

Cable / Hose Drag Chain MP3000 Series

Cable / Hose Drag Chain MP3000 Series

Overview

The MP3000 series features hinge and latch crossbars to allow convenient access to the chain's channel after installation. This feature saves time by allowing cables and hoses to be added or replaced after chain installation and does not limit the installer to only pulling hose and cable through the chain.

The MP3000 series is constructed of rugged polyamide (PA) and will support and protect cables up to 23mm (0.90in) in diameter. End brackets provide a secure mounting point for chains and have cable tie strain relief tabs for securing cables and hoses.

This series may be designed into systems requiring 2.13m [7ft] of unsupported spans. The MP3000 chain is packaged in chain lengths of 1 meter (22 connected links) and may be shortened or extended by one or more links to fit the application.

Separators may be added at any time to enable segregation of cables/hoses within the same chain.

Features

- Black PA (Polyamide)
- Chain length 1m [3.2ft]
- Link pitch 45mm [1.77in]
- Gliding friction factor 0.3
- Static friction factor 0.45
- Material flammability rating of UL 94 HB
- Operating temperature -30 to 120°C [-76 to 176°F]
- Each package contains 22 chain links (brackets required sold separately)
- One or more links may be added/removed to extend/shorten the chain length



[CDC-10X24R118N](#)

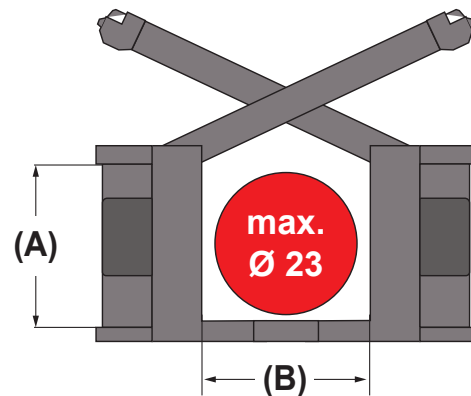


[CDC-10X49R79N](#)



[CDC-10X10R28N](#)

