

REINFORCED PLASTIC/METAL PROTECTED&GUIDE CHAINS

DESIGN FOF USE ON:

AUTOMATIC WAREHOUSE SYSTEM / PARKING EQUIPMENT / INDUSTRIAL ROBOTS /
AND OTHER MOVI NG EQUIPMENT OR TUBES



Introduction:

Being specialized in hoist repair and related engineering innovation, we provide our customers with excellent service backed up by persistent devotion, responsibility advanced technology. In order to overcome the difficulties that we have been.

Confronted with part importing , we dedicate ourselves to the production and innovation of parts and components.

We also obtained numerous patents approved either by R.O.C.(Taiwan) and many countries.

We supply our customers with readily available engineering materials and technical assistance to shorten customers' time.

KYEC General Manager
Tommy Tan

DATA

600V EP rubber insulation tubes

CORES mm ²	2		3		4		5		6	
	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m
1.25	9.8	0.14	10.5	0.175	11.5	0.195	13.5	0.26	16.0	0.36
2.0	11.0	0.175	11.5	0.2	12.5	0.245	14.5	0.33	17.0	0.445
3.5	12.5	0.245	13.0	0.29	14.5	0.355	17.0	0.485	20.0	0.66
5.5	14.5	0.35	15.5	0.415	17.0	0.515	21.0	0.72	24.0	1.0
8.0	16.0	0.435	17.0	0.525	18.5	0.655	23.0	0.93	27.0	1.27
14.0	18.5	0.64	20.0	0.795	22.0	1.00	27.0	1.42	32.0	1.96
22.0	25.0	1.07	27.0	1.33	29.0	1.67				
(30.0)	27.0	1.34	29.0	1.67	32.0	2.10				
38.0	30.0	1.63	32.0	2.02	35.0	2.55				
(50.0)	34.0	2.1	36.0	2.62	40.0	3.32				
60.0	37.0	2.52	39.0	3.15	44.0	4.02				
(80.0)	43.0	3.47	46.0	4.32	51.0	5.50				
100.0	47.0	4.2	50.0	5.27	56.0	6.72				

600v PVC flat tubes

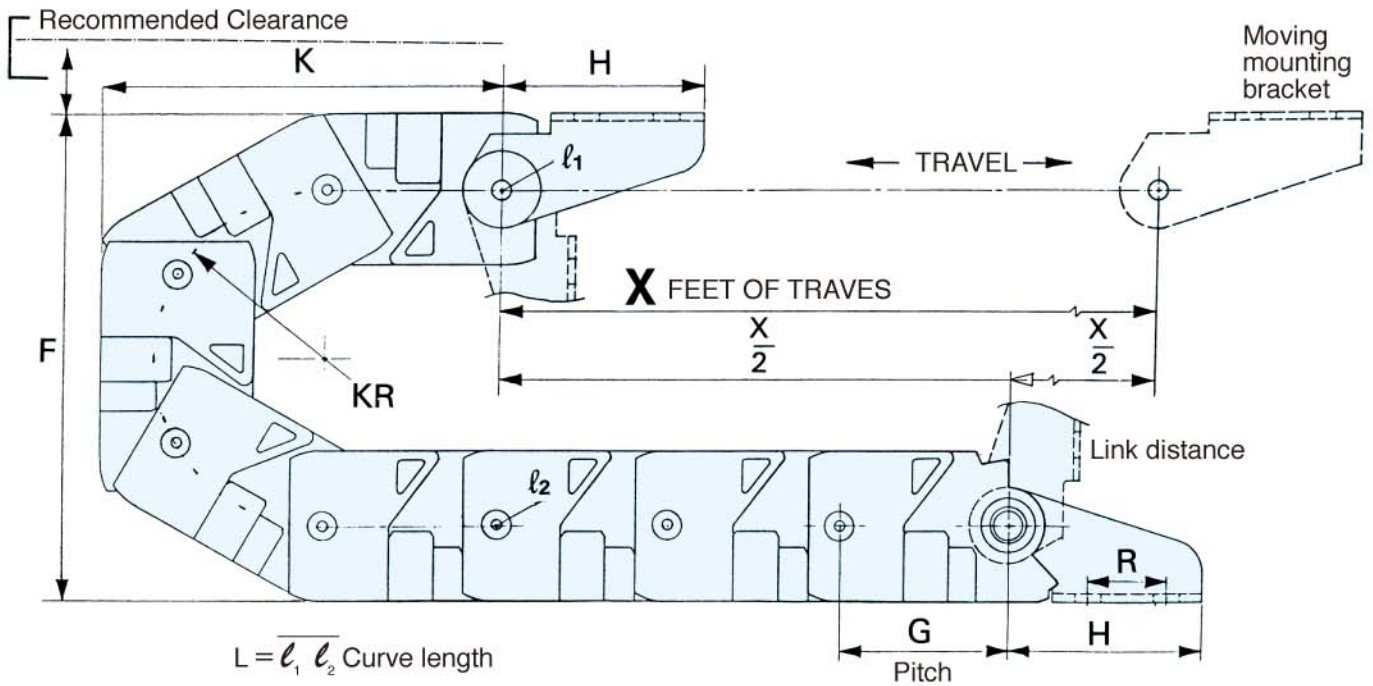
MODEL	mm ²	CORES	(W)	(T)
KY-B0302	2.0	3C	13.0	5.4
KY-B0303	3.5	3C	16.2	6.8
KY-B0305	5.5	3C	19.2	8.2
KY-B0308	8.0	3C	22.6	9.6
KY-B0314	14.0	3C	28.0	11.0
KY-B0322	22.0	3C	34.0	17.0
KY-B0801	1.25	8C	30.0	6.2
KY-B1001	1.25	10C	35.5	5.5
KY-B1301	1.25	13C	43.5	6.0
KY-B2400	0.75	24C	39.0	8.0
KY-B3600	0.75	36C	47.0	9.0
KY-B6000	0.75	60C	70.0	9.0

