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Cable / Hose Drag Chain MP10 Series

Cable / Hose Drag Chain MP10 Series

2 YEAR WARRANTY

Overview

The MP10 series features open slots 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 MP10 series is constructed of rugged polyamide (PA) and will support and protect cables up to 8mm [0.315in] 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 0.62m [24.4in] of unsupported spans and is capable of extending up to 10m [32.8 ft] in a gliding configuration. The MP10 chain is packaged in chain lengths of .5m [1.6ft] (33 connected links) and may be shortened or extended by one or more links to fit the application. Parts are available with one, two, or three chambers to enable segregation of cables/hoses within the same chain.

Features

- Black PA (Polyamide)
- Chain length 0.5m [1.6ft]
- Link pitch 15mm [0.59in]
- Gliding friction factor 0.3
- Static friction factor 0.45
- Material flammability rating of UL 94 HB
- Operating temperature -30 – 120°C [-22 – 248°F]
- Each package contains 33 chain links (required brackets sold separately)
- One or more links may be added/removed to extend/ shorten the chain length

One chamber
CDC-04X02R11T

Two chambers
CDC-04X08R07T

Three chambers
CDC-04X12R07T

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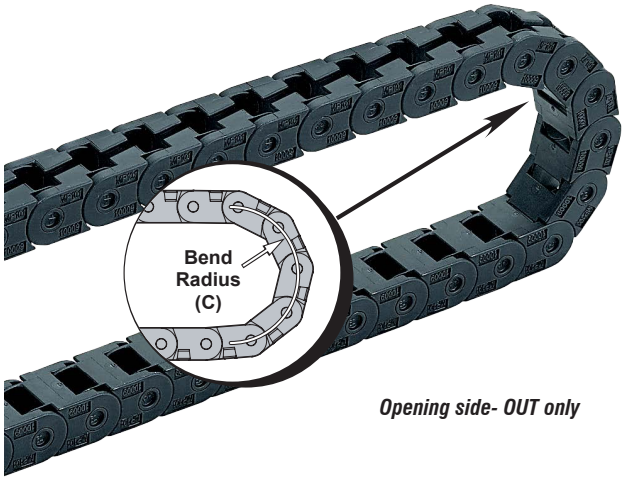
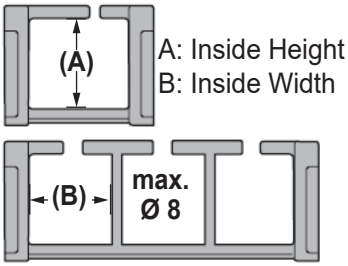


Opening side- OUT only



See chart below for number of chambers by part number.

Cable / Hose Drag Chain Selection Chart MP10 Series

Part Number	Price	Drawing Link	Inside Height (A)		Number of Chambers	Inside Chamber Width (B)		Bend Radius (C)		Requires Mounting Bracket (sold separately)
			mm	in		mm	in	mm	in	
CDC-04X02R07T	$31.00	PDF	10mm	0.39in	1	6.0mm	0.24in	18mm	0.71in	CDC-KAZ-04X04
CDC-04X02R11T	$31.00	PDF	10mm	0.39in	1	6.0mm	0.24in	28mm	1.1in	CDC-KAZ-04X12
CDC-04X04R07T	$33.00	PDF	10mm	0.39in	1	9.0mm	0.35in	18mm	0.71in	CDC-KAZ-04X02
CDC-04X04R11T	$33.00	PDF	10mm	0.39in	1	9.0mm	0.35in	28mm	1.1in	CDC-KAZ-04X04
CDC-04X04R19T	$33.00	PDF	10mm	0.39in	1	9.0mm	0.35in	48mm	1.89in	CDC-KAZ-04X06
CDC-04X06R07T	$33.00	PDF	10mm	0.39in	1	15.0mm	0.59in	18mm	0.71in	CDC-KAZ-04X02
CDC-04X06R11T	$33.00	PDF	10mm	0.39in	1	15.0mm	0.59in	28mm	1.1in	CDC-KAZ-04X04
CDC-04X08R07T	$36.00	PDF	10mm	0.39in	2	9.5mm	0.37in	18mm	0.71in	CDC-KAZ-04X06
CDC-04X12R07T	$37.50	PDF	10mm	0.39in	3	9.5mm	0.37in	18mm	0.71in	CDC-KAZ-04X08
CDC-04X12R15T	$37.50	PDF	10mm	0.39in	3	9.5mm	0.37in	38mm	1.5in	CDC-KAZ-04X12