Cable / Hose Drag Chain MP3000 Series


Cable / Hose Drag Chain Selection Chart MP3000 Series

| Part Number | Price | Drawing Link | Inside Height (A) | | Inside Width (B) | | Bend Radius (C) | | Opening Side | Requires Mounting Bracket (sold separately) |
|--------------------------------|---------|---------------------|-------------------|--------|------------------|--------|-----------------|--------|--------------|---------------------------------------------|
| | | | mm | in | mm | in | mm | in | | |
| CDC-10X10R28N | \$55.50 | PDF | 26mm | 1.02in | 26mm | 1.02in | 71mm | 2.8in | IN | CDC-KAZ-10X10 |
| CDC-10X10R47N | \$55.50 | PDF | 26mm | 1.02in | 26mm | 1.02in | 119mm | 4.7in | IN | CDC-KAZ-10X10 |
| CDC-10X10R79N | \$55.50 | PDF | 26mm | 1.02in | 26mm | 1.02in | 201mm | 7.9in | IN | CDC-KAZ-10X10 |
| CDC-10X15R28N | \$59.50 | PDF | 26mm | 1.02in | 37mm | 1.46in | 71mm | 2.8in | IN | CDC-KAZ-10X15 |
| CDC-10X15R47N | \$59.50 | PDF | 26mm | 1.02in | 37mm | 1.46in | 119mm | 4.7in | IN | CDC-KAZ-10X15 |
| CDC-10X15R98N | \$59.50 | PDF | 26mm | 1.02in | 37mm | 1.46in | 249mm | 9.8in | IN | CDC-KAZ-10X15 |
| CDC-10X22R28N | \$61.00 | PDF | 26mm | 1.02in | 56mm | 2.2in | 71mm | 2.8in | IN | CDC-KAZ-10X22 |
| CDC-10X22R47N | \$61.00 | PDF | 26mm | 1.02in | 56mm | 2.2in | 119mm | 4.7in | IN | CDC-KAZ-10X22 |
| CDC-10X22R79N | \$61.00 | PDF | 26mm | 1.02in | 56mm | 2.2in | 201mm | 7.9in | IN | CDC-KAZ-10X22 |
| CDC-10X24R118N | \$62.00 | PDF | 26mm | 1.02in | 62mm | 2.44in | 300mm | 11.8in | IN | CDC-KAZ-10X24 |
| CDC-10X24R28N | \$62.00 | PDF | 26mm | 1.02in | 62mm | 2.44in | 71mm | 2.8in | IN | CDC-KAZ-10X24 |
| CDC-10X24R47N | \$62.00 | PDF | 26mm | 1.02in | 62mm | 2.44in | 119mm | 4.7in | IN | CDC-KAZ-10X24 |
| CDC-10X30R118N | \$63.00 | PDF | 26mm | 1.02in | 76mm | 3in | 300mm | 11.8in | IN | CDC-KAZ-10X30 |
| CDC-10X30R28N | \$63.00 | PDF | 26mm | 1.02in | 76mm | 3in | 71mm | 2.8in | IN | CDC-KAZ-10X30 |
| CDC-10X30R47N | \$63.00 | PDF | 26mm | 1.02in | 76mm | 3in | 119mm | 4.7in | IN | CDC-KAZ-10X30 |
| CDC-10X34R28N | \$64.50 | PDF | 26mm | 1.02in | 87mm | 3.43in | 71mm | 2.8in | IN | CDC-KAZ-10X34 |
| CDC-10X34R47N | \$64.50 | PDF | 26mm | 1.02in | 87mm | 3.43in | 119mm | 4.7in | IN | CDC-KAZ-10X34 |
| CDC-10X34R79N | \$64.50 | PDF | 26mm | 1.02in | 87mm | 3.43in | 201mm | 7.9in | IN | CDC-KAZ-10X34 |
| CDC-10X40R118N | \$66.50 | PDF | 26mm | 1.02in | 101mm | 3.98in | 300mm | 11.8in | IN | CDC-KAZ-10X40 |
| CDC-10X40R28N | \$66.50 | PDF | 26mm | 1.02in | 101mm | 3.98in | 71mm | 2.8in | IN | CDC-KAZ-10X40 |
| CDC-10X40R47N | \$66.50 | PDF | 26mm | 1.02in | 101mm | 3.98in | 119mm | 4.7in | IN | CDC-KAZ-10X40 |
| CDC-10X49R28N | \$70.50 | PDF | 26mm | 1.02in | 125mm | 4.92in | 71mm | 2.8in | IN | CDC-KAZ-10X49 |
| CDC-10X49R47N | \$70.50 | PDF | 26mm | 1.02in | 125mm | 4.92in | 119mm | 4.7in | IN | CDC-KAZ-10X49 |
| CDC-10X49R79N | \$70.50 | PDF | 26mm | 1.02in | 125mm | 4.92in | 201mm | 7.9in | IN | CDC-KAZ-10X49 |

Each chain is 1m [3.2 ft]

Cable / Hose Drag Chain Accessories MP3000 Series

Cable / Hose Drag Chain Brackets MP3000 Series

Overview

The chain end brackets are made of black polyamide (PA). The end brackets are precisely adjusted to the respective chain width and only need to be snapped into each end of the chain. Please order one bracket kit that includes (1) male and (1) female end bracket for each chain system. The brackets should be fastened with M6 screws (not included). The cables or conduits may be fastened with cable ties on the integrated strain reliefs of the chain bracket.

| Cable / Hose Drag Chain Brackets MP3000 Series | | | | | | |
|------------------------------------------------|---------|---------------|--------|--------------|--------|---------------------|
| Part Number | Price | Inside Height | | Inside Width | | Drawing Link |
| | | mm | in | mm | in | |
| CDC-KAZ-10X10 | \$18.00 | 26mm | 1.02in | 26mm | 1.02in | PDF |
| CDC-KAZ-10X15 | \$18.00 | 26mm | 1.02in | 37mm | 1.46in | PDF |
| CDC-KAZ-10X22 | \$18.00 | 26mm | 1.02in | 56mm | 2.2in | PDF |
| CDC-KAZ-10X24 | \$18.00 | 26mm | 1.02in | 62mm | 2.44in | PDF |
| CDC-KAZ-10X30 | \$18.00 | 26mm | 1.02in | 76mm | 3in | PDF |
| CDC-KAZ-10X34 | \$18.00 | 26mm | 1.02in | 76mm | 3.43in | PDF |
| CDC-KAZ-10X40 | \$18.00 | 26mm | 1.02in | 101mm | 3.98in | PDF |
| CDC-KAZ-10X49 | \$25.50 | 26mm | 1.02in | 125mm | 4.92in | PDF |