PU air tubes

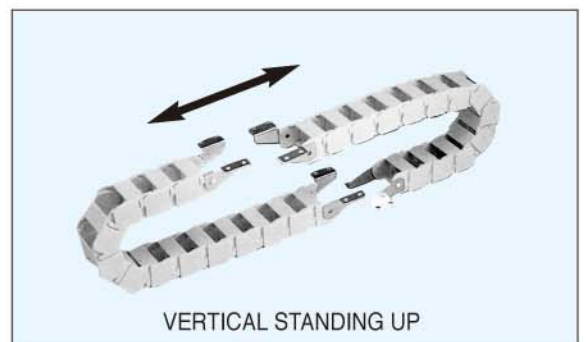
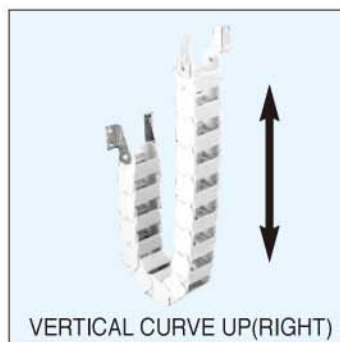
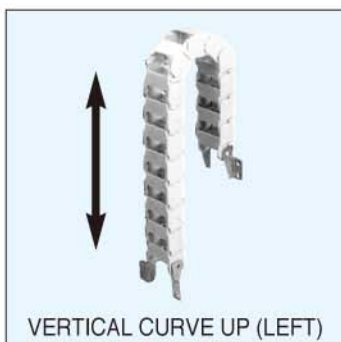
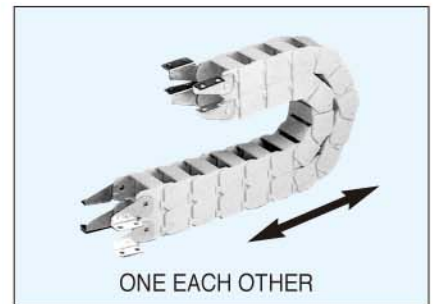
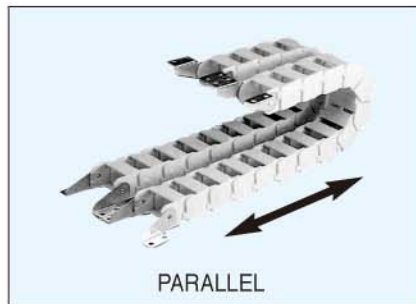
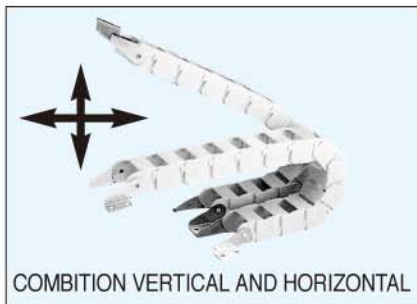
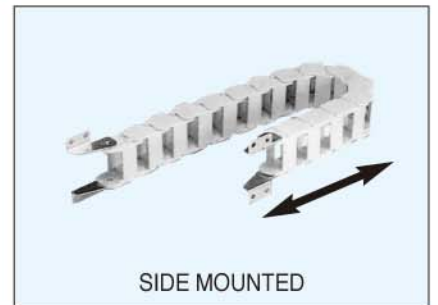
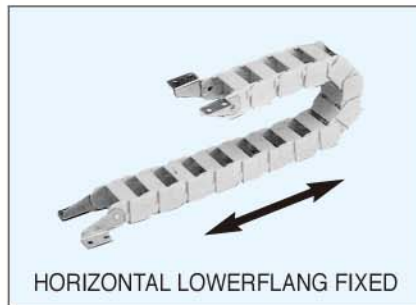
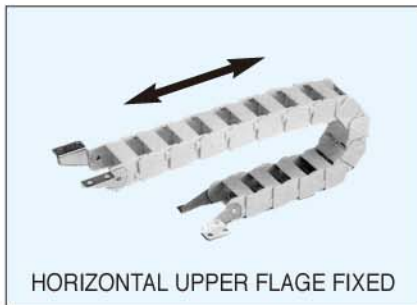
O.D. (mm)	I.D. (mm)	Break- Pressure (kg/cm ²)	N.W. (g/m)
16	12	26	110
16	13	24	86
11	8.0	24	65
4	2.5	24	9
6	4.0	24	19
8	5.0	24	36
10	6.5	24	54
12	8.0	24	74
8	6	18	24
8	5.0	24	36
9.53	6.5	24	53
12.6	9.6	20	65
6.35	4.0	24	21

