

Cable / Hose Drag Chain MP35 Series

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Overview

The MP35 series is constructed of rugged black polyamide (PA) and will support and protect cables and hoses up to 30mm (1.18in) in diameter. End brackets provide a secure mounting point and include integrated cable tie strain relief tabs for securing cables and hoses at each end of the chain.

The MP35 is available in two interior widths and supports both inside and outside bend opening, allowing cables and hoses to be added or replaced after installation without removing the chain from the system. Chains are packaged in 1-meter lengths 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 and hoses within the same chain.

Features

- Black PA (Polyamide)
- Chain length 1m [3.2ft]
- Link pitch 56mm [2.20in]
- Maximum cable/hose diameter 30mm [1.18in]
- Inside and outside bend opening
- Integrated strain relief tabs on end brackets
- Gliding friction factor 0.3
- Static friction factor 0.45
- Material flammability rating UL 94 HB
- Operating temperature -30 to 120°C [-22 to 248°F]
- Each package contains 18 chain links
- One or more links may be added/removed to extend/shorten the chain length
- Separators sold separately
- Brackets required, sold separately

Technical Specifications

- Travel distance gliding Lg max. 80.0 m
- Travel distance self-supporting Lf max. (see diagram in design guide)
- Travel distance vertical, hanging Lvh max. 50.0 m
- Travel distance vertical standing Lvs max. 3.0 m
- Rotated 90°, self-supporting L90f max. 1.0 m
- Speed, gliding Vg max. 5.0 m/s
- Speed, self-supporting Vf max. 20.0 m/s
- Acceleration, gliding ag max. 15.0 m/s²
- Acceleration, self-supporting af max. 50.0 m/s²

