
<td>95.5</td>
<td>71.5</td>
</tr>
<tr>
<td>HRC 35 FN</td>
<td>48</td>
<td>33</td>
<td>34</td>
<td>80</td>
<td>14x6x12</td>
<td>100</td>
<td>111.2</td>
<td>86.2</td>
</tr>
<tr>
<td>HRC 45 FN</td>
<td>60</td>
<td>37.5</td>
<td>45</td>
<td>105</td>
<td>20x14x17</td>
<td>120</td>
<td>135.5</td>
<td>102.5</td>
</tr>
<tr>
<td>HRC 55 FN</td>
<td>70</td>
<td>43.5</td>
<td>53</td>
<td>120</td>
<td>24x16x20</td>
<td>140</td>
<td>168.5</td>
<td>126.5</td>
</tr>
</tbody>
</table>

1. The load capacities are for full rolls (without ball chain)
2. No = Inclining holes
3. N1 = O-ring size for lubrication from above
4. N2, N3 will be seal before shipment, open it when using product.

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

AR/HR/ER Lightweight Linear Guide Product Characteristics

- Excellent dynamic performance: \( V_{\text{max}} > 5 \text{m/s} \) \( \text{and} \) \( a_{\text{max}} > 300 \text{m/s}^2 \)
- Four directions equal load capacity
- Four circulation channels within plastic accessories reduce block weight by 10~20%.
- Stainless steel reinforcement plate has scraper function, and L design fastens screws onto the top and bottom of the runner block, which reinforces rigidity.
- AR/HR/ER Lightweight Linear Guide mainly provide preload class VC and V0 to enhance the tolerance of dimension and convenience of processed components and even reduce the cost of manufacturing work.

Technical Information

Accuracy

<table>
<thead>
<tr>
<th>Accuracy grades</th>
<th>H</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerance of dimension height H</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Variation of height for different runner Block on the same position of Rail</td>
<td>±15</td>
<td>±30</td>
</tr>
<tr>
<td>Tolerance of dimension width W</td>
<td>±20</td>
<td>±40</td>
</tr>
<tr>
<td>Variation of width for different runner Block on the same position of Rail</td>
<td>±15</td>
<td>±30</td>
</tr>
</tbody>
</table>

Preload and clearance

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
<th>Preload Value</th>
<th>Clearance (μm)</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC</td>
<td>Clearance</td>
<td>0</td>
<td>±10~±2</td>
<td>Smooth motion, low friction</td>
</tr>
<tr>
<td>V0</td>
<td>Light preload</td>
<td>0.02C</td>
<td>±2~±5</td>
<td>For precision situations, smooth motion</td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>AR/HR/ER</th>
<th>Block quantity</th>
<th>Seal type</th>
<th>Block width</th>
<th>Block type</th>
<th>Rail length (mm)</th>
<th>Starting hole pitch (mm)</th>
<th>End hole pitch (mm)</th>
</tr>
</thead>
</table>

**Note:** Please refer to P16: Accuracy of the running parallelism graph.
Product Overview

AR/HR/ER Lightweight Linear Guide Product Characteristics

- **CPC** lightweight Ball Type Linear Guide Series adopt the O-type arrangement for the four row ball circulation design featuring high load and high stiffness. The contact angle between the rail and the ball is 45 degrees and realizes the 4 directions equal load capacity.
- Among the AR/HR/ER Lightweight Linear Guide, two of the four circulation channels are positioned within the plastic accessories, reducing 10~20% of the block weight.
- Stainless steel reinforcement plate has scraper function and the L design fastens the screws onto the top and bottom of the runner block, which reinforces the rigidity of end caps and cladding; further enables the high speed movement of products.
- AR/HR/ER Lightweight Linear Guide mainly provide the preload class VC and VO etc. to enhance the tolerance of dimension and convenience of customers’ processed components and even reduce the cost of manufacturing work.

- Tolerance of velocity
- Four directions equal load capacity
- Adopting the same rail with ARC/HRC/ERC
- Lightweight block rotary hole design
- Processed accessories match tolerance of dimension
- Available for vertical (downward) and reverse (upward) bolting track rail
- Available for special surface treatment
- Excellent dynamic performance: Reach Vmax > 5m/s Reach amax > 300m/s²
- Dust protection of double wipe blade design in the end seal; have Standard type and reinforcement type

Technical Information

Accuracy

- Accuracy grades:
  - H: ±0.01
  - N: ±0.02

<table>
<thead>
<tr>
<th>Tolerance of dimension height H</th>
<th>H</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation of height for different runner Block on the same position of Rail</td>
<td>15</td>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tolerance of dimension width W</th>
<th>H</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation of width for different runner Block on the same position of Rail</td>
<td>250</td>
<td>240</td>
</tr>
</tbody>
</table>

Preload and clearance

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
<th>Preload Value</th>
<th>Clearance (μm)</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC</td>
<td>Clearance</td>
<td>0</td>
<td>+10~+2</td>
<td>+10~+2</td>
</tr>
<tr>
<td>VO</td>
<td>Light preload</td>
<td>0.02C</td>
<td>+2~+4</td>
<td>+2~+5</td>
</tr>
</tbody>
</table>

Ordering information

<table>
<thead>
<tr>
<th>AR</th>
<th>U</th>
<th>15</th>
<th>M</th>
<th>N</th>
<th>B</th>
<th>2</th>
<th>Z</th>
<th>V0</th>
<th>H</th>
<th>-1480L</th>
<th>-20</th>
<th>-20</th>
<th>11</th>
<th>/f</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Customization code (Please refer to P14)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of rails on the same moving axis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>End hole pitch (mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Starting hole pitch (mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rail length (mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accuracy grade: H, N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Preload class: VC, VO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Z with lubrication storage pad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Block quantity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Seal type: B: Low friction S: Standard</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Block length: L: long N: standard S: short</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Block width: M: standard F: flanged</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Block type: 15, 20, 25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>U: rail (tapped from the bottom)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Product type: AR: automation series HR/ER: heavy load series</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Dimensions Table

### AR Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions (mm)</th>
<th>Rail Dimension (mm)</th>
<th>Block Dimension (mm)</th>
<th>Block Dimension (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR 15 FS</td>
<td>H: 24, W1: 18.5, W2: 15, H1: 15, P: 60</td>
<td>7.5x4.5x6.3</td>
<td>W: 52, L: 40.8, L2: 24.2, h2: 20.1, P1: -41, P2: 4.5</td>
<td>M5x7, M4: 4, T: 7</td>
<td>Cc0: 6.4, Co: 8.1</td>
<td>Mn: 10.8</td>
<td>80</td>
</tr>
<tr>
<td>AR 15 FN</td>
<td>H: 24, W1: 18.5, W2: 15, H1: 15, P: 60</td>
<td>7.5x4.5x6.3</td>
<td>W: 52, L: 56.1, L2: 39.5, h2: 20.1, P1: 26, P2: 41.4</td>
<td>M5x7, M4: 4, T: 7</td>
<td>Cc0: 9.0, Co: 11.3</td>
<td>Mn: 17.5</td>
<td>140</td>
</tr>
</tbody>
</table>