Nylon tubes

O.D. (mm)	I.D. (mm)	Break- Pressure (kg/cm ²)	N.W. (g/m)
4	2.5	70	9
6	4.0	55	17
8	6.0	50	23
10	7.5	50	36
12	9.0	50	52
6.35	4.57	45	17
8	6.0	50	23
9.53	6.99	45	35
12.7	9.56	50	58

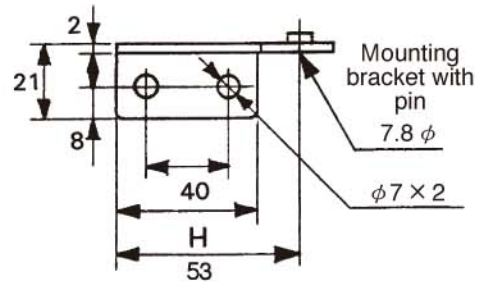
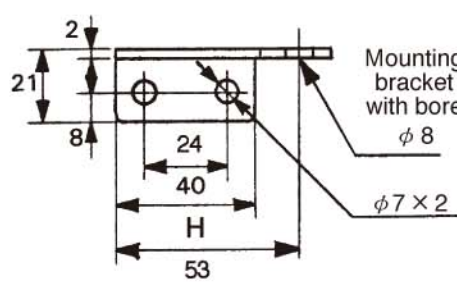
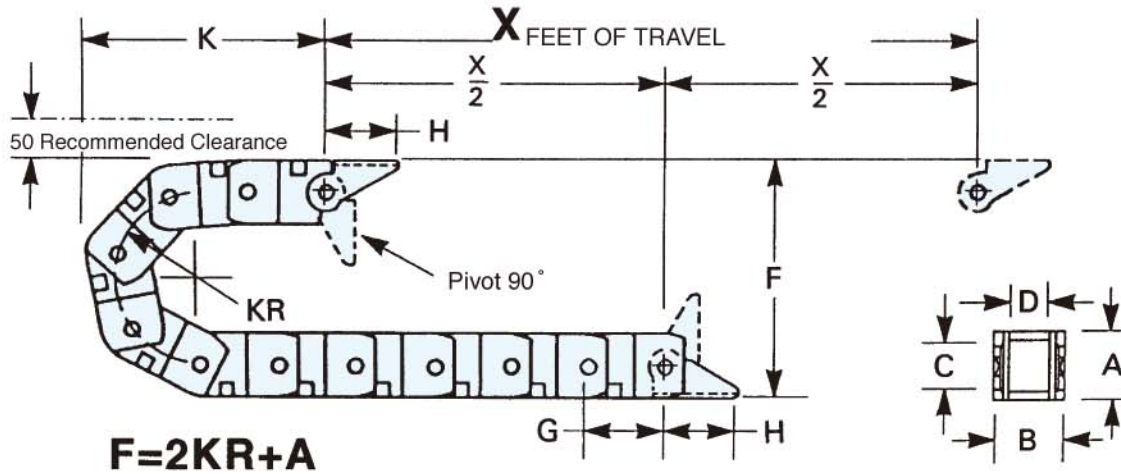


TYPES OF APPLICATIONS



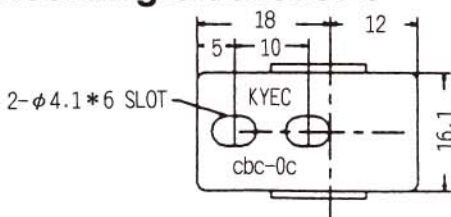
Cable chain closed type

CECBC — **00** — **13 × 13** — **2KR+A**
 Cable chain closed MODEL INNER SIZE C × D F

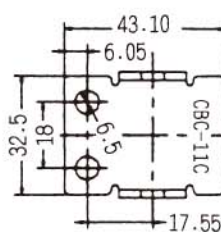


Series no.	MODEL	Inner Height	Inner Widths	Outer Height	Outer Widths	distance	Winding radius	Meter Link
KY-CE	CBC00	13	13	16	20	18	R20	56
KY-CE	CBC11	17	25	23	36	30	R50	33
KY-CE	CBC22	25	40	35	55	46	R100	22
KY-CE	CBC33	25	57	35	72	46	R120	22

