

Drag Chain - Catalog

Drag Chain

	 P187/188/189	 P190	 P191
Product Name	Small Bridge-type Drag Chain, Non-openable 5/7/10 Series	Small Semi-closed Drag Chain, Non-openable 10 Series	Press-to-Open 10 Series with Convenient Operation
Product Mode	EXAPA / EXAPB / EXAPD	EXAPF	EXAPG
 P192	 P193	 P194	 P195
Small Bridge-type Drag Chain, Outward-opening 15 Series	Small Semi-closed Drag Chain, Side-opening 15 Series	Small Press-to-Open 15 Series with Convenient Operation	Small Semi-closed Drag Chain, Internal-opening 18 Series
EXAPI	EXAPL	EXAPN	EXAPP
 P196	 P197	 P198	 P199
Small Bridge-type Drag Chain, Non-openable 18 Series	Bridge-type Drag Chain, Outward-opening 18 Series	Small Press-to-Open 18 Series with Convenient Operation	Small Bridge-type Drag Chain, Double-side Opening 25 Series
EXAPQ	EXAPR	EXAPS	EXAPU
 P200	 P201	 P202	 P203
Small Closed Drag Chain, Double-side Opening 25 Series	Reinforced Bridge-type Drag Chain, Double-side Opening 25 Series	Reinforced Closed Drag Chain, Double-side Opening 25 Series	Reinforced Bridge-type Drag Chain, Double-side Opening 30 Series
EXAPX	EXBPC	EXBPD	EXBPE
 P204	 P205	 P206	 P207
Reinforced Closed Drag Chain, Double-side Opening 30 Series	Reinforced Bridge-type Drag Chain, Double-side Opening 35 Series	Reinforced Closed Drag Chain, Double-side Opening 35 Series	Reinforced Bridge-type Drag Chain, Double-side Opening 45 Series
EXBPF	EXBPG	EXBPH	EXBPK
 P208	 P209	 P210	 P211
Reinforced Closed Drag Chain, Double-side Opening 45 Series	Reinforced Bridge-type Drag Chain, Double-side Opening 55 Series	Reinforced Closed Drag Chain, Double-side Opening 55 Series	Reinforced Bridge-type Drag Chain, Double-side Opening 65 Series
EXBPL	EXBPM	EXBPN	EXBPO

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 P212	 P213	 P214	 P215
Reinforced Closed Drag Chain, Double-side Opening 65 Series	Reinforced Bridge-type Drag Chain, Double-side Opening 80 Series	Reinforced Closed Drag Chain, Double-side Opening 80 Series	Heavy-duty Bridge-type Drag Chain, Double-side Opening 35 Series
EXBPP	EXBPQ	EXBPR	EXCPA
 P216	 P217	 P218	 P219
Heavy-duty Closed Drag Chain, Double-side Opening 35 Series	Heavy-duty Bridge-type Drag Chain, Double-side Opening 45 Series	Heavy-duty Closed Drag Chain, Double-side Opening 45 Series	Heavy-duty Bridge-type Drag Chain, Double-side Opening 55 Series
EXCPB	EXCPE	EXCPF	EXCPG
 P220	 P221	 P222	 P223
Heavy-duty Closed Drag Chain, Double-side Opening 65 Series	Silent Bridge-type Drag Chain, Double-side Opening 25 Series	Silent Enclosed Drag Chain, Double-side Opening 25 Series	Silent Bridge-type Drag Chain, Double-side Opening 30 Series
EXCPH	EXDPB	EXDPC	EXDPD
 P224	 P225	 P226	 P227
Silent Enclosed Drag Chain, Double-side Opening 30 Series	Silent Bridge-type Drag Chain, Double-side Opening 35 Series	Silent Enclosed Drag Chain, Double-side Opening 35 Series	Silent Bridge-type Drag Chain, Double-side Opening 40 Series
EXDPE	EXDPF	EXDPG	EXDPH
 P228	 P229	 P230	
Silent Enclosed Drag Chain, Double-side Opening 40 Series	Silent Bridge-type Drag Chain, Double-side Opening 45 Series	Silent Enclosed Drag Chain, Double-side Opening 45 Series	
EXDPK	EXDPL	EXDPM	

Drag Chain - Product Overview

Product Overview

Suitable for reciprocating motion applications, the drag chain provides traction and protection for internally mounted cables, oil lines, air lines, water lines, etc. Each section of the drag chain can be opened for easy installation and maintenance. It operates with low noise, smooth wear, and is capable of high-speed motion. Drag chains are widely used in CNC machines, electronic equipment, stone processing machinery, glass machinery, door and window machinery, injection molding machines, robots, lifting and transportation equipment, automated warehouses, and other applications.