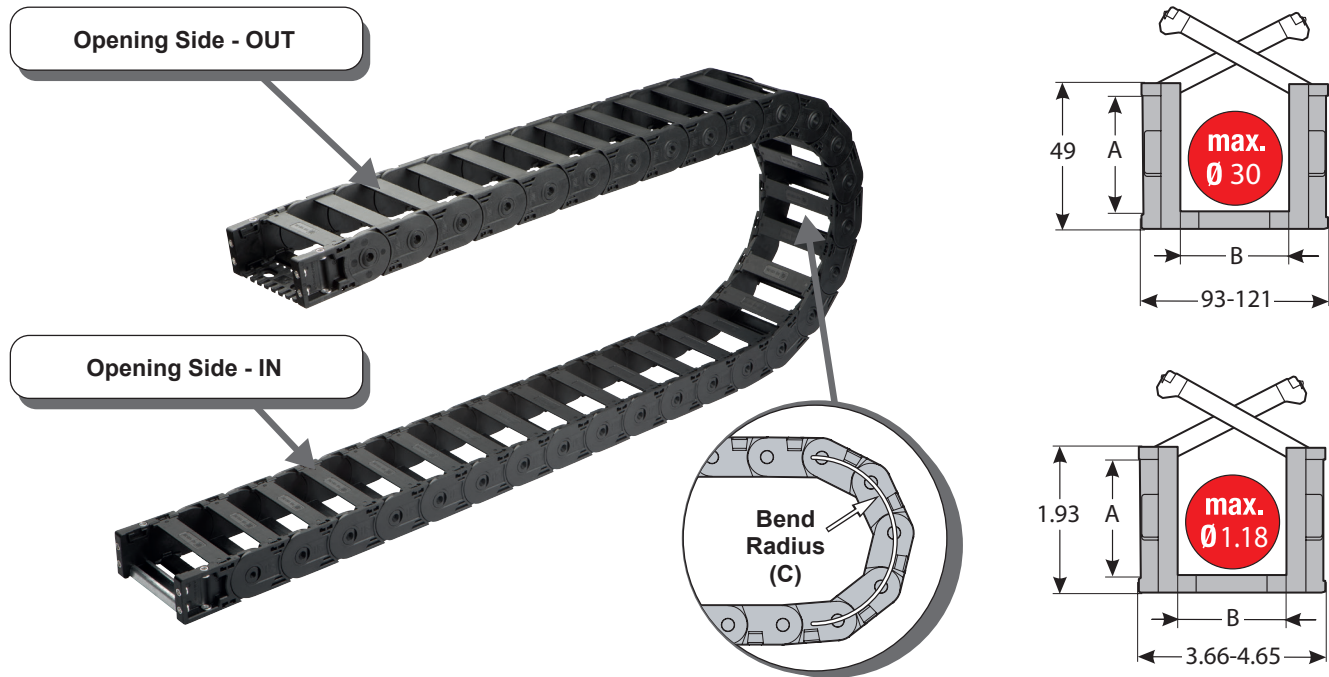


CDC-14X30RK39N



CDC-14X39RK59T

Cable / Hose Drag Chain MP35 Series


Cable / Hose Drag Chain Selection Chart MP35 Series

Part Number	Price	Drawing Link	Inside Height (A)		Inside Width (B)		Bend Radius (C)		Opening Side	Pretensioned (Y/N)	Requires Mounting Bracket (sold separately)
			mm	in	mm	in	mm	in			
CDC-14X30RK39N	\$103.00	PDF	35	1.38	75	2.95	100	3.94	Inside	No	CDC-KAZ-14X30
CDC-14X30RK39T	\$103.00	PDF	35	1.38	75	2.95	100	3.94	Outside	No	CDC-KAZ-14X30
CDC-14X30RV25N	\$100.00	PDF	35	1.38	75	2.95	63	2.48	Inside	Yes	CDC-KAZ-14X30
CDC-14X30RV39N	\$103.00	PDF	35	1.38	75	2.95	100	3.94	Inside	Yes	CDC-KAZ-14X30
CDC-14X39RK59T	\$103.00	PDF	35	1.38	100	3.94	150	5.91	Outside	No	CDC-KAZ-14X39
CDC-14X39RV39N	\$103.00	PDF	35	1.38	100	3.94	100	3.94	Inside	Yes	CDC-KAZ-14X39
CDC-14X39RV49N	\$100.00	PDF	35	1.38	100	3.94	125	4.92	Inside	Yes	CDC-KAZ-14X39

Each chain is 1m [3.2ft]

Pretensioned vs. Non-pretensioned

Pre-tensioned drag chains are slightly cambered, and when they are unloaded they appear slightly bowed. The pretensioned bias helps to reduce drag chain sag when used in the horizontal self-supported configuration. For gliding and vertical installations, non-pretensioned drag chains are the best option.

Cable / Hose Drag Chain Accessories MP35 Series

Cable / Hose Drag Chain Brackets MP35 Series

Overview

The chain end brackets are made of black polyamide (PA) and attach to each end of the cable drag chain as a side link. Each bracket offers universal connection options — top, bottom, and front — allowing flexible installation in a variety of mounting configurations. Please order one bracket kit that includes (1) male and (1) female end bracket for each chain system. The brackets should be fastened with M5 screws (not included). Cables and conduits may be fastened with cable ties on the integrated strain reliefs of the chain bracket.

- Rotation Type:
 - 0 deg locking male
 - -53 to +90 deg pivoting female



CDC-KAZ-14X39

Cable / Hose Drag Chain Brackets MP35 Series						
Part Number	Price	Inside Height		Inside Width		Drawing Link
		mm	in	mm	in	
<u>CDC-KAZ-14X30</u>	\$27.50	35	1.38	75	2.95	PDF
<u>CDC-KAZ-14X39</u>	\$28.00	35	1.38	100	3.94	PDF

Mounting hardware not included.

Cable / Hose Drag Chain Separator MP35 Series

Overview

The chain separators are black polyamide (PA). Separators are recommended when multiple round cables or hoses with differing diameters are to be installed in the same chain. Separators should be installed every 2 to 3 links depending on load conditions, but may be placed on every link if necessary to prevent cable pinching.



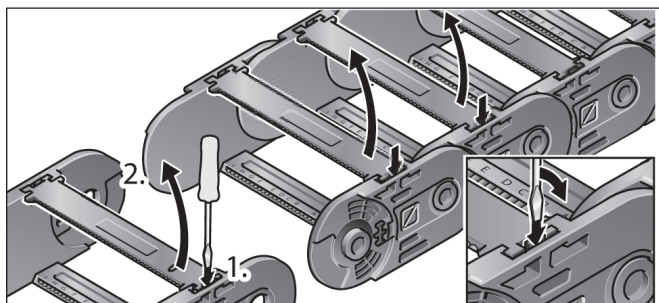
CDC-TR-35-V

Cable / Hose Drag Chain Separator MP35 Series					
Part Number	Price	Qty	Inside Height		Drawing Link
			mm	in	
<u>CDC-TR-35-V</u>	\$5.50	9	35	1.38	PDF