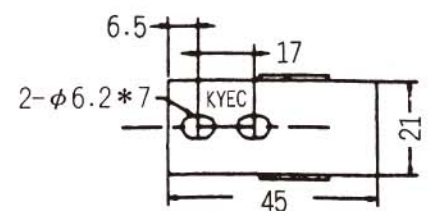
Mounting bracket size



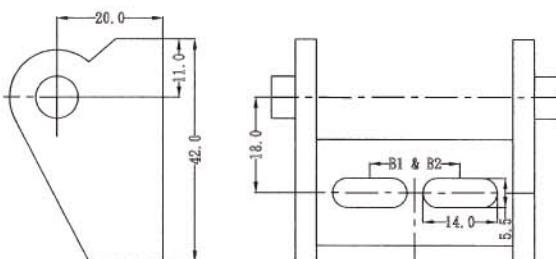
CECBC-00C



CECBC-11C



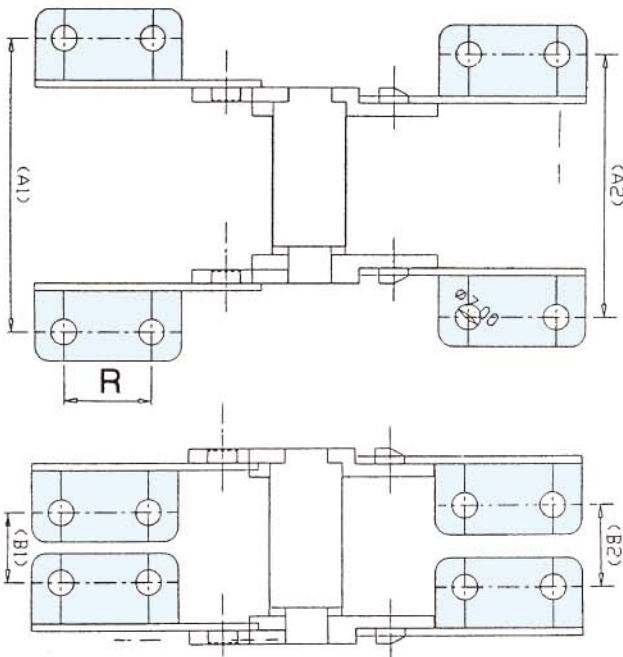
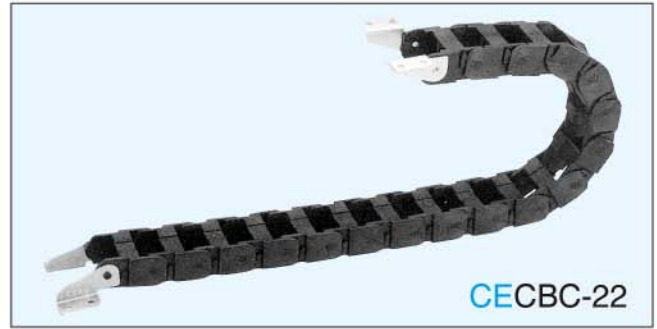
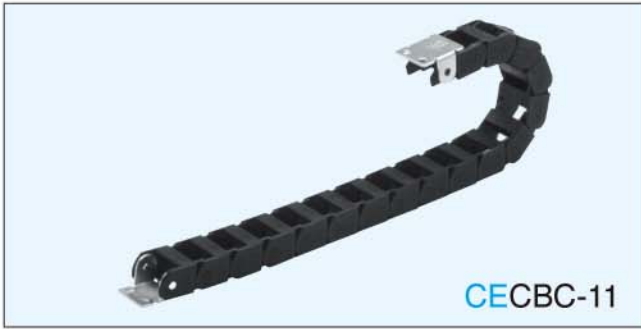
CECBO-00C



CECBO-1C~4C

MODEL	B1 & B2
CBO-1	18
CBO-2	38
CBO-3	58
CBO-4	78

Products

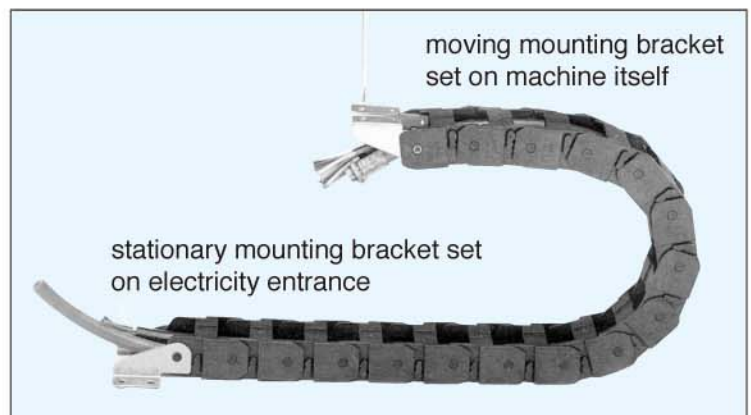
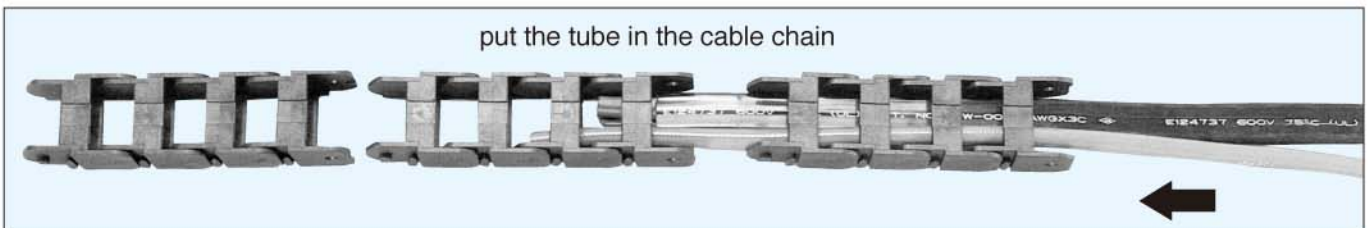