Selection of Drag Chain Installation Space

1. Determination of Internal Dimensions

The load, quantity, and diameter of cables, pneumatic tubes, and hydraulic tubes determine the internal dimensions and distribution of the drag chain. The load distribution within the drag chain must be reasonable and uniform, including the rational distribution of weight and space.

- ① The internal width and height of the drag chain are typically 1.5 times the maximum width and height of the pipeline arrangement.
- ② When there are multiple types of pipelines with large variations in quantity, diameter, and load, it is recommended to use separator sheets for isolation and arrangement.
- ③ The decision on whether to use a fully enclosed drag chain should be based on the use environment (e.g., dusty or chipping environments).

2. Calculation of Bending Radius

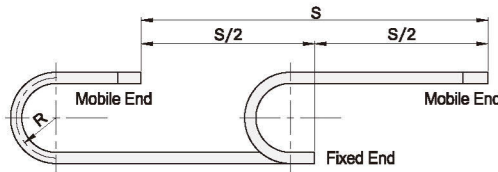
The selection of bending radius depends on the following two factors:

- ① Typically, the maximum diameter or thickness and the hardest pipeline determine the minimum bending radius of the drag chain.
 - ② The available installation space determines the allowable bending radius, especially when the installation space is limited.
- Cables: The bending radius of domestically produced cables is 8~10 times their maximum outer diameter, while imported cables have a bending radius of approximately 6 times.
 - Pneumatic/oil/water tubes: The bending radius is 10~12 times the maximum outer diameter of the pipeline.
 - Actual installation height (HF): This serves as a practical reference value for the bending space of the drag chain.

Relationship between Drag Chain Length and Stroke

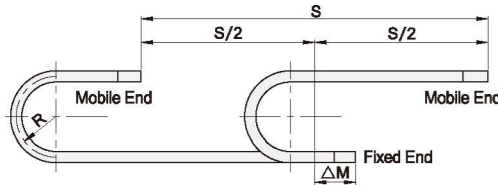
Stroke (S): Refers to the maximum distance traveled by the mobile end of the drag chain. The optimal solution is when the fixed end is positioned at the center of the stroke, minimizing the required length of the drag chain.

$L_k = S/2 + k$ The formula applies to all applications where the fixed end is located at the center of the stroke, excluding rotational movements and long stroke applications.



L_k = Drag Chain Length
 S = Stroke Type
 R = Bending Radius
 ΔM = Distance from Center Point Offset
 $K = \pi \times R + (2-4) \times P$
 Safety Margin

$L_k = S/2 + \Delta M + K$ The formula applies to all applications where the fixed end is not in the center of the stroke.



Calculation of Drag Chain Length

For example: When selecting a drag chain (pitch $P=33.5\text{mm}$), Bending Radius $=38\text{mm}$, Stroke S is 500, the drag chain length can be calculated as follows:

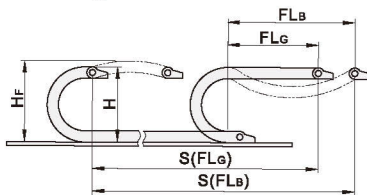
1. When the fixed end is at the center of the stroke:

$$L_k = S/2 + K = 500/2 + 3.14 \times 38 + 2 \times 33.5 = 436.32\text{mm}$$

2. When the fixed end is not at the center of the stroke: For instance, when there is an offset $\Delta M=100\text{mm}$

$$L_k = S/2 + \Delta M + K = 500/2 + 100 + 3.14 \times 38 + 2 \times 33.5 = 536.32\text{mm}$$

Overhead length



① Refer to the following table for overhead lengths:

FL_G = Straight Overhead Length

FL_B = Safe Sagging Overhead Length

Drag Chain - Product Overview

Image	Type	Internal Height (mm in)	Internal Width (mm in)	External Height (mm in)	External Width (mm in)	External Width (mm in)Ø
Small Drag Chain						
	5 Series	5	5	8	8.6	Ø3.5
	7 Series	7	7	10	12	Ø5
	10 Series	10	6-30	13.5-15.2	12.6-37.2	Ø9
	15 Series	15	15-50	19-20	24-60	Ø13
	18 Series	18	18-50	23-25	28.5-60.5	Ø16
	25 Series	25	25-103	36	39.4-117.8	Ø22
	35 Series	35	100	50	117	Ø32
	38 Series	38	75	50	93	Ø35
Reinforced Drag Chain						
	20 Series	20	25-125	35	41-141	Ø19
	25 Series	25	25-125	40	42-142	Ø22
	30 Series	30	25-125	45	45-145	Ø27
	35 Series	35	38-300	55	61-323	Ø32
	45 Series	45	50-300	65	76-326	Ø40
	55 Series	55	50-300	75	82-332	Ø50
	65 Series	65	50-300	85	83.3-333.3	Ø60
	80 Series	80	75-350	106.5	119-394	Ø75
Heavy-Duty Drag Chain						
	35 Series	35	38-300	54	61-323	Ø32
	38 Series	38	50-400	54	73-423	Ø34
	45 Series	45	50-400	67	77-427	Ø40
	55 Series	55	50-300	76	78-328	Ø50
	58 Series	58	50-400	79	79-429	Ø55
	60 Series	60	75-400	88	107-432	Ø55
	85 Series	85	75-400	108	107-432	Ø75
	60 Double row series	60	75-400	87	107-432	Ø55
Silent Drag Chain						
	18 Series	18	25-50	24.5	36-61	Ø16
	25 Series	25	25-110	34	40.8-115.8	Ø22
	30 Series	30	25-140	41	40.4-155.4	Ø28
	35 Series	35	25-140	47.8	46-161	Ø32
	40 Series	40	40-150	52.8	62.3-172.3	Ø37
	45 Series	45	40-150	58.1	65-175	Ø40
Bending Radius (mm in)	Pitch (mm in)	Maximum Overhead Load Capacity max(kg/m lbs/ft)	Maximum Overhead Length max(m ft)	Maximum Length for Sliding Applications length max≤[m]	Opening Method	
Small Drag Chain						
R10	10.1	0.25	0.4	-	Applications	
R15	17	0.25	0.4	-	Applications	
R18-R38	17	0.25	0.5	-	Applications/Opening Method	
R28-R48	22	1.5	1	-	Internal Opening/Opening Method/Applications	
R28-R100	30.8-35	1.5	1.5	-	Internal Opening/Opening Method/Applications	
R40-R200	45.8	5	2.3	-	Internal Opening/Opening Method/Internal Opening	
R100	60	8	2.8	-	Internal Opening	
R75	63	8	2.8	-	Internal Opening	
Reinforced Drag Chain						
R40-R200	46	2	2	75	Internal Opening	
R40-R200	46	5	2.3	100	Internal Opening	
R55-R200	48.3	10	3.3	200	Internal Opening	
R60-R200	62.9	20	3.8	300	Internal Opening	
R75-R250	71.4	45	4.5	350	Internal Opening	
R75-R300	71.4	63	5	400	Internal Opening	
R75-R300	71.4	70	5.5	400	Internal Opening	
R200-R300	101	80	6.2	550	Internal Opening	
Heavy-Duty Drag Chain						
R75-R200	63	20	3.8	300	两侧开	
R63-R300	63	20	3.8	250	两侧开	
R75-R250	71.4	45	4.5	350	两侧开	
R75-R250	71.4	65	5.3	400	两侧开	
R75-R350	72	65	5.3	350	两侧开	
R135-R300	91	70	5.3	450	两侧开	
R150-R500	111	83	6.5	450	两侧开	
R135-R300	91	70	5.3	450	两侧开	
Silent Drag Chain						
R28-R48	17.6	3	1.6	-	两侧开	
R55-R150	21	3.5	1.8	-	两侧开	
R55-R150	21.8	3.5	1.8	-	两侧开	
R60-R200	33.6	8	2.5	-	两侧开	
R75-R200	33.6	8	2.5	-	两侧开	
R75-R200	33.6	15	3	-	两侧开	