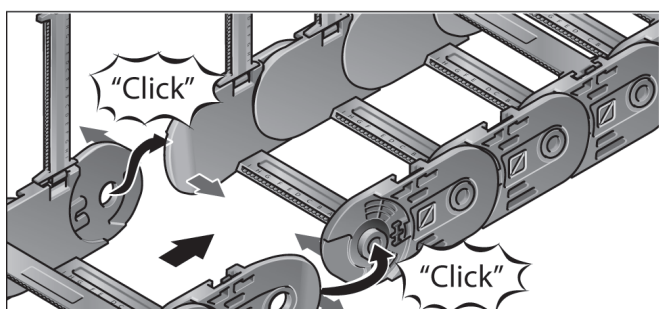
Cable / Hose Drag Chain Separator Usage MP35 Series	
Separator Usage	Separator per 1m Chain
Every Link	18
Every 2 Links	9
Every 3 Links	6

Cable / Hose Drag Chain MP35 Series

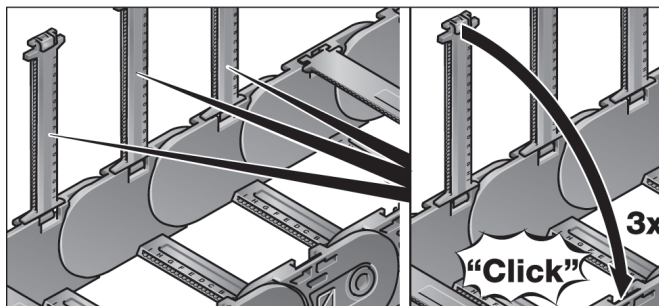
Assembly



Step 1

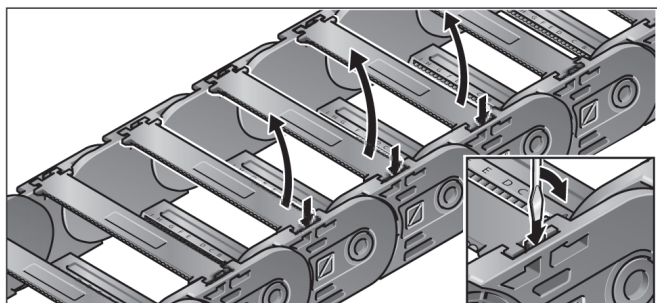


Step 2

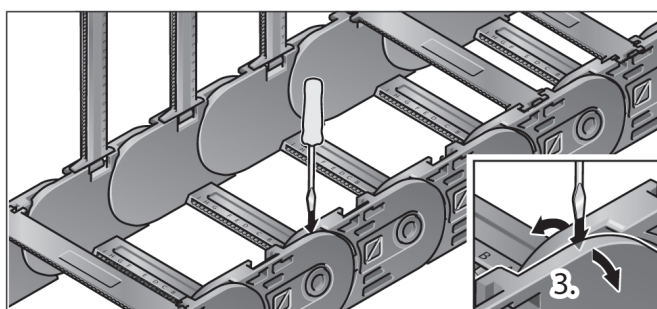


Step 3

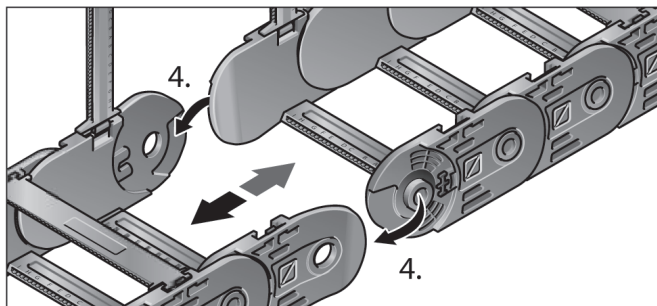
Disassembly



Step 1



Step 2



Step 3

Cable / Hose Drag Chain MP35 Series

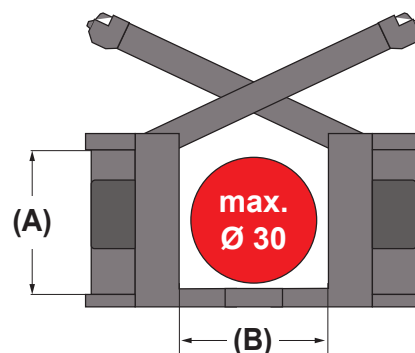
MP35 Design Guide

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 30mm [1.18in]