Bracket distance

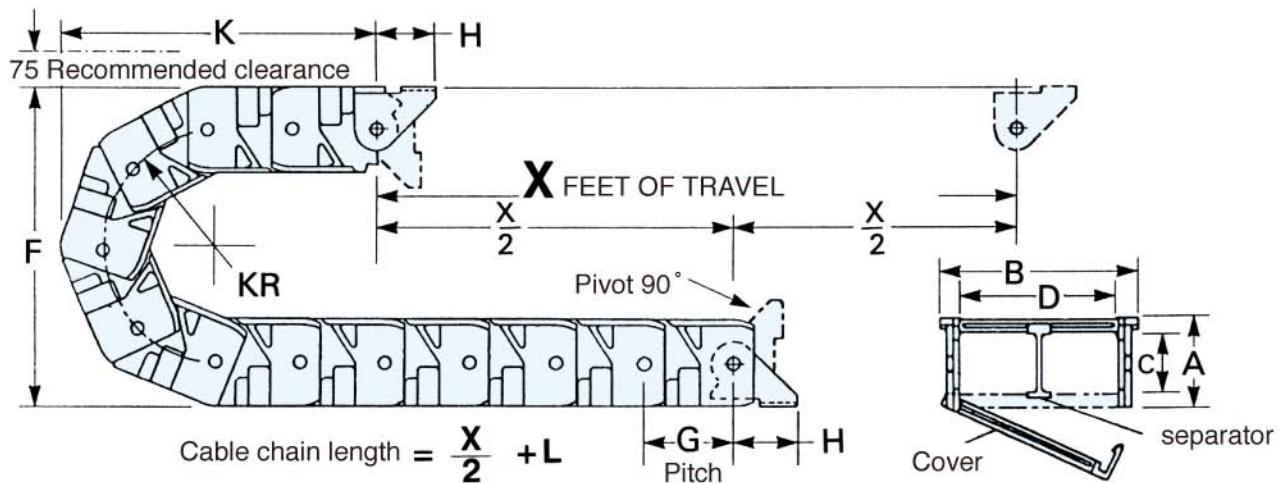
MODEL	A1	A2	B1	B2	R		
CBC-2		69		30	24		
CBC-22	80	74	73	26	25	22	24
CBC-33	97	93	90	42	43	39	24
CBP-5 X 80W				55	63	65	40
CBO-5 X 150W				125	133	135	40
CBO-5 X 200W				175	183	185	40
CBO-5 X 250W				225	233	235	40
CBO-5 X 300W					283		
CBO-55X 60W	120	117	110	38	45	46	40
CBO-55X 100W	160	157	150	78	85	86	40
CBO-55X 150W	210	207	200	128	135	136	40
CE0625-1B					50		30
CE0625-2B					95		30

p.s the white frames represent new center distance

Assemblage



Snap-on type



Dimensions in mm

Series 1

Series no.	MODEL	Inner Height	Inner Widths	Outer Height	Outer Widths	Pitch	KR Winding radius	Meter	
								Link	
KY-CE	CBO00	19	15	25	26	29	R45	34	
KY-CE	CBO01	26	38	42	54	46	R50	<input type="checkbox"/> R95	22
KY-CE	CBO02	26	58	42	74	46	R50	<input type="checkbox"/> R70 <input type="checkbox"/> R95	22
KY-CE	CBO03	26	77	42	93	46	R50	<input type="checkbox"/> R95 <input type="checkbox"/> R120	22
KY-CE	CBO04	26	98	42	114	46	R50	<input type="checkbox"/> R95 <input type="checkbox"/> R120	22
KY-CE	0625-1B	43	65	62	93	62	R125	16	
KY-CE	0625-2B	43	108	62	135	62	R125	16	