Note: Each chain is .5m [1.6 ft]

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Cable / Hose Drag Chain Accessories MP10 Series

Cable / Hose Drag Chain Brackets MP10 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 M3 screws (not included). The cables or conduits may be fastened with cable ties on the integrated strain relief of the chain bracket.

CDC-KAZ-04X06

Cable / Hose Drag Chain Brackets MP10 Series

Part Number	Price	Inside Height		Inside Width		Drawing Link
		mm	in	mm	in	
CDC-KAZ-04X02	$5.50	10mm	0.39in	6mm	0.24in	PDF
CDC-KAZ-04X04	$6.25	10mm	0.39in	9mm	0.35in	PDF
CDC-KAZ-04X06	$7.00	10mm	0.39in	15mm	0.59in	PDF
CDC-KAZ-04X08	$7.75	10mm	0.39in	21mm	0.83in	PDF
CDC-KAZ-04X12	$8.50	10mm	0.39in	31mm	1.22in	PDF

Note: Mounting hardware not included.

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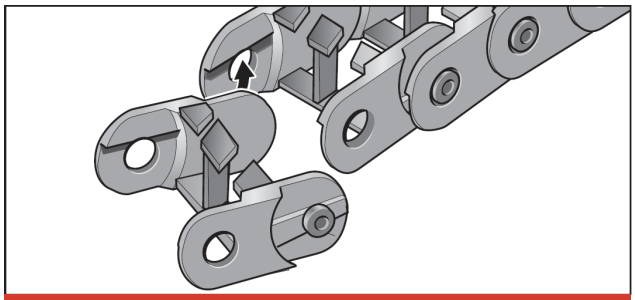
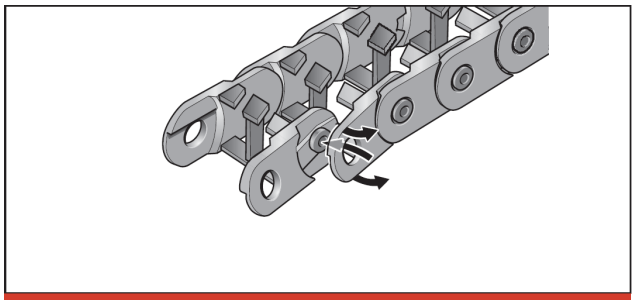
Cable / Hose Drag Chain MP10 Series

Assembly

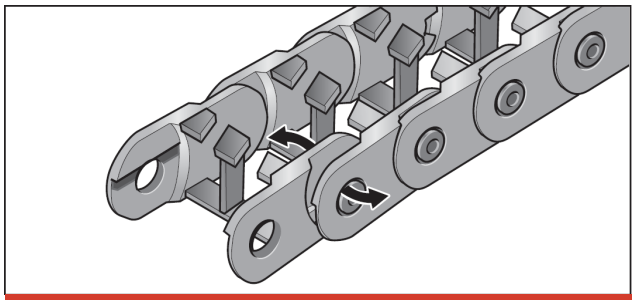


Step 1

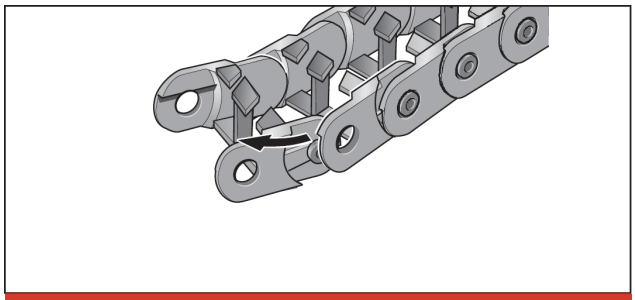


Step 2

Disassembly



Step 1



Step 2

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Cable / Hose Drag Chain MP10 Series