[CDC-KAZ-10X10](#)

Mounting hardware not included.

Cable / Hose Drag Chain Separator MP3000 Series

Overview

The chain separators are black polyamide (PA). We recommend that separators be used if multiple round cables or hoses with differing diameters are to be installed. Separators are recommended to be used every 2 to 3 links depending on the loading, but may be placed on every link if necessary to prevent cable pinching.

| Cable / Hose Drag Chain Separator MP3000 Series | | | | | |
|-------------------------------------------------|--------|-----|---------------|--------|---------------------|
| Part Number | Price | Qty | Inside Height | | Drawing Link |
| | | | mm | in | |
| CDC-TR-3001 | \$5.50 | 11 | 26mm | 1.02in | PDF |

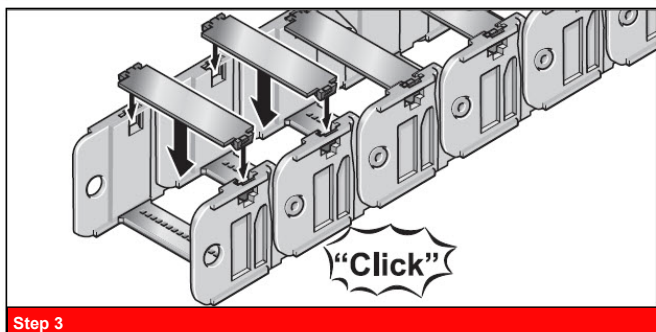
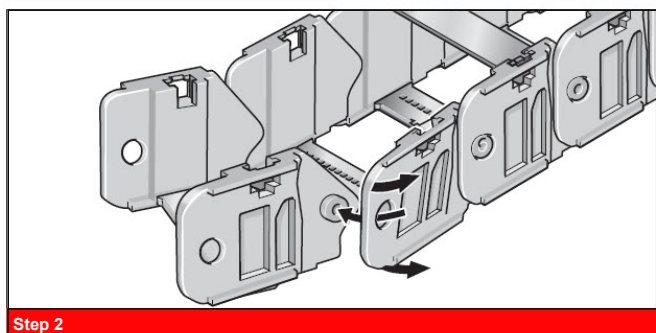
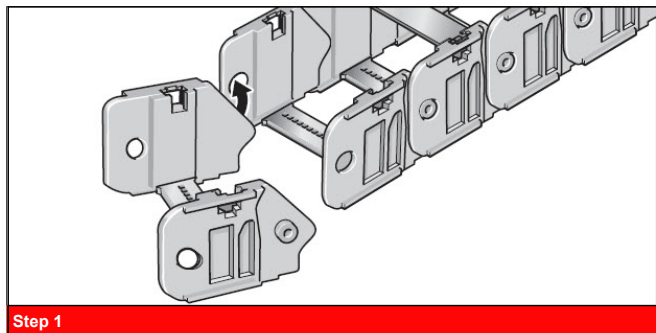


[CDC-TR-3001](#)