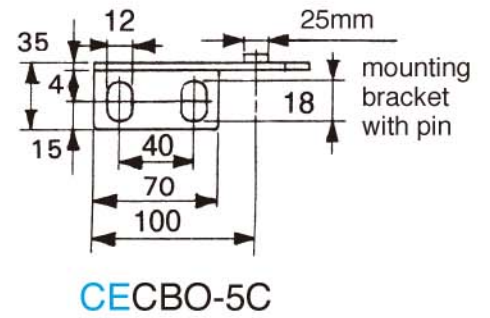
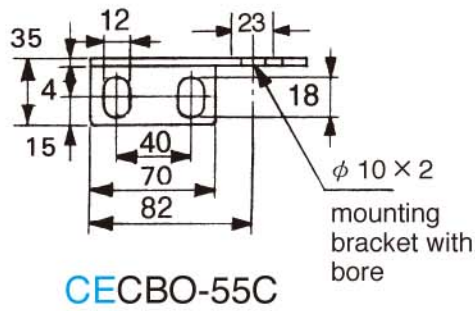
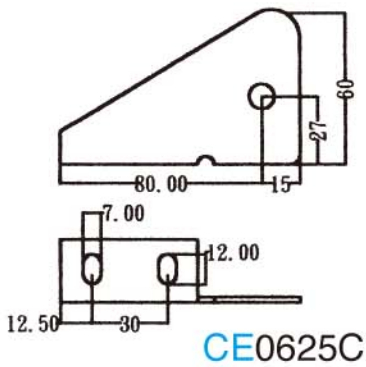
Mounting Bracket Size (See Page 3.) Order then available

Series 2

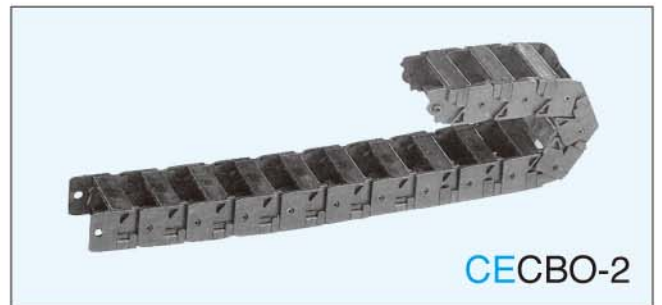
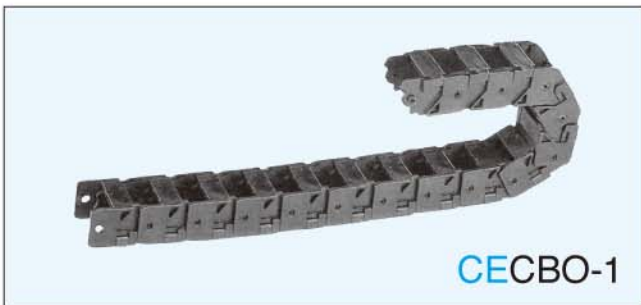
Series no.	MODEL	Inner Height	Inner Widths	Outer Height	Outer Widths	Pitch	KR Winding radius	Meter	
								Link	
KY-CE	CBO0508	55	80	84	116	92	R160	11	
KY-CE	CBO0515	55	150	84	186	92	R160	11	
KY-CE	CBO0520	55	200	84	236	92	R160	11	
KY-CE	CBO0525	55	250	84	286	92	R160	11	
KY-CE	CBO0530	55	300	84	336	92	R160	11	
KY-CE	CBO0535	55	350	84	386	92	R160	11	
KY-CE	CBO5506	50	60	72	105	80	R125	13	
KY-CE	CBO5510	50	94	72	140	80	R125	13	
KY-CE	CBO5515	50	143	72	190	80	R125	13	

- Length: fixed point in the middle – total length = stroke/2 + 3 (KR + G)
fixed point in one side – total length = stroke + 3 (KR + G)
- Model: To choose fit model, it's recommended 20% plus to the inside cable's outer diameter.
- Curve: To choose winding radius, it's recommended 8~10 times to the inside cable's diameter.