MP10 Design Guide

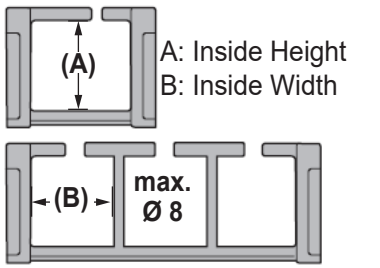
The following Design Guide section walks through 6 steps to select the correct part numbers and to optimize drag chain system design. Drag chain inside width requirement, bend radius, maximum unsupported length, and stroke length will be calculated. In step 4, generalized tables are provided for reference. The intention of these tables 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

- MP10 has one, two, or three cables depending on size
- Verify cable outer diameter (OD) is less than 8mm [0.315in]

Cable / Hose Drag Chain Selection Chart MP10 Series

Part Number	Inside Height (A)		Number of Chambers	Inside Chamber Width (B)		Bend Radius (C)	
	mm	in		mm	in	mm	in
CDC-04X02R07T	10mm	0.39in	1	6.0mm	0.24in	18mm	0.71in
CDC-04X02R11T	10mm	0.39in	1	6.0mm	0.24in	28mm	1.1in
CDC-04X04R07T	10mm	0.39in	1	9.0mm	0.35in	18mm	0.71in
CDC-04X04R11T	10mm	0.39in	1	9.0mm	0.35in	28mm	1.1in
CDC-04X04R19T	10mm	0.39in	1	9.0mm	0.35in	48mm	1.89in
CDC-04X06R07T	10mm	0.39in	1	15.0mm	0.59in	18mm	0.71in
CDC-04X06R11T	10mm	0.39in	1	15.0mm	0.59in	28mm	1.1in
CDC-04X08R07T	10mm	0.39in	2	9.5mm	0.37in	18mm	0.71in
CDC-04X12R07T	10mm	0.39in	3	9.5mm	0.37in	18mm	0.71in
CDC-04X12R15T	10mm	0.39in	3	9.5mm	0.37in	38mm	1.5in



Chamber Configuration

Step 2: Part Number Selection – Bend Radius

- Determine the **minimum cable bend radius**
  - Located on the cable/hose supplier specification
- Determine the **drag chain bend radius**
  - Located in the technical specification
- Select drag chain part number
  - Drag Chain bend radius (C) > Minimum cable bend radius

Cable / Hose Drag Chain Selection Chart MP10 Series

Part Number	Inside Height (A)		Number of Chambers	Inside Chamber Width (B)		Bend Radius (C)	
	mm	in		mm	in	mm	in
CDC-04X02R07T	10mm	0.39in	1	6.0mm	0.24in	18mm	0.71in
CDC-04X02R11T	10mm	0.39in	1	6.0mm	0.24in	28mm	1.1in
CDC-04X04R07T	10mm	0.39in	1	9.0mm	0.35in	18mm	0.71in
CDC-04X04R11T	10mm	0.39in	1	9.0mm	0.35in	28mm	1.1in
CDC-04X04R19T	10mm	0.39in	1	9.0mm	0.35in	48mm	1.89in
CDC-04X06R07T	10mm	0.39in	1	15.0mm	0.59in	18mm	0.71in
CDC-04X06R11T	10mm	0.39in	1	15.0mm	0.59in	28mm	1.1in
CDC-04X08R07T	10mm	0.39in	2	9.5mm	0.37in	18mm	0.71in
CDC-04X12R07T	10mm	0.39in	3	9.5mm	0.37in	18mm	0.71in
CDC-04X12R15T	10mm	0.39in	3	9.5mm	0.37in	38mm	1.5in