### HR Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions (mm)</th>
<th>Rail Dimension (mm)</th>
<th>Block Dimension (mm)</th>
<th>Block Dimension (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR 25 FL</td>
<td>H: 36, W1: 23.5, W2: 23, H1: 23, P: 60</td>
<td>11x7x9</td>
<td>W: 70, L: 100.2, L2: 80, h2: 29.6, P1: 45, P2: 57</td>
<td>M8x10, M6: 8, T: 10</td>
<td>Cc0: 23.4, Co: 29.5</td>
<td>Mn: 48.5</td>
<td>560</td>
</tr>
</tbody>
</table>

### ER Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions (mm)</th>
<th>Rail Dimension (mm)</th>
<th>Block Dimension (mm)</th>
<th>Block Dimension (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
</tr>
</thead>
</table>

The above testing load capacities and static moment are calculated as conforming to ISO14728 standard. The rating life for basic dynamic load rating is defined as the total 100km travel distance that 99% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50km travel distance is applied, the above basic dynamic load rating C of ISO 14728 should be multiplied by 2.06 for conversion.
The above rating load capacities and static moment are calculated as conforming to ISO14728 standard. The rating life for basic dynamic load rating is defined as the total 100km travel distance that 90% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50km travel distance is applied, the above basic dynamic load rating C of ISO 14728 should be multiplied by 1.26 for conversion.
### Dimensions Table

#### Rail (tapped from the bottom)

<table>
<thead>
<tr>
<th>Model Code</th>
<th>W1</th>
<th>H1</th>
<th>P</th>
<th>M4x8</th>
<th>Lmax</th>
<th>Rail(kg/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARU15</td>
<td>15</td>
<td>15</td>
<td>60</td>
<td>M5x8</td>
<td>4000</td>
<td>1290</td>
</tr>
<tr>
<td>ARU20</td>
<td>20</td>
<td>20</td>
<td>60</td>
<td>M6x10</td>
<td>4000</td>
<td>2280</td>
</tr>
<tr>
<td>ARU25</td>
<td>25</td>
<td>25</td>
<td>60</td>
<td>M6x12</td>
<td>4000</td>
<td>3020</td>
</tr>
<tr>
<td>ARU30</td>
<td>30</td>
<td>27</td>
<td>80</td>
<td>M8x15</td>
<td>4000</td>
<td>4380</td>
</tr>
<tr>
<td>ARU35</td>
<td>35</td>
<td>32</td>
<td>80</td>
<td>M8x15</td>
<td>4000</td>
<td>6790</td>
</tr>
<tr>
<td>ARU45</td>
<td>45</td>
<td>39</td>
<td>105</td>
<td>M12x19</td>
<td>4000</td>
<td>10530</td>
</tr>
<tr>
<td>ARU55</td>
<td>53</td>
<td>45.7</td>
<td>120</td>
<td>M14x24</td>
<td>4000</td>
<td>14060</td>
</tr>
</tbody>
</table>

### Nipple Option

<table>
<thead>
<tr>
<th>Type</th>
<th>Nipple size</th>
<th>Nipple size</th>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Section</td>
<td>Side</td>
<td>Standard</td>
</tr>
<tr>
<td>ARC15</td>
<td>HRC15</td>
<td>M3</td>
<td>M3</td>
</tr>
<tr>
<td>ARC20</td>
<td>HRC20</td>
<td>M3</td>
<td>M3</td>
</tr>
<tr>
<td>ARC25</td>
<td>HRC25</td>
<td>M6</td>
<td>M3</td>
</tr>
<tr>
<td></td>
<td>ERC25</td>
<td>M6</td>
<td>M3</td>
</tr>
<tr>
<td>ARC30</td>
<td>HRC30</td>
<td>M6</td>
<td>M6</td>
</tr>
<tr>
<td>ADC5</td>
<td>HRC5</td>
<td>M6</td>
<td>M6</td>
</tr>
<tr>
<td>ARC35</td>
<td>HRC35</td>
<td>M6</td>
<td>M6</td>
</tr>
<tr>
<td>ARC45</td>
<td>HRC45</td>
<td>M6</td>
<td>M6</td>
</tr>
<tr>
<td>ARC55</td>
<td>HRC55</td>
<td>M6</td>
<td>M6</td>
</tr>
</tbody>
</table>

### Ordering Information

#### Model code

<table>
<thead>
<tr>
<th>Model Code</th>
<th>W1</th>
<th>H1</th>
<th>P</th>
<th>M4x8</th>
<th>Lmax</th>
<th>Rail(kg/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRC21/15</td>
<td>37</td>
<td>14.4</td>
<td>50</td>
<td>22</td>
<td>4000</td>
<td>3596</td>
</tr>
<tr>
<td>WRC27/20</td>
<td>42</td>
<td>18.5</td>
<td>60</td>
<td>24</td>
<td>5x7.5</td>
<td>5259</td>
</tr>
</tbody>
</table>

#### Dimensions Table

<table>
<thead>
<tr>
<th>Model Code</th>
<th>W1</th>
<th>H1</th>
<th>P</th>
<th>P2</th>
<th>M4x8</th>
<th>Lmax</th>
<th>Rail(kg/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRC21/15</td>
<td>37</td>
<td>14.4</td>
<td>50</td>
<td>22</td>
<td>4000</td>
<td>3596</td>
<td></td>
</tr>
<tr>
<td>WRC27/20</td>
<td>42</td>
<td>18.5</td>
<td>60</td>
<td>24</td>
<td>5x7.5</td>
<td>5259</td>
<td></td>
</tr>
</tbody>
</table>
Dimensions Table

Rail (tapped from the bottom)

<table>
<thead>
<tr>
<th>Model Code</th>
<th>W1</th>
<th>H1</th>
<th>P</th>
<th>Mxg3</th>
<th>Lmax</th>
<th>Rail (kg/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARU15</td>
<td>15</td>
<td>15</td>
<td>60</td>
<td>M5x8</td>
<td>4000</td>
<td>1290</td>
</tr>
<tr>
<td>ARU20</td>
<td>20</td>
<td>20</td>
<td>60</td>
<td>M6x10</td>
<td>4000</td>
<td>2280</td>
</tr>
<tr>
<td>ARU25</td>
<td>25</td>
<td>25</td>
<td>60</td>
<td>M6x12</td>
<td>4000</td>
<td>3020</td>
</tr>
<tr>
<td>ARU30</td>
<td>30</td>
<td>30</td>
<td>80</td>
<td>M8x15</td>
<td>4000</td>
<td>4380</td>
</tr>
<tr>
<td>ARU35</td>
<td>35</td>
<td>35</td>
<td>80</td>
<td>M8x15</td>
<td>4000</td>
<td>6790</td>
</tr>
<tr>
<td>ARU45</td>
<td>45</td>
<td>39</td>
<td>105</td>
<td>M12x19</td>
<td>4000</td>
<td>10530</td>
</tr>
<tr>
<td>ARU55</td>
<td>55</td>
<td>45.7</td>
<td>120</td>
<td>M14x24</td>
<td>4000</td>
<td>14060</td>
</tr>
</tbody>
</table>