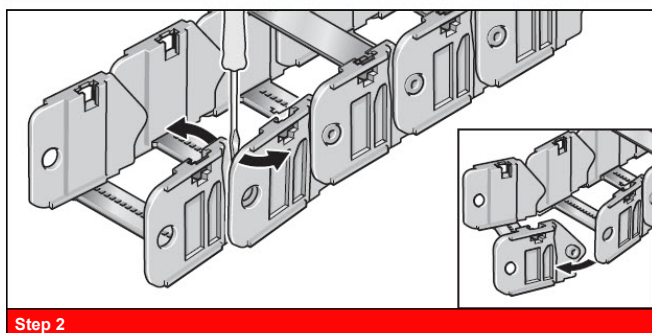
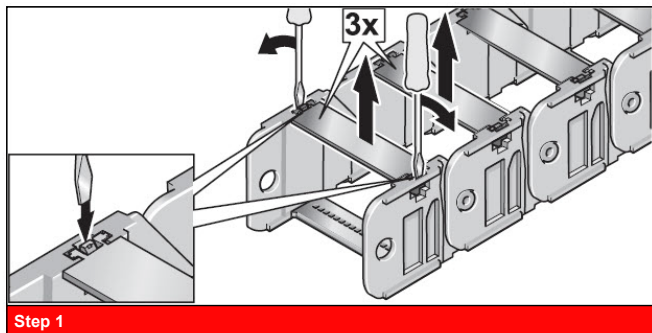
| Cable / Hose Drag Chain Separator Usage MP3000 Series | |
|-------------------------------------------------------|------------------------|
| Separator Usage | Separator per 1m Chain |
| Every Link | 22 |
| Every 2 Links | 11 |
| Every 3 Links | 6 |

Cable / Hose Drag Chain MP 3000 Series

Assembly



Disassembly



Cable / Hose Drag Chain MP3000 Series

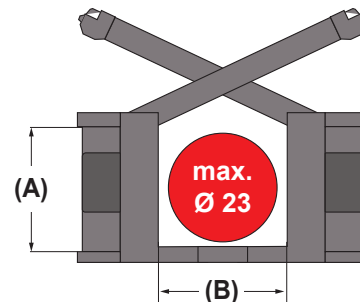
MP3000 Design Guide

The following Design Guide section walks through 5 steps to select the correct part numbers and to optimize drag chain system design. Drag chain inside width requirement, bend radius, maximum unsupported length, and stroke length will be calculated. In step 4, generalized tables are provided for reference. The intention of this table is to provide conservative estimates of cable linear weight; the designer should consult manufacturer cable specification sheets to verify cable specifications.

Step 1 Part Number Selection: Inside Width

Verify cable outer diameter (OD) is less than 23mm [0.91in]

| Inside Width Calculation | |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Cables with Equal Diameters | Cables with Different Diameters |
| Add all diameters | Add all diameters plus separator(s) width |
| Total Cable Width = OD1 + OD2 + OD3.... | Total Cable Width = OD1 + OD2 + OD3.... Separator Width = Number of Separators x 0.18 in Total Width = Total Cable Width + Separators Width |
| Inside Width = Total Cable Width x 1.2 | Inside Width = Total Width x 1.2 |



| Cable / Hose Drag Chain MP3000 Series | | | | | |
|---------------------------------------|------------------|--------|-----------------|--------|--------------|
| Part Number | Inside Width (B) | | Bend Radius (C) | | Opening Side |
| | mm | in | mm | in | |
| CDC-10X10R28N | 26mm | 1.02in | 71mm | 2.8in | IN |
| CDC-10X15R28N | 37mm | 1.46in | 71mm | 2.8in | IN |
| CDC-10X22R79N | 56mm | 2.2in | 201mm | 7.9in | IN |
| CDC-10X34R28N | 87mm | 3.43in | 71mm | 2.8in | IN |
| CDC-10X30R118N | 76mm | 3in | 300mm | 11.8in | IN |

Full part number selection chart available earlier in this section.



Separators are installed by the user every 2-3 links to keep cables of different diameters from crossing and getting pinched. The separators are sold as an accessory in packages of 11.

Step 2 Part Number Selection: Bend Radius

- Determine **minimum cable bend radius** located on the cable/hose supplier specification
- Select drag chain part number

Bend Radius (C) > minimum cable bend radius

| Cable / Hose Drag Chain MP3000 Series | | | | | |
|---------------------------------------|------------------|--------|-----------------|--------|--------------|
| Part Number | Inside Width (B) | | Bend Radius (C) | | Opening Side |
| | mm | in | mm | in | |
| CDC-10X10R28N | 25mm | 1.02in | 71mm | 2.8in | IN |
| CDC-10X15R28N | 37mm | 1.46in | 71mm | 2.8in | IN |
| CDC-10X22R79N | 56mm | 2.2in | 201mm | 7.9in | IN |
| CDC-10X34R28N | 87mm | 3.43in | 71mm | 2.8in | IN |
| CDC-10X30R118N | 76mm | 3in | 300mm | 11.8in | IN |

Full part number selection chart available earlier in this section.