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 Chart MP35 Series					
Part Number	Inside Width (B)		Bend Radius (C)		Opening Side
	mm	in	mm	in	
CDC-14X30RK39N	75	2.95	100	3.94	Inside
CDC-14X30RK39T	75	2.95	100	3.94	Outside
CDC-14X30RV25N	75	2.95	63	2.48	Inside
CDC-14X30RV39N	75	2.95	100	3.94	Inside
CDC-14X39RK59T	100	3.94	150	5.91	Outside
CDC-14X39RV39N	100	3.94	100	3.94	Inside
CDC-14X39RV49N	100	3.94	125	4.92	Inside

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 9.

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 Chart MP35 Series					
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	mm	in	mm	in	
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CDC-14X30RV25N	75	2.95	63	2.48	Inside
CDC-14X30RV39N	75	2.95	100	3.94	Inside
CDC-14X39RK59T	100	3.94	150	5.91	Outside
CDC-14X39RV39N	100	3.94	100	3.94	Inside
CDC-14X39RV49N	100	3.94	125	4.92	Inside

Full part number selection chart available earlier in this section.

LUTZE
SYSTEMATIC TECHNOLOGY

LUTZE SUPERFLEX®
Control Cable

Unshielded High Flexing Control Cable Shielded High

	Traveling Distance	Flex Cycles	
		Bending Radius	Cycles
A148 Series	< 16ft / 5m	> 12 Ø	< 5m/s²
	< 49ft / 15m	> 10 Ø	< 10m/s²
A149 Series	< 16ft / 5m	> 15 Ø	< 5m/s²
	< 49ft / 15m	> 12 Ø	< 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.

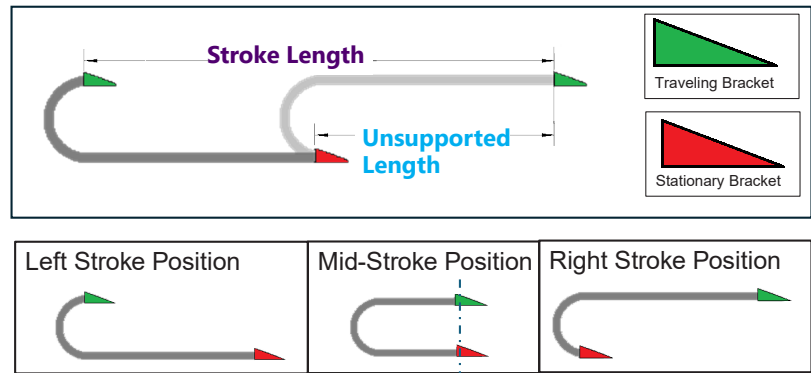
Available cut to length in 1 foot increments with a 20 foot minimum length.

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

Cable / Hose Drag Chain MP35 Series

Step 3 Stroke Length: Unsupported

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



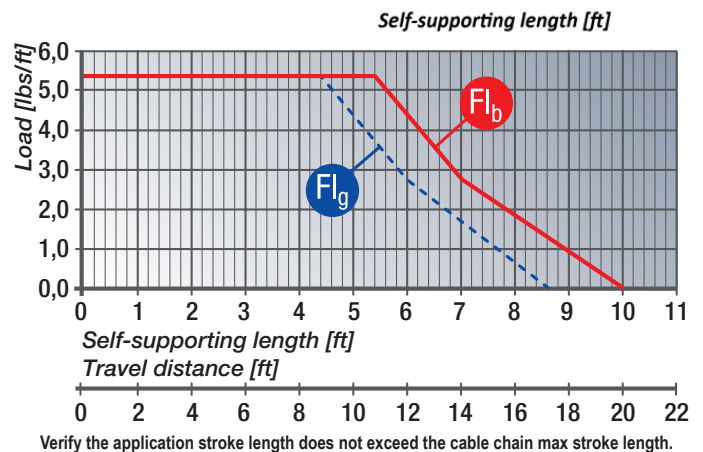
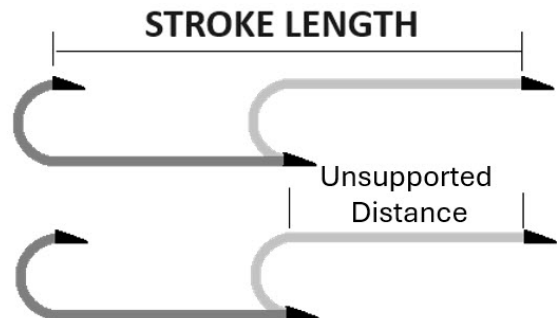
Steps 3, 4, and 5 apply to Installation Options 1, 7, and 8 - see the Installation Options page.