Nipple Option

<table>
<thead>
<tr>
<th>Type</th>
<th>Nipple size</th>
<th>Inner nipple</th>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC15 HRC15</td>
<td>M3</td>
<td>M3</td>
<td>A-M3</td>
</tr>
<tr>
<td>ARC20 HRC20</td>
<td>M3</td>
<td>M3</td>
<td>B-M3</td>
</tr>
<tr>
<td>ARC25 HRC25 ERC25</td>
<td>M6</td>
<td>M6</td>
<td>B-M6</td>
</tr>
<tr>
<td>ARC30 HRC30</td>
<td>M6</td>
<td>M6</td>
<td>B-M6</td>
</tr>
<tr>
<td>ARC35 HRC35</td>
<td>M6</td>
<td>M6</td>
<td>B-M6</td>
</tr>
<tr>
<td>ARC45 HRC45</td>
<td>PT2/8</td>
<td>M6</td>
<td>B-PT2/8</td>
</tr>
<tr>
<td>ARC55 HRC55</td>
<td>M6</td>
<td>M6</td>
<td>B-M6</td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Model code</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRC U 21/15 M N B P</td>
</tr>
<tr>
<td>Customization code (Please refer to page 14)</td>
</tr>
<tr>
<td>Number of rails on the same moving axis</td>
</tr>
<tr>
<td>Rail length (mm)</td>
</tr>
<tr>
<td>Rail hole pitch (mm)</td>
</tr>
<tr>
<td>Block width : M: standard Flanged</td>
</tr>
<tr>
<td>Block length : N: standard</td>
</tr>
<tr>
<td>Accuracy grade : UP, SP, P, H, N (Please refer to page 13)</td>
</tr>
<tr>
<td>Preload class : VC, V0, V1, V2 (Please refer to page 12)</td>
</tr>
<tr>
<td>Block quantity</td>
</tr>
<tr>
<td>Rail type : WRC: Wide Rail Ball Type Linear Guide Series</td>
</tr>
<tr>
<td>Dimensions Table</td>
</tr>
</tbody>
</table>

WRU Series Rail (tapped from the bottom)

<table>
<thead>
<tr>
<th>Model Code</th>
<th>W1</th>
<th>H1</th>
<th>P</th>
<th>P2</th>
<th>Mxg3</th>
<th>Lmax</th>
<th>Rail (kg/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRU21/15</td>
<td>37</td>
<td>14.4</td>
<td>50</td>
<td>22</td>
<td>M4x8</td>
<td>4000</td>
<td>3596</td>
</tr>
<tr>
<td>WRU27/20</td>
<td>42</td>
<td>18.5</td>
<td>60</td>
<td>24</td>
<td>M5x7.5</td>
<td>4000</td>
<td>5259</td>
</tr>
</tbody>
</table>
The above rating load capacities and static moment are calculated according to ISO14728 standard. The rating life for basic dynamic load rating is defined as the total 100km travel distance that 90% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50km travel distance is applied, the above basic dynamic load rating $C$ of ISO 14728 should be multiplied by 1.26 for conversion.

### Dimensions Table

#### WRC Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRC 21/15 MN</td>
<td>H W W1 P Dxdx g1 Mxg2 W2 h2 W1 L1 M1 P1 P2 H2</td>
<td>21 37 14.4 50 22 7.5x4.5x5.3</td>
<td>54 18.3 19 31 5x55</td>
<td>M3</td>
<td>3.5 3.3 6.1 13.9</td>
<td>11.9</td>
<td>315 105</td>
</tr>
<tr>
<td>WRC 21/15 FN</td>
<td>H W W1 P Dxdx g1 Mxg2 W2 h2 W1 L1 M1 P1 P2 H2</td>
<td>21 37 14.4 50 22 7.5x4.5x5.3</td>
<td>68 18.3 29 60 5x56</td>
<td>M4</td>
<td>6 6</td>
<td>5x45</td>
<td>11.5</td>
</tr>
<tr>
<td>WRC 27/20 MN</td>
<td>H W W1 P Dxdx g1 Mxg2 W2 h2 W1 L1 M1 P1 P2 H2</td>
<td>27 42 18.5 60 24 7.5x4.5x5.3</td>
<td>62 23.5 30 46 6x66</td>
<td>- 10</td>
<td>M3</td>
<td>4.5 8</td>
<td>11.5</td>
</tr>
<tr>
<td>WRC 27/20 FN</td>
<td>H W W1 P Dxdx g1 Mxg2 W2 h2 W1 L1 M1 P1 P2 H2</td>
<td>27 42 18.5 60 24 7.5x4.5x5.3</td>
<td>80 23.5 40 70 6x69</td>
<td>9 9</td>
<td>M3</td>
<td>4.5 8</td>
<td>9.2</td>
</tr>
</tbody>
</table>

#### WRC...C Series

Ball chain type

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRC 21/15 MN.C</td>
<td>H W W1 P Dxdx g1 Mxg2 W2 h2 W1 L1 M1 P1 P2 H2</td>
<td>21 37 14.4 50 22 7.5x4.5x5.3</td>
<td>54 18.3 19 31 5x55</td>
<td>M3</td>
<td>3.5 3.3 6.1 13.9</td>
<td>11.9</td>
<td>315 105</td>
</tr>
<tr>
<td>WRC 21/15 FN.C</td>
<td>H W W1 P Dxdx g1 Mxg2 W2 h2 W1 L1 M1 P1 P2 H2</td>
<td>21 37 14.4 50 22 7.5x4.5x5.3</td>
<td>68 18.3 29 60 5x56</td>
<td>M4</td>
<td>6 6</td>
<td>5x45</td>
<td>11.5</td>
</tr>
<tr>
<td>WRC 27/20 MN.C</td>
<td>H W W1 P Dxdx g1 Mxg2 W2 h2 W1 L1 M1 P1 P2 H2</td>
<td>27 42 18.5 60 24 7.5x4.5x5.3</td>
<td>62 23.5 30 46 6x66</td>
<td>- 10</td>
<td>M3</td>
<td>4.5 8</td>
<td>11.5</td>
</tr>
<tr>
<td>WRC 27/20 FN.C</td>
<td>H W W1 P Dxdx g1 Mxg2 W2 h2 W1 L1 M1 P1 P2 H2</td>
<td>27 42 18.5 60 24 7.5x4.5x5.3</td>
<td>80 23.5 40 70 6x69</td>
<td>9 9</td>
<td>M3</td>
<td>4.5 8</td>
<td>9.2</td>
</tr>
</tbody>
</table>

The dynamic load rating value with ball chain C cage is the measured value (please refer to page 18). The above static load rating and the static moment are calculated according to the ISO 14728 standard.
The above rating load capacities and static moment are calculated according to ISO14728 standard. The rating life for basic dynamic load rating is defined as the total 100km travel distance that 90% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50km travel distance is applied, the above basic dynamic load rating C of ISO 14728 should be multiplied by 1.26 for conversion.