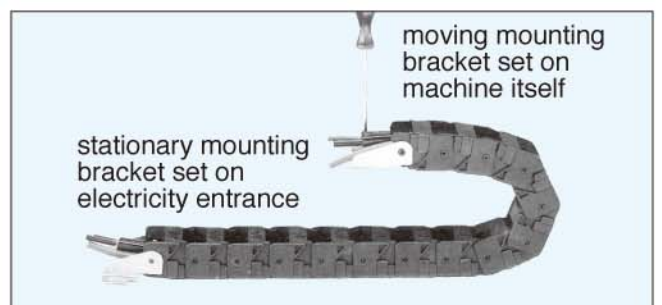
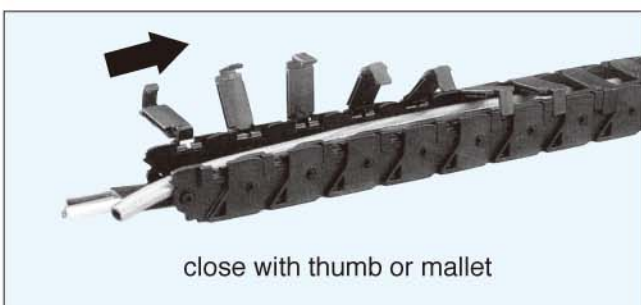
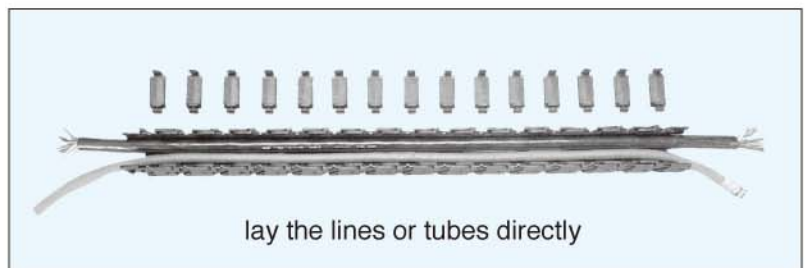
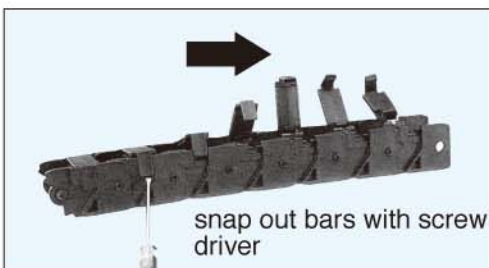
Mounting Bracket