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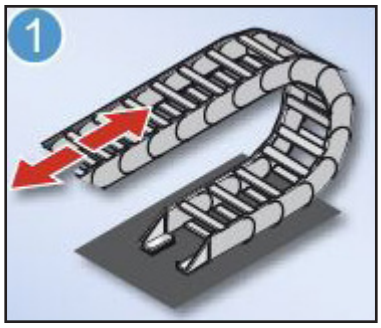
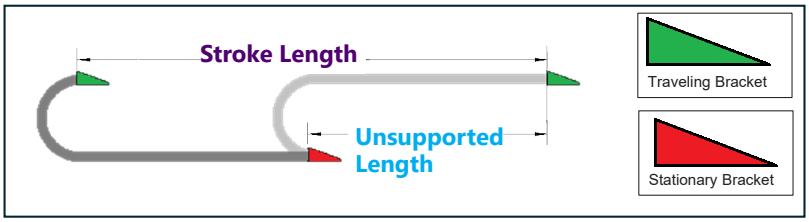
Step 3: Stroke Length – Unsupported

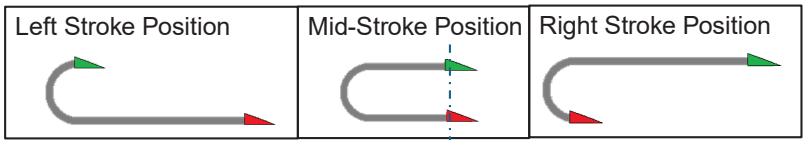
Determine **Stroke Length (L_S)**

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



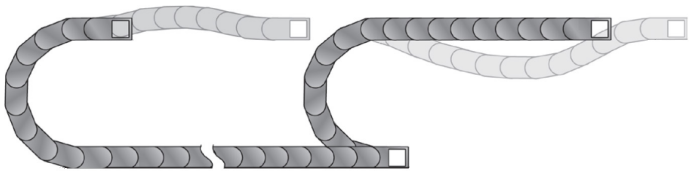
Steps 3, 4, and 5 apply to Installation Options 1, 7, and 8 - see the Installation Options page below.





TIP 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



4a: 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

4b: Determine linear weight vs max unsupported distance

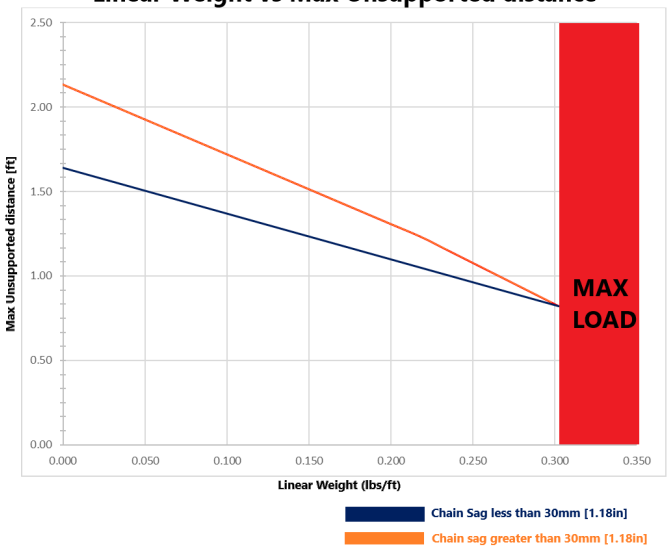
- Unsupported chains will experience less wear if chain sag is less than 30mm [1.18in]
- Sag will increase as unsupported length and/or weight are increased
- Refer to the chart to determine maximum conditions