### WRC Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRC 21/15 MN</td>
<td>H 21, W 8.5, L 37, D 14.4, P 50, d 22</td>
<td>7.5x4.5x5.3</td>
<td>54, L 57.5, L 40.3, h 18.3, P 19</td>
<td>Mx 31, Mx 5, M3 p 6</td>
<td>M3x3, P3</td>
<td>3.5, 3.3, 6.1</td>
<td>13.9, 11.9</td>
<td>9.9, 12.5, 17.5</td>
</tr>
<tr>
<td>WRC 21/15 FN</td>
<td>H 21, W 15.5, L 37, D 14.4, P 50, d 22</td>
<td>7.5x4.5x5.3</td>
<td>68, L 57.5, L 40.3, h 18.3, P 29</td>
<td>Mx 60, Mx 6, M3</td>
<td>M3x3, P3</td>
<td>3.5, 3.3, 6.1</td>
<td>8.9, 6.9</td>
<td>9.9, 12.5, 17.5</td>
</tr>
<tr>
<td>WRC 27/20 MN</td>
<td>H 27, W 10, L 42, D 18.5, P 60, d 24</td>
<td>7.5x4.5x5.3</td>
<td>62, L 70, L 52, h 23.5, P 32</td>
<td>Mx 46, Mx 6, M3</td>
<td>M3x4, P4</td>
<td>3.5, 4.5, 8</td>
<td>13.2, 11.5</td>
<td>17.1, 21.5, 30</td>
</tr>
<tr>
<td>WRC 27/20 FN</td>
<td>H 27, W 19, L 42, D 18.5, P 60, d 24</td>
<td>7.5x4.5x5.3</td>
<td>80, L 70, L 52, h 23.5, P 40</td>
<td>Mx 70, Mx 9, M3</td>
<td>M3x4, P4</td>
<td>3.5, 4.5, 8</td>
<td>9.2, 7.5</td>
<td>17.1, 23.5, 30</td>
</tr>
</tbody>
</table>

### WRC...C Series - Ball chain type

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRC 21/15 NLC</td>
<td>H 21, W 8.5, L 37, D 14.4, P 50, d 22</td>
<td>7.5x4.5x5.3</td>
<td>54, L 57.5, L 40.3, h 18.3, P 19</td>
<td>Mx 31, Mx 5, M3</td>
<td>M3x3, P3</td>
<td>3.5, 3.3, 6.1</td>
<td>13.9, 11.9</td>
<td>11.8, 14.9, 16.2</td>
</tr>
<tr>
<td>WRC 21/15 NLC</td>
<td>H 21, W 15.5, L 37, D 14.4, P 50, d 22</td>
<td>7.5x4.5x5.3</td>
<td>68, L 57.5, L 40.3, h 18.3, P 29</td>
<td>Mx 60, Mx 6, M3</td>
<td>M3x3, P3</td>
<td>3.5, 3.3, 6.1</td>
<td>8.9, 6.9</td>
<td>11.8, 14.9, 16.2</td>
</tr>
<tr>
<td>WRC 27/20 NLC</td>
<td>H 27, W 10, L 42, D 18.5, P 60, d 24</td>
<td>7.5x4.5x5.3</td>
<td>62, L 70, L 52, h 23.5, P 32</td>
<td>Mx 46, Mx 6, M3</td>
<td>M3x4, P4</td>
<td>3.5, 4.5, 8</td>
<td>13.2, 11.5</td>
<td>22.3, 28.1, 25.7</td>
</tr>
<tr>
<td>WRC 27/20 NLC</td>
<td>H 27, W 19, L 42, D 18.5, P 60, d 24</td>
<td>7.5x4.5x5.3</td>
<td>80, L 70, L 52, h 23.5, P 40</td>
<td>Mx 70, Mx 9, M3</td>
<td>M3x4, P4</td>
<td>3.5, 4.5, 8</td>
<td>9.2, 7.5</td>
<td>22.3, 28.1, 25.7</td>
</tr>
</tbody>
</table>

The dynamic load rating value with ball chain C cage 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

Compared to the industry’s standard, with various combination and low center of gravity provides a more compact space, and is suitable for occasions that need to lower external torque and smaller inertial force. ARR, HRR, LRR’s block, all share the same track, and with same load capacity and service life.

#### MXL Ultra Long Block Type

Compared to the industry’s ML lengthened block, MXL is the model with a much lengthened block and can demonstrate a greater load capability and rigidity, and better shock reduction capability. It’s suitable for machine tool that requires super high rigidity and accuracy.

### Parts Information

#### Low Noise Roller Chain (Optional)

Ball chain can effectively lower high frequency noise volume while sliding, and enhance smoothness. The ball chain spacer between steel rollers can continuously replenish the oil film cladding to maintain better lubrication effect.

(For more information please refer to page 07)

#### Full Cover Seal (Standard Feature)

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

(For more information please refer to page 03)

#### NBR Seal (Optional)

The seal can demonstrate high dustproof ability focusing on the fine dust working condition, such as wood-working machine, glass processing machine, graphite processing machine, and grinder. On the outer side of the seal is equipped with stainless steel scraper, and the clearance between inner contour and rail contour is only 0.2~0.3mm. This can prevent comparatively large foreign objects from damaging rubber seal.

(For more information please refer to page 09)

### Ordering Information

#### Model Code

<table>
<thead>
<tr>
<th>Code</th>
<th>ARR U</th>
<th>35</th>
<th>M N</th>
<th>S 2</th>
<th>C V1</th>
<th>P -1480L</th>
<th>-20</th>
<th>-20</th>
<th>I  / J</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Customization code** (please refer to page 14)
- **Number of rails on the same moving axis**
- **End hole pitch (mm)**
- **Starting hole pitch (mm)**
- **Rail length (mm)**
- **Accuracy grade:** UP, SP, P, H (please refer to page 13)
- **Preload class:** V0, V1, V2
- **Block quantity**
- **Seal type:** Standard
- **Block length:** N: Standard, L: Long, XL: Extra Long
- **Block width:** M: Standard, F: Flanged
- **Block type:** 35, 45, 55
- **U Rail (tapped from the bottom)**

### Product Type

- ARR: Low Profile Type
- HRR: High Profile Type
- LRR: Extremely Low Profile Type
- U: Rail (tapped from the bottom)

---

**Image:** ARR/ HRR/ LRR series Roller-type Linear Guide
Product Overview

LRR Extremely Low Profile Type
Compared to the industry's standard, with various combination and low center of gravity provides a more compact space, and is suitable for occasions that need to lower external torque and smaller inertial force. ARR, HRR, LRR's block, all share the same track, and with same load capacity and service life.

MXL Ultra Long Block Type
Compared to the industry's ML lengthened block, MXL is the model with a much lengthened block and can demonstrate a greater load capability and rigidity, and better shock reduction capability. It's suitable for machine tool that requires super high rigidity and accuracy.