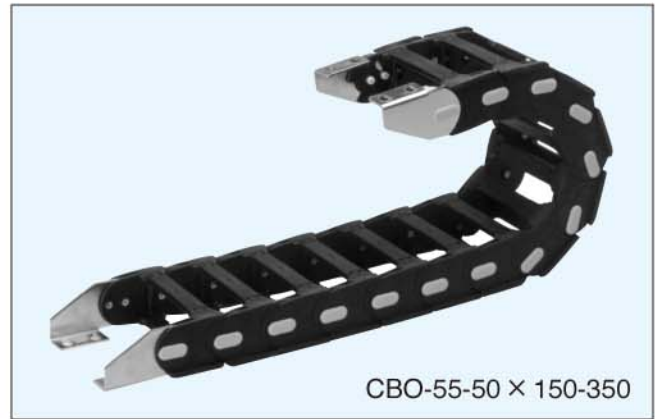
Products Series I



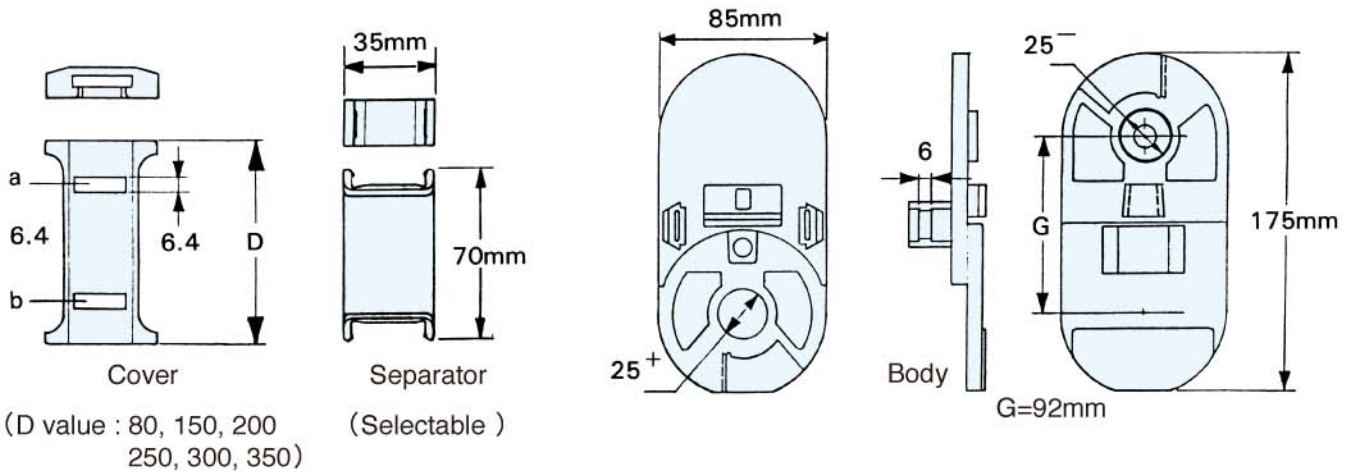
Assembling

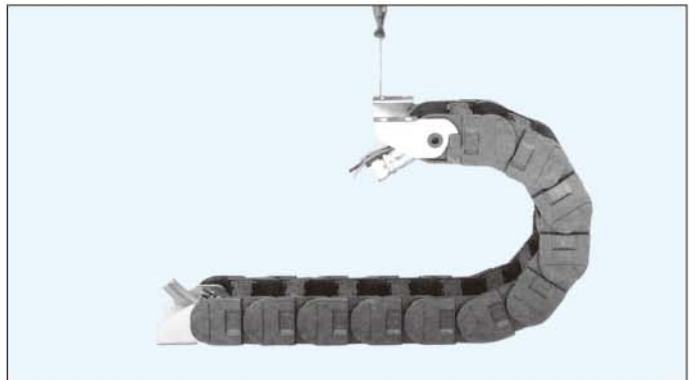
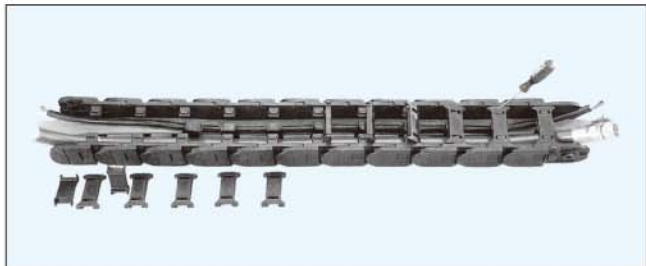
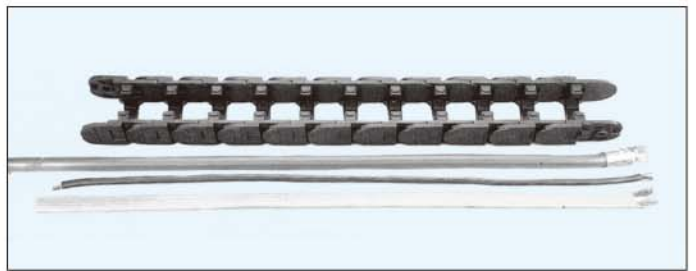
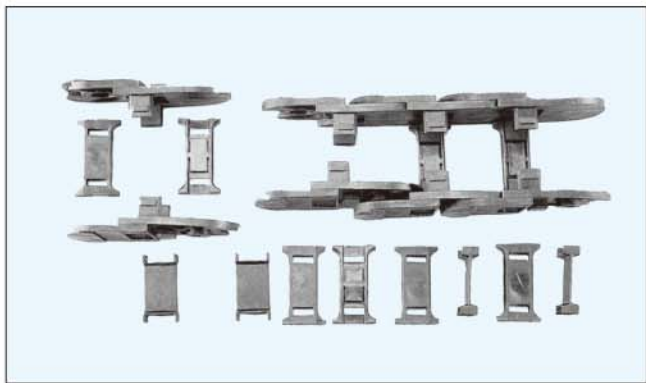


Products Series II



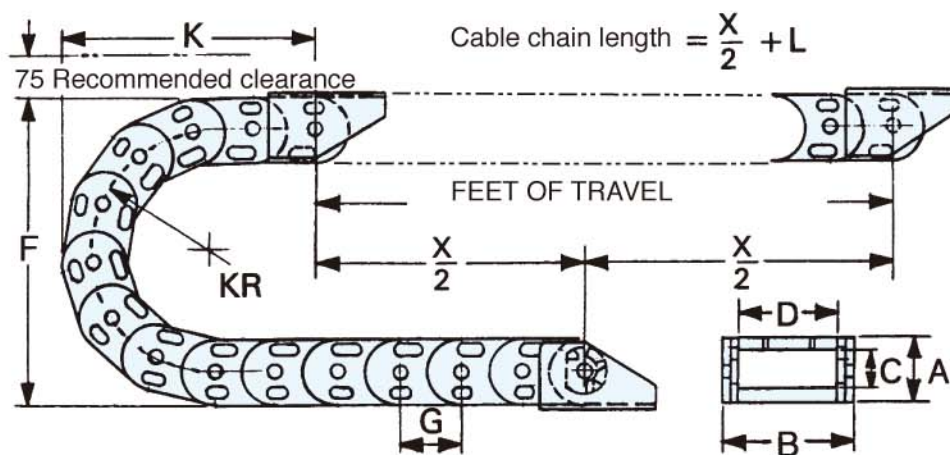
Assembling





Secure type

COS — **1** — **26 × 58** — **2KR+A**
 Cable chain secure MODEL INNER SIZE C × D F

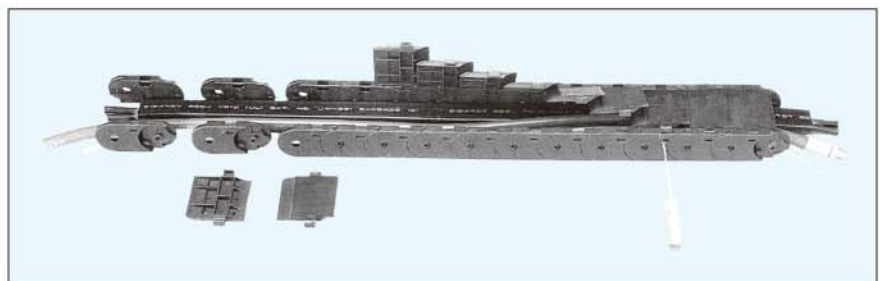


L : Winding circumference