LUTZE
SYSTEMATIC TECHNOLOGY

LUTZE SUPERFLEX®
Control Cable

Unshielded High Flexing Control Cable Shielded High Flexing Control Cable

| | Traveling Distance | Flex Cycles | | |
|-------------|--------------------|----------------|--------|--------------|
| | | Bending Radius | Speed | Acceleration |
| A148 Series | < 185' / 56m | > 12 Ø | < 5m/s | < 5m/s² |
| | < 495' / 15m | > 10 Ø | < 5m/s | < 10m/s² |
| A149 Series | < 185' / 56m | > 15 Ø | < 5m/s | < 5m/s² |
| | < 495' / 15m | > 12 Ø | < 5m/s | < 10m/s² |

conductor control cable has the versatility to meet a wide range of industrial applications. These flexible multi-conductor cables provide an economical way to organize and simplify control wiring in machines and facilities. Suitable for continuous flexing applications, these cables are ideal for both stationary and flexing applications with limited mechanical stress and free movement without any tensile stress, loads or forced movements.

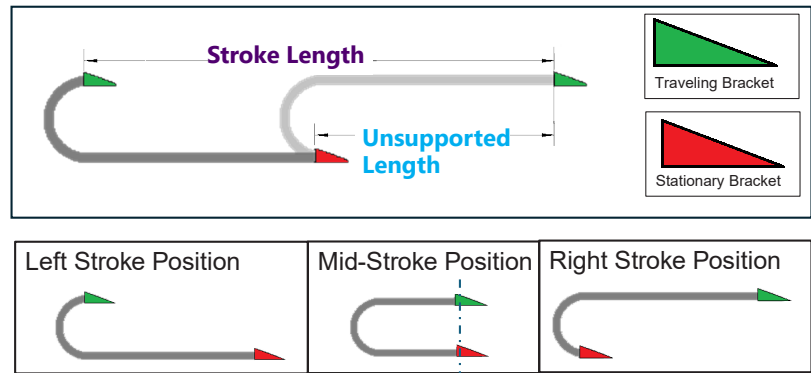
Available cut to length in 1 foot increments with a 20 foot minimum length.

- Cut to length in 1 foot or
- Low 20 foot minimum length
- Made in the USA

Cable / Hose Drag Chain MP3000 Series

Step 3 Stroke Length: Unsupported

- Determine **Stroke Length**
- Stroke Length** = 2 x **Unsupported Length**



Steps 3, 4, and 5 apply to Installation Options 1, 7, and 8 - see the Installation Options page.



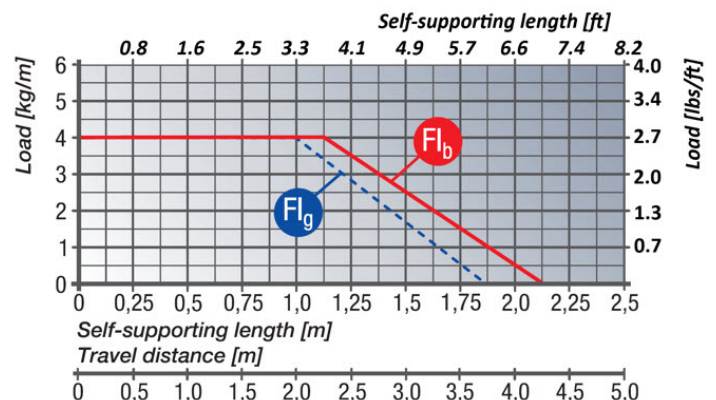
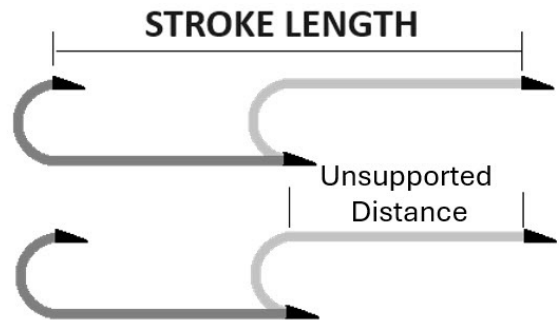
Vertically aligning the **Traveling Bracket** and **Stationary Bracket** at the mid stroke position will reduce the length of chain needed and may reduce system wear due to extra mass.