Parts information

Low Noise Roller Chain (Optional)
Ball chain can effectively lower high frequency noise volume while sliding, and enhance smoothness. The ball chain spacer between steel rollers can continuously replenish the oil film cladding to maintain better lubrication effect.
(For more information please refer to page 07)

Full Cover Seal (Standard Feature)
All model type are equipped with "end seal", "bottom seal", "inner seal" and can effectively prevent foreign objects from sliding into the block, and prevent lubrication from leaking out.
(For more information please refer to page 03)

NBR Seal (Optional)
The seal can demonstrate high dustproof ability focusing on the fine dust working condition, such as wood-working machine, glass processing machine, graphite processing machine, and grinder. On the outer side of the seal is equipped with stainless steel scraper, and the clearance between inner contour and rail contour is only 0.2~0.3mm. This can prevent comparatively large foreign objects from damaging rubber seal.
(For more information please refer to page 09)

High Rigidity Stainless Steel Reinforcement Plate (Standard Feature)
L-shaped design is locked with end and bottom screw on block body respectively. The bottom of the body is equipped with integrated bolt, and can fix the reinforcement plate tightly to prevent plastic mountings from cracking and result in block damage.
(For more information please refer to page 06)

Metal-Plastic-Cap (Standard Feature)
Stainless steel cover can demonstrate excellent friction resistance ability under harsh environment. Inside the hole plug is equipped with plastic fixed support, having easy installation characteristics, can directly be installed on the standard rail. Contact between support part and stigma screws can prevent over fastening while installation, and can prevent foreign objects from stacking while sliding as well.
(For more information please refer to page 10)

Ordering Information

Model Code

| Block type: | ARR: Low Profile Type | HRR: High Profile Type | LRR: Extremely Low Profile Type |
| U: Rail (tapped from the bottom) | | | |

<table>
<thead>
<tr>
<th>ARR</th>
<th>U</th>
<th>35</th>
<th>M</th>
<th>N</th>
<th>S</th>
<th>2</th>
<th>C</th>
<th>V1</th>
<th>P</th>
<th>-1480</th>
<th>-20</th>
<th>-20</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block type:</td>
<td>Standard</td>
<td>Flanged</td>
<td>Flanged</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block length:</td>
<td>Standard</td>
<td>Long</td>
<td>Extra long</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block width:</td>
<td>Standard</td>
<td>Flanged</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rail length(mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy grade:</td>
<td>UP, SP, P, H (please refer to page 13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preload class:</td>
<td>V0, V1, V2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block quantity:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rail length(mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End hole pitch(mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Starting hole pitch(mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of rail on the same moving axis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customization code (please refer to page 14)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U: Rail (tapped from the bottom)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The above rating load capacities and static moment are calculated according to ISO 14728 standard. The rating life for ball dynamic load rating is defined as the total 100km travel distance that 90% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50km travel distance is applied, the above ball dynamic load rating $C$ of ISO 14728 should be multiplied by 1.26 for conversion.

### Dimensions Table

#### ARR MN/ML/MXL Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight Block(g) Roll(g/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARR 35MN</td>
<td>H 48 W2 18 L3 34 P 40 140x17</td>
<td>70 122 W4 84 Li 42 P1 50 P1/2 50 P2 25 P2/2 25 M1x13 M1 13</td>
<td>M6x12 M6x8 PS 12 10 16.4 25 25 57 154</td>
<td>2742 1946 1946 1200</td>
<td>740</td>
<td>740</td>
</tr>
<tr>
<td>ARR 35ML</td>
<td>H 48 W2 18 L3 34 P 40 140x17</td>
<td>70 147.5 W4 109.5 Li 42 P1 72 P1/2 50 P2 25 P2/2 25 M1x13 M1 13</td>
<td>M6x12 M6x8 PS 12 10 16.4 26.7 26.7 68.9 196</td>
<td>3525 3226 3226 2100</td>
<td>740</td>
<td>740</td>
</tr>
</tbody>
</table>

#### HRR MN/ML/MXL Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight Block(g) Roll(g/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRR 35MN</td>
<td>H 55 W2 18 L3 34 P 40 140x17</td>
<td>70 122 W4 84 Li 49 P1 50 P1/2 50 P2 25 P2/2 25 M1x16 M1 13</td>
<td>M6x12 M6x8 PS 12 17 23.4 25 25 57 154</td>
<td>2742 1946 1946 1200</td>
<td>740</td>
<td>740</td>
</tr>
<tr>
<td>HRR 35ML</td>
<td>H 55 W2 18 L3 34 P 40 140x17</td>
<td>70 147.5 W4 109.5 Li 49 P1 72 P1/2 50 P2 25 P2/2 25 M1x16 M1 13</td>
<td>M6x12 M6x8 PS 12 17 23.4 26.7 26.7 68.9 196</td>
<td>3525 3226 3226 2100</td>
<td>740</td>
<td>740</td>
</tr>
<tr>
<td>HRR 35XL</td>
<td>H 55 W2 18 L3 34 P 40 140x17</td>
<td>70 177.5 W4 139.5 Li 49 P1 100 P1/2 50 P2 25 P2/2 100 M1x16 M1 13</td>
<td>M6x12 M6x8 PS 12 17 23.4 27.7 27.7 82 245</td>
<td>4439 5111 5111 2700</td>
<td>740</td>
<td>740</td>
</tr>
</tbody>
</table>

#### LRR MN/ML/MXL Series

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight Block(g) Roll(g/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LRR 35MN</td>
<td>H 44 W2 18 L3 34 P 40 140x17</td>
<td>70 122 W4 84 Li 38 P1 50 P1/2 50 P2 25 P2/2 25 M1x9 M1 9</td>
<td>M6x12 M6x8 PS 12 6 12.4 25 25 57 154</td>
<td>2742 1946 1946 1100</td>
<td>740</td>
<td>740</td>
</tr>
<tr>
<td>LRR 35ML</td>
<td>H 44 W2 18 L3 34 P 40 140x17</td>
<td>70 147.5 W4 109.5 Li 38 P1 72 P1/2 50 P2 25 P2/2 25 M1x9 M1 9</td>
<td>M6x12 M6x8 PS 12 6 12.4 26.7 26.7 68.9 196</td>
<td>3525 3226 3226 1500</td>
<td>740</td>
<td>740</td>
</tr>
<tr>
<td>LRR 35XL</td>
<td>H 44 W2 18 L3 34 P 40 140x17</td>
<td>70 177.5 W4 139.5 Li 38 P1 100 P1/2 50 P2 25 P2/2 100 M1x9 M1 9</td>
<td>M6x12 M6x8 PS 12 6 12.4 27.7 27.7 82 245</td>
<td>4439 5111 5111 1900</td>
<td>740</td>
<td>740</td>
</tr>
</tbody>
</table>

1. The load capacities for full-ball type (without ball chain)
2. $N_2$ = Injecting holes
3. $N_3$ = O-ring size for lubrication from above
4. $N_2, N_3$ will be sealed before shipment, open it when using product.