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

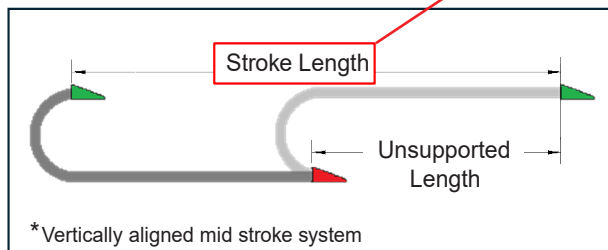


Cable / Hose Drag Chain MP35 Series

Step 5 Chain Length: Unsupported

- Each drag chain part number is 1m [3.2ft] in length (18 links) and additional links may be added to extend the chain

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

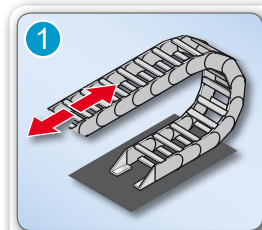


Cable / Hose Drag Chain Chart MP35 Series					
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<u>CDC-14X30RV39N</u>	75	2.95	100	3.94	Inside
<u>CDC-14X39RK59T</u>	100	3.94	150	5.91	Outside
<u>CDC-14X39RV39N</u>	100	3.94	100	3.94	Inside
<u>CDC-14X39RV49N</u>	100	3.94	125	4.92	Inside

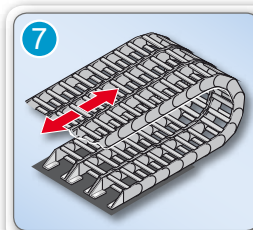
Full part number selection chart available earlier in this section.

Cable / Hose Drag Chain MP35 Series

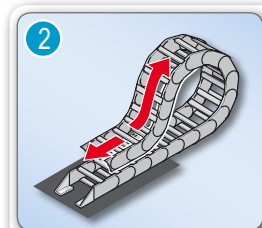
Installation Options For Cable / Hose Drag Chains



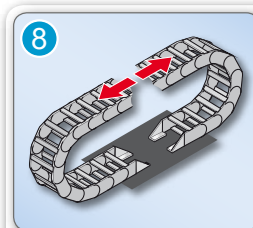
Installation option:
Horizontal, self-supporting



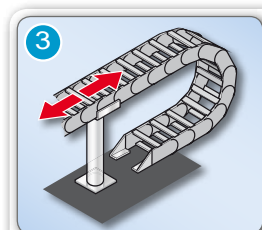
Installation option:
Horizontal, parallel



Installation option:
Horizontal, gliding



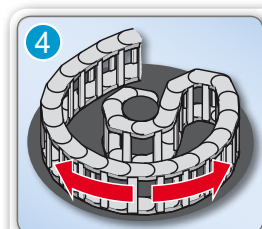
Installation option:
Horizontal, opposed



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



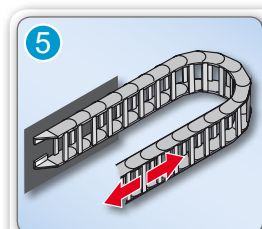
Installation option:
Vertical, standing



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



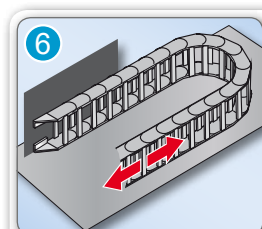
Installation option:
Vertical, hanging



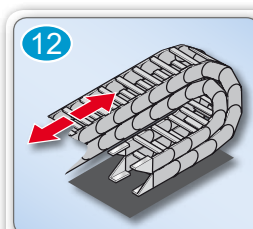
Installation option:
Horizontal, side-mounted
(rotated 90°)



Installation option:
Horizontal/vertical, combined



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



Installation option:
Horizontal, interlocked