Step 4 Max Stroke Length: Unsupported

- Determine cable fill linear weight
 - Use cable spec sheets to add linear weights
 - Use table below for estimating linear weights
 - Verify the application stroke length does not exceed the MAX stroke length corresponding to the application weight/load conditions

| Cable Drag Chain Max Stroke Length | | | | | | |
|------------------------------------|-----------------------|------------------------|------------------------|-------------|-------------|-----------|
| Cable Type | Outer Diameter (inch) | Linear Weight (lbs/ft) | MAX Stroke Length (ft) | | | |
| | | | Single Fill | Double Fill | Triple Fill | Quad Fill |
| Ethernet | < 0.25 | < 0.034 | 12.2 | 12.2 | 12.1 | 12.0 |
| | 0.25 - 0.32 | < 0.053 | 12.2 | 12.1 | 12.0 | 11.9 |
| Control/VFD Cable | < 0.25 | < 0.044 | 12.2 | 12.1 | 12.0 | 11.9 |
| | 0.25 - 0.32 | < 0.074 | 12.1 | 12.0 | 11.8 | 11.7 |
| | 0.32 - 0.40 | < 0.132 | 12.0 | 11.7 | 11.5 | 11.2 |
| | 0.40 - 0.45 | < 0.180 | 11.9 | 11.5 | 11.1 | 10.8 |
| | 0.45 - 0.50 | < 0.211 | 11.9 | 11.4 | 11.0 | 10.5 |
| | 0.50 - 0.55 | < 0.271 | 11.7 | 11.1 | 10.6 | 10.0 |
| | 0.55 - 0.60 | < 0.328 | 11.6 | 10.9 | 10.2 | 9.5 |

Note: For managing hoses, consult the hose manufacturer for diameter and weights.



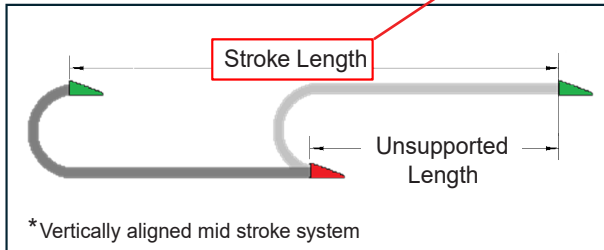
Verify the application stroke length does not exceed the cable chain max stroke length.

Cable / Hose Drag Chain MP3000 Series

Step 5 Chain Length: Unsupported

- Each drag chain part number is 1m [3.2ft] in length (22 links) and additional links may be added to extend the chain

$$\text{Chain length} = \frac{1}{2} \text{ Stroke Length} + (3.14 \times \text{Bend Radius})$$

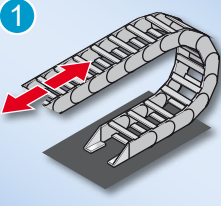
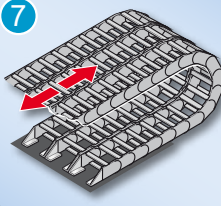
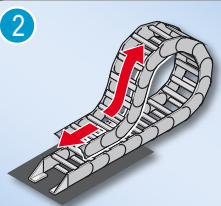
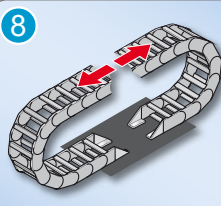
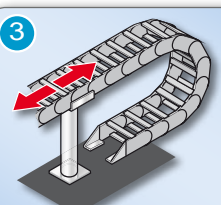