### Notes

- Dimensions shown in the diagrams are for visual reference only.
- Specifications are subject to change without notice.
- For detailed dimensions, refer to the technical manual provided by the manufacturer.
- The diagrams illustrate the basic configurations and should not be used for exact measurements.

---

**Linear Motion Technology**

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

### Dimensions Table

**ARR MN/ML/MXL Series**

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight Block (g)</th>
<th>Rail (g/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARR 35MN</td>
<td>H 48 W2 18 L1 34 P 40</td>
<td>140x8x17</td>
<td>W 70 L2 122 h2 84 P3 42 Mx13 50</td>
<td>6x12 M08x0.5 P5 12 10 16.4 25 25 57</td>
<td>154 2742</td>
<td>1946 1946</td>
<td>1200 5740</td>
</tr>
<tr>
<td>ARR 35ML</td>
<td>H 48 W2 18 L1 34 P 40</td>
<td>140x8x17</td>
<td>W 70 L2 122 h2 84 P3 42 Mx13 50</td>
<td>6x12 M08x0.5 P5 12 10 16.4 25 25 57</td>
<td>154 2742</td>
<td>1946 1946</td>
<td>1200 5740</td>
</tr>
</tbody>
</table>

**HRR MN/ML/MXL Series**

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight Block (g)</th>
<th>Rail (g/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRR 35MN</td>
<td>H 55 W2 18 L1 34 P 40</td>
<td>140x8x17</td>
<td>W 70 L2 122 h2 84 P3 42 Mx13 50</td>
<td>6x12 M08x0.5 P5 12 10 16.4 25 25 57</td>
<td>154 2742</td>
<td>1946 1946</td>
<td>1200 5740</td>
</tr>
<tr>
<td>HRR 35ML</td>
<td>H 55 W2 18 L1 34 P 40</td>
<td>140x8x17</td>
<td>W 70 L2 122 h2 84 P3 42 Mx13 50</td>
<td>6x12 M08x0.5 P5 12 10 16.4 25 25 57</td>
<td>154 2742</td>
<td>1946 1946</td>
<td>1200 5740</td>
</tr>
</tbody>
</table>

**LRR MN/ML/MXL Series**

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions (mm)</th>
<th>Block Dimensions (mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight Block (g)</th>
<th>Rail (g/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LRR 35MN</td>
<td>H 44 W2 18 L1 34 P 40</td>
<td>140x8x17</td>
<td>W 70 L2 122 h2 84 P3 42 Mx13 50</td>
<td>6x12 M08x0.5 P5 12 10 16.4 25 25 57</td>
<td>154 2742</td>
<td>1946 1946</td>
<td>1200 5740</td>
</tr>
<tr>
<td>LRR 35ML</td>
<td>H 44 W2 18 L1 34 P 40</td>
<td>140x8x17</td>
<td>W 70 L2 122 h2 84 P3 42 Mx13 50</td>
<td>6x12 M08x0.5 P5 12 10 16.4 25 25 57</td>
<td>154 2742</td>
<td>1946 1946</td>
<td>1200 5740</td>
</tr>
</tbody>
</table>

2. The load capacities for full-ball type (without ball chain)
3. \( N2 \) = Injecting holes
4. \( N3 \) will be sealed before shipment, open it when using product.
The above rating load capacities and static moment are calculated according to ISO14728 standard. The rating life for each type is defined as the total 100km travel distance that 90% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50km travel distance is applied, the above basic dynamic load rating $C$ of ISO 14728 should be multiplied by 1.26 for conversion.
The above rating load capacities and static moment are calculated according to ISO14728 standard. The rating life for basic dynamic load rating is defined as the total 100km travel distance that 90% of a group of identical linear guides can be operated individually under the same conditions free from any material damage caused by rolling fatigue. When the standard of 50km travel distance is applied, the above basic dynamic load rating $C$ of ISO 14728 should be multiplied by 1.26 for conversion.
### Dimensions Table

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

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H</td>
<td>W2</td>
<td>W1</td>
<td>H1</td>
<td>P</td>
<td>D x 9</td>
<td>W</td>
<td>L</td>
</tr>
<tr>
<td>ARR 35MN</td>
<td>48</td>
<td>18</td>
<td>34</td>
<td>31</td>
<td>40</td>
<td>14x9</td>
<td>70</td>
<td>122</td>
</tr>
<tr>
<td>ARR 35ML</td>
<td>48</td>
<td>18</td>
<td>34</td>
<td>31</td>
<td>40</td>
<td>14x9</td>
<td>70</td>
<td>147.5</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRR 35MN</td>
<td>55</td>
<td>18</td>
<td>34</td>
<td>31</td>
<td>40</td>
<td>14x9</td>
<td>70</td>
<td>122</td>
</tr>
<tr>
<td>HRR 35ML</td>
<td>55</td>
<td>18</td>
<td>34</td>
<td>31</td>
<td>40</td>
<td>14x9</td>
<td>70</td>
<td>147.5</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>LRR 35MN</td>
<td>44</td>
<td>18</td>
<td>34</td>
<td>31</td>
<td>40</td>
<td>14x9</td>
<td>70</td>
<td>122</td>
</tr>
<tr>
<td>LRR 35ML</td>
<td>44</td>
<td>18</td>
<td>34</td>
<td>31</td>
<td>40</td>
<td>14x9</td>
<td>70</td>
<td>147.5</td>
</tr>
</tbody>
</table>

### Notes:
1. N2 = Injecting holes
2. No O-ring size for lubrication from above
3. N2, N3 will be seal before shipment, open it when using product.

The dynamic load rating value with ball chain Ccage is the measured value. The above static load rating and the static moment are calculated according to the ISO 14728 standard.
**ARR MN/ML/MXL...C Series (Ball chain type)**