Cable Drag Chain Max Stroke Length

Cable Type	*Outer Diameter (inch)*	*Linear Weight (lbs/ft)*	*MAX Stroke Length [ft] (2x max unsupported distance)*			
			Single Fill	*Double Fill*	*Triple Fill*	*Quad Fill*
Ethernet	< 0.25in	< 0.034	1.57	1.45	1.43	1.32
	0.25 - 0.315in	< 0.053	1.50	1.42	1.25	n/a
Control/VFD Cable	< 0.25 in	< 0.044	1.53	1.39	1.35	1.19
	0.25 - 0.315in	< 0.074	1.42	1.28	1.04	n/a

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

Linear Weight vs Max Unsupported distance



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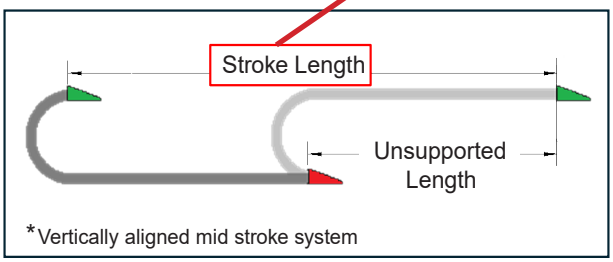
Step 5: Chain Length – Unsupported

Each drag chain part number is 1.6 ft [.5m] in length (33 links) and additional links may be added to extend the chain.

Chain length = 1/2 Stroke Length + (3.14 x Bend Radius)



Cable / Hose Drag Chain Selection Chart MP10 Series

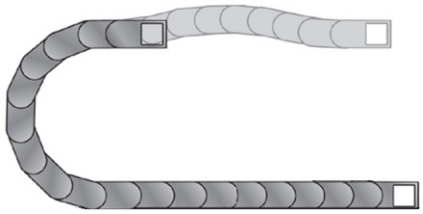
Part Number	Number of Chambers	Inside Chamber Width (B)		Bend Radius (C)	
		mm	in	mm	in
CDC-04X02R07T	1	6.0mm	0.24in	18mm	0.71in
CDC-04X02R11T	1	6.0mm	0.24in	28mm	1.1in
CDC-04X04R07T	1	9.0mm	0.35in	18mm	0.71in
CDC-04X04R11T	1	9.0mm	0.35in	28mm	1.1in
CDC-04X04R19T	1	9.0mm	0.35in	48mm	1.89in
CDC-04X06R07T	1	15.0mm	0.59in	18mm	0.71in
CDC-04X06R11T	1	15.0mm	0.59in	28mm	1.1in
CDC-04X08R07T	2	9.5mm	0.37in	18mm	0.71in
CDC-04X12R07T	3	9.5mm	0.37in	18mm	0.71in
CDC-04X12R15T	3	9.5mm	0.37in	38mm	1.5in

Step 6: Drag Chain Mounting

Mounting height of traveling bracket is specified for each chain bend radius.

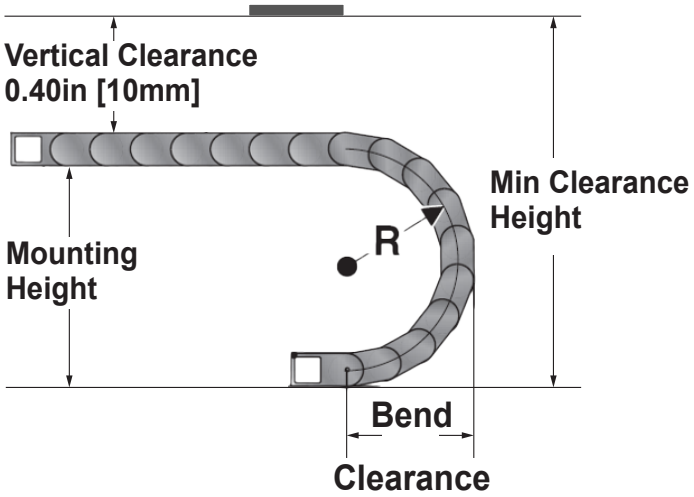
Vertical clearance must be maintained to account for chains bowing height of unloaded chains.

See the following page for installation options



Drag Chain Mounting Selection Chart

Radius R		Mounting Height		Min. Clearance Height		Bend Clearance	
mm	in	mm	in	mm	in	mm	in
18mm	0.71in	36mm	1.42in	60mm	2.36in	40mm	1.57in
28mm	1.10in	59mm	2.20in	80mm	3.15in	50mm	1.97in
38mm	1.50in	76mm	2.99in	100mm	3.94in	60mm	2.36in
48mm	1.89in	96mm	3.78in	120mm	4.72in	70mm	2.76in
58mm	2.28in	116mm	4.57in	140mm	5.51in	80mm	3.15in



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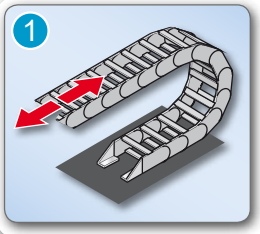
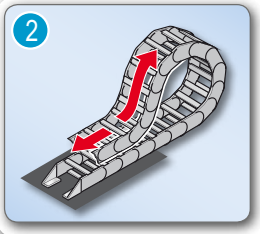
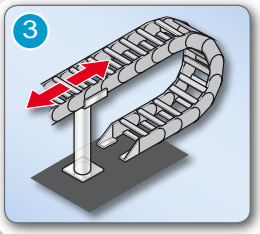
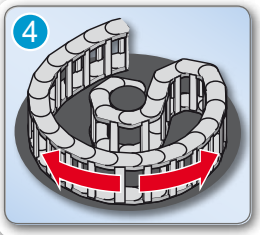
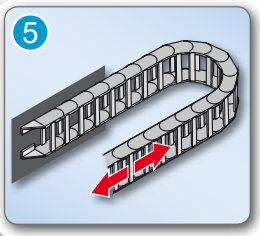
Installation Options For Cable / Hose Drag Chains

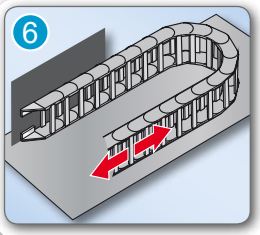
1

Installation option:
Horizontal, self-supporting

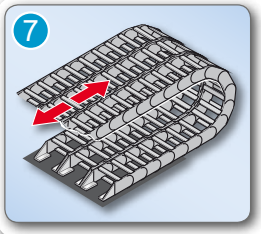
2

Installation option:
Horizontal, gliding

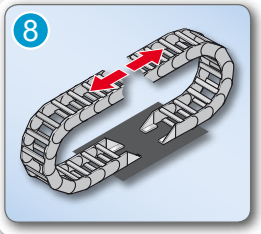
3

Installation option:
Horizontal, self-supporting, overlap with support

4

Installation option:
Horizontal, circular movement
Design using rearward bending radius

5

Installation option:
Horizontal, side-mounted (rotated 90°)

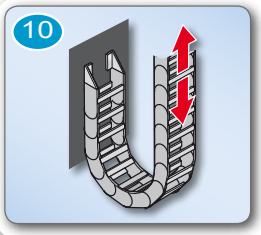
6

Installation option:
Horizontal, side-mounted (rotated 90°), with support

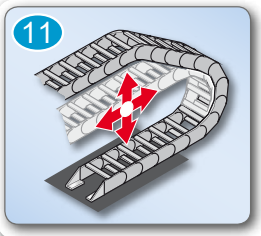
7

Installation option:
Horizontal, parallel

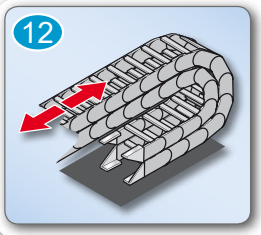
8

Installation option:
Horizontal, opposed

9

Installation option:
Vertical, standing

10

Installation option:
Vertical, hanging

11

Installation option:
Horizontal/vertical, combined

12

Installation option:
Horizontal, interlocked