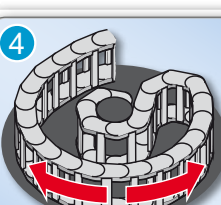
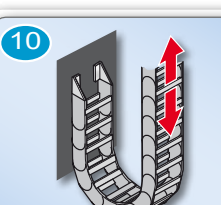
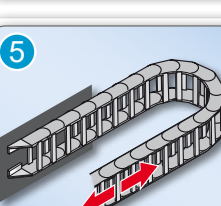
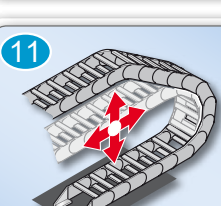
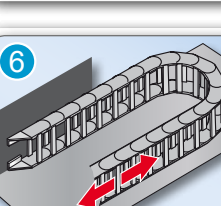
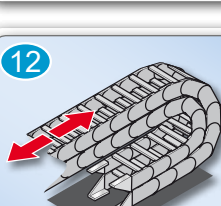


| Cable / Hose Drag Chain MP3000 Series | | | | | |
|---------------------------------------|------------------|--------|-----------------|--------|--------------|
| Part Number | Inside Width (B) | | Bend Radius (C) | | Opening Side |
| | mm | in | mm | in | |
| CDC-10X10R28N | 26mm | 1.02in | 71mm | 2.8in | IN |
| CDC-10X10R47N | 26mm | 1.02in | 119mm | 4.7in | IN |
| CDC-10X10R79N | 26mm | 1.02in | 201mm | 7.9in | IN |
| CDC-10X15R28N | 37mm | 1.46in | 71mm | 2.8in | IN |
| CDC-10X15R47N | 37mm | 1.46in | 119mm | 4.7in | IN |
| CDC-10X15R98N | 37mm | 1.46in | 249mm | 9.8in | IN |
| CDC-10X22R28N | 56mm | 2.2in | 71mm | 2.8in | IN |
| CDC-10X22R47N | 56mm | 2.2in | 119mm | 4.7in | IN |
| CDC-10X22R79N | 56mm | 2.2in | 201mm | 7.9in | IN |
| CDC-10X24R118N | 62mm | 2.44in | 300mm | 11.8in | IN |
| CDC-10X24R28N | 62mm | 2.44in | 71mm | 2.8in | IN |
| CDC-10X24R47N | 62mm | 2.44in | 119mm | 4.7in | IN |
| CDC-10X30R118N | 76mm | 3in | 300mm | 11.8in | IN |
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| CDC-10X40R118N | 101mm | 3.98in | 300mm | 11.8in | IN |
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| CDC-10X40R47N | 101mm | 3.98in | 119mm | 4.7in | IN |
| CDC-10X49R28N | 125mm | 4.92in | 71mm | 2.8in | IN |
| CDC-10X49R47N | 125mm | 4.92in | 119mm | 4.7in | IN |
| CDC-10X49R79N | 125mm | 4.92in | 201mm | 7.9in | IN |

Each chain is 1m [3.2 ft]

Cable / Hose Drag Chain MP3000 Series

Installation Options For Cable / Hose Drag Chains

| | | | |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------|
|  | <p>Installation option: Horizontal, self-supporting</p> |  | <p>Installation option: Horizontal, parallel</p> |
|  | <p>Installation option: Horizontal, gliding <i>Not recommended for MP3000</i></p> |  | <p>Installation option: Horizontal, opposed</p> |
|  | <p>Installation option: Horizontal, self-supporting, overlap with support</p> |  | <p>Installation option: Vertical, standing</p> |
|  | <p>Installation option: Horizontal, circular movement Design using rearward bending radius <i>Not recommended for MP3000</i></p> |  | <p>Installation option: Vertical, hanging</p> |
|  | <p>Installation option: Horizontal, side-mounted (rotated 90°)</p> |  | <p>Installation option: Horizontal/vertical, combined</p> |
|  | <p>Installation option: Horizontal, side-mounted (rotated 90°), with support</p> |  | <p>Installation option: Horizontal, interlocked</p> |