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight Block(g) Rail(g/m)</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARR 35MN</td>
<td>18 34 31 40 14x8x17</td>
<td>70 122 84 42 50 - 50 25 50</td>
<td>M8x13 - 13 M6x12 M6x8 P5 12 10 16.4 25 25</td>
<td>71.3 133 2350 1710 1710</td>
<td>1200 5800</td>
<td>ARR 35MN</td>
<td></td>
</tr>
<tr>
<td>ARR 35ML</td>
<td>18 34 31 40 14x8x17</td>
<td>70 147.5 109.5 42 72 - 50 25 72</td>
<td>M8x13 - 13 M6x12 M6x8 P5 12 10 16.4 26.7 26.7</td>
<td>86.1 175 3133 2881 2881</td>
<td>1750 5850</td>
<td>ARR 35ML</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight Block(g) Rail(g/m)</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRR 35MN</td>
<td>18 34 31 40 14x8x17</td>
<td>70 122 84 49 50 - 50 25 50</td>
<td>M8x16 - 13 M6x12 M6x8 P5 12 17 23.4 25 25</td>
<td>71.3 133 2350 1710 1710</td>
<td>1220 5721</td>
<td>HRR 35MN</td>
<td></td>
</tr>
<tr>
<td>HRR 35ML</td>
<td>18 34 31 40 14x8x17</td>
<td>70 147.5 109.5 49 72 - 50 25 72</td>
<td>M8x16 - 13 M6x12 M6x8 P5 12 17 23.4 26.7 26.7</td>
<td>86.1 175 3133 2881 2881</td>
<td>2100 5850</td>
<td>HRR 35ML</td>
<td></td>
</tr>
<tr>
<td>HRR 35XL</td>
<td>18 34 31 40 14x8x17</td>
<td>70 177.5 139.5 49 100 50 50 25 100</td>
<td>M8x16 - 13 M6x12 M6x8 P5 12 17 23.4 27.7 27.7</td>
<td>102.5 224 4047 4695 4695</td>
<td>2700 5850</td>
<td>HRR 35XL</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight Block(g) Rail(g/m)</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>LRR 35MN</td>
<td>18 34 31 40 14x8x17</td>
<td>70 122 84 38 50 - 50 25 50</td>
<td>M8x9 - 9 M6x12 M6x8 P5 12 6 12.4 25 25</td>
<td>71.3 133 2350 1710 1710</td>
<td>1100 5850</td>
<td>LRR 35MN</td>
<td></td>
</tr>
<tr>
<td>LRR 35ML</td>
<td>18 34 31 40 14x8x17</td>
<td>70 147.5 109.5 38 72 - 50 25 72</td>
<td>M8x9 - 9 M6x12 M6x8 P5 12 6 12.4 26.7 26.7</td>
<td>86.1 175 3133 2881 2881</td>
<td>1500 5850</td>
<td>LRR 35ML</td>
<td></td>
</tr>
<tr>
<td>LRR 35XL</td>
<td>18 34 31 40 14x8x17</td>
<td>70 177.5 139.5 38 100 50 50 25 100</td>
<td>M8x9 - 9 M6x12 M6x8 P5 12 6 12.4 27.7 27.7</td>
<td>102.5 224 4047 4695 4695</td>
<td>1900 5850</td>
<td>LRR 35XL</td>
<td></td>
</tr>
</tbody>
</table>

1. N2 = Injecting holes  
2. N3 = O-ring size for lubrication from above  
3. N2, N3 will be seal before shipment, open it when using product.
**Dimensions Table**

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

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>LRR 35FN</td>
<td>44 33 34 31 40 14dx17 100 122 84 38 62 - 82 41 52 M10x13 M8 9 9</td>
<td>M6x12 M6x8 P5 12 6 12.4 10 19 71.3 133 2350 1710 1710 1550 5800</td>
<td>LRR 35FL</td>
<td>44 33 34 31 40 14dx17 100 147.5 105.5 42 62 - 82 41 52 M10x13 M8 9 9</td>
<td>M6x12 M6x8 P5 12 6 12.4 10 19 71.3 133 2350 1710 1710 1550 5800</td>
<td>LRR 35FXL</td>
<td>44 33 34 31 40 14dx17 100 177.5 135.5 42 100 50 82 41 100 M10x13 M8 9 9</td>
</tr>
</tbody>
</table>

1. N2 = Injecting holes
2. N3 = O-ring size for lubrication from above
3. N2, N3 will be seal before shipment, open it when using product.

The dynamic load rating value with ball chain Ccage is the measured value. The above static load rating and the static moment are calculated according to the ISO 14728 standard.
### Dimensions Table

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

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRR 35FN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRR 35FL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRR 35FXL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Mounting Dimensions</th>
<th>Rail Dimensions(mm)</th>
<th>Block Dimensions(mm)</th>
<th>Load Capacities (KN)</th>
<th>Static Moment (Nm)</th>
<th>Weight</th>
<th>Model Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>LRR 35FN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LRR 35FL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LRR 35FXL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. N2: Injecting holes
2. N3: O-ring size for lubrication from above
3. N2, N3 will be sealed before shipment, open it when using product.

---

The dynamic load rating value with ball chain C cage is the measured value. The above static load rating and the static moment are calculated according to the ISO 14728 standard.
### Nipple Option

**Grease nipple/ Oil piping joint**

<table>
<thead>
<tr>
<th>A: M3</th>
<th>B: M3</th>
<th>B: M6</th>
<th>B: PT1/8</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OB: M3-M6</th>
<th>OA: M3-D4</th>
<th>OA: M6-M8</th>
<th>OA: M6-PT1/8</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
</tbody>
</table>

**M3x0.5**

<table>
<thead>
<tr>
<th>Ø4.5 Ø6.5 (67.5°)</th>
</tr>
</thead>
</table>

- **L** type nipple is for ball bearing external seal (SN) and roller type
- **XL** type nipple is for roller type external seal (SN)

**Note:** If there is any customization need, please contact CPC for more information.
# Nipple Option

**Grease nipple/ Oil piping joint**

<table>
<thead>
<tr>
<th>Grease Type</th>
<th>Oil Type</th>
<th>Descriptive Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3x0.5</td>
<td>Ø4</td>
<td>Grease nipple is available</td>
</tr>
<tr>
<td>M6x0.75</td>
<td>Ø6</td>
<td>Grease nipple is available</td>
</tr>
</tbody>
</table>

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

Note: If there is any customization need, please contact CPC for more information.
Lubrication Kit and Grease Gun

**cpc** Lubrication Unit is a supply nozzle with 3 different sizes of nozzle adaptors. These nozzle adaptors are suitable for different size of grease nipple on different size of linear blocks.

**GP-PT1/8-01 Lubrication Kit**

The Lubrication Kit is 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 mount on the main body of common manual or pneumatic grease gun with PT1/8 tapped connector available on the market.

<table>
<thead>
<tr>
<th>Nipple Option</th>
<th>Nipple Size</th>
<th>Nipple Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Section</td>
<td>Site</td>
</tr>
<tr>
<td>ARC-15 HRC-15</td>
<td>M3</td>
<td>M3</td>
</tr>
<tr>
<td>ARC-20 HRC-20</td>
<td>M3</td>
<td>M3</td>
</tr>
<tr>
<td>ARC-25 HRC-25</td>
<td>M6</td>
<td>M3</td>
</tr>
<tr>
<td>ARC-30 HRC-30</td>
<td>M6</td>
<td>M6</td>
</tr>
<tr>
<td>ARC-35 HRC-35</td>
<td>M6</td>
<td>M6</td>
</tr>
<tr>
<td>ARC-45 HRC-45</td>
<td>PT1/8</td>
<td>M6</td>
</tr>
<tr>
<td>ARC-55 HRC-55</td>
<td>M6</td>
<td>M6</td>
</tr>
</tbody>
</table>

**Greasing Diagram**

**Supply Nozzle**

**Nozzle Adapter**

<table>
<thead>
<tr>
<th>Type</th>
<th>Dimension</th>
<th>Grease Nipple</th>
</tr>
</thead>
<tbody>
<tr>
<td>GH-M5-MR</td>
<td></td>
<td>MR series Miniature linear guide size</td>
</tr>
<tr>
<td>GH-M5-06</td>
<td></td>
<td>MR-15W</td>
</tr>
<tr>
<td>GH-M5-08</td>
<td></td>
<td>MR-12W</td>
</tr>
</tbody>
</table>

**Main Body of Grease Gun**

Option for Main Body of Grease Gun: GG-070 for 70g volume grease pack and GG-400 for 400g volume grease pack.

<table>
<thead>
<tr>
<th>Type</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>GG-070</td>
<td></td>
</tr>
<tr>
<td>GG-400</td>
<td></td>
</tr>
</tbody>
</table>

- | 2. Output Volume: 0.5~0.7 c.c/stroke |
- | 2. Output Volume: 1.0~1.2 c.c/stroke |
- | 3. Grease: Suitable for 70g volume grease pack or bulk loading |
|---|---|---|---|---|
- | 3. Grease: Suitable for 400g volume grease pack or bulk loading |
The Lubrication Kit is 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 common manual or pneumatic grease gun with PT1/8 tapped connector available on the market.

**Nipple Option**

<table>
<thead>
<tr>
<th>Type</th>
<th>Nipple Size</th>
<th>Nipple Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC-15</td>
<td>M3</td>
<td>A-M3</td>
</tr>
<tr>
<td>ARC-20</td>
<td>M3</td>
<td>A-M3</td>
</tr>
<tr>
<td>ARC-25</td>
<td>M6</td>
<td>B-M6</td>
</tr>
<tr>
<td>ARC-30</td>
<td>M6</td>
<td>B-M6</td>
</tr>
<tr>
<td>ARC-35</td>
<td>M6</td>
<td>B-M6</td>
</tr>
<tr>
<td>ARC-45</td>
<td>PT1/8</td>
<td>B-PT1/8</td>
</tr>
<tr>
<td>ARC-55</td>
<td>M6</td>
<td>B-M6</td>
</tr>
</tbody>
</table>

**Nozzle Adapter**

<table>
<thead>
<tr>
<th>Type</th>
<th>Dimension</th>
<th>Grease Nipple</th>
</tr>
</thead>
<tbody>
<tr>
<td>GH-M5-06</td>
<td>A-M3 A-M3X</td>
<td></td>
</tr>
<tr>
<td>GH-M5-08</td>
<td>B-M6 B-M6X</td>
<td></td>
</tr>
</tbody>
</table>

**Main body of Grease Gun**

The main body of the Grease Gun: GG-070 for 70g volume grease pack and GG-400 for 400g volume grease pack.

<table>
<thead>
<tr>
<th>Type</th>
<th>Dimension</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>GG-070</td>
<td>1. Pressure: 27Mpa 2. Output Volume: 0.5~0.7 c.c/stroke 3. Grease: Suitable for 70g volume grease pack or bulk loading</td>
<td></td>
</tr>
<tr>
<td>GG-400</td>
<td>1. Pressure: 62Mpa 2. Output Volume: 1.0~1.2 c.c/stroke 3. Grease: Suitable for 400g volume grease pack or bulk loading</td>
<td></td>
</tr>
</tbody>
</table>
LINEAR MOTION TECHNOLOGY

**AR/HR Z Series  Lubrication Storage Pad Testing Report**

**Testing equipment**

- **Testing condition**
  - Count: 3000 (2000-5000)
  - Speed: 10 mm/s
  - Running target: 1000 m
  - Lubricant: DAIMLER SUPER MULTITEC 15W-40 (4001)
  - Lubrication period: No lubrication added during testing period

**Testing result**

- Stead lubrication residue started appearing on side profile. Full pads, and full contact between the tested blocks.

**Testing result of inspection point**

- **Inspection point 1 and 2**
  - No wear or roller balls
  - Some oil profile has dried contamination present

- **Inspection point 3**
  - Wear and roller balls
  - No lubrication residue started appearing on side profile

**Test Summary**

- Total continuous running time of 3820 hours and travel distance 8825 kilometers.
- Out of eight test blocks, dried lubricant residue appeared in 2 blocks and 1 block. Dried lubricant residue is indicative of a need for re-lubrication.
- The test results indicated that the lubrication pad design effectively extends re-lubrication requirement and thus lengthens linear operational life.
**LINEAR MOTION TECHNOLOGY**

**MEMO**

**cpc AR/HR Z Series**

**Lubrication Storages Pad Testing Report**

A linear guide is a category of rolling guidance, by using un lubricated stainless steel balls operate between the carriage and the block, result in the moving blocks achieving high precision and low friction linear movement.

The linear guide do not suffice lubrication, rolling friction will increase, cause wear and shortened linear guide life span in long term operation.

**CPC** has added and embedded Hi lubricant storage pads to lengthen linear guide operational life, the pads directly contact and lubricate the rolling balls. This design supplies sufficient lubrication even during short-stroke operations.

**CPC**’s design, due to the embedded pads’ absorption and retention capabilities, results in a product that features a long operating life and long-term lubrication.

The following is the **CPC** in-house lab test results:

**AR15 Lubrication Storage Pad Testing Data**

<table>
<thead>
<tr>
<th>Test condition</th>
<th>Lining back cap (mm)</th>
<th>Lining back cap (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated load</td>
<td>500kg/cm²</td>
<td>500kg/cm²</td>
</tr>
<tr>
<td>Speed</td>
<td>1 m/s</td>
<td>1 m/s</td>
</tr>
<tr>
<td>Measuring tool</td>
<td>1N</td>
<td>1N</td>
</tr>
<tr>
<td>Lubricant</td>
<td>H-4500/1/1</td>
<td>H-4500/1/1</td>
</tr>
<tr>
<td>Elevated speed</td>
<td>No lubrication added during testing period</td>
<td></td>
</tr>
</tbody>
</table>

**Testing result**

- Steel lubricant residue started appearing on all points. Full pads and full surface of the tested blocks.
- Total continuous running time of 3020 hours and travel distance 5820 kilometers.

**Lubrication Storages Pad**

- Inspection point 1 and 2
  - No wear on rollers.
  - Some oil stains have dried. No contamination present.
- Inspection point 3
  - Wear on rollers.
  - Some oil stains have dried. Contamination present.

**Test Summary**

Total continuous running time of 3020 hours and travel distance 5820 kilometers. Out of eight test blocks, dried lubricant residue appeared on Zebrabo and 1 not. Dried lubricant residue is indicative of the need for re-lubrication. The test results indicated that the **CPC** Lubrication pad design effectively extends re-lubrication requirement and thus lengthens linear operational life.

**Plastic parts and end cap in good condition**
Distributors for Australia & New Zealand

MOTION TECHNOLOGIES PTY LTD

24/22-30 Northumberland Road
Carlingbah NSW 2229 Australia
Phone: (02) 9524 4782
Fax: (02) 9525 3878
sales@motiontech.com.au
www.motiontech.com.au

© 1993/1994

ARC/HRC/ERC  Standard 4-Row Ball Bearing Linear Guide
WRC  Wide 4-Row Ball Bearing Linear Guide
ARR/HRR/LRR  Standard 4-Row Roller-type Linear Guide

www.motiontech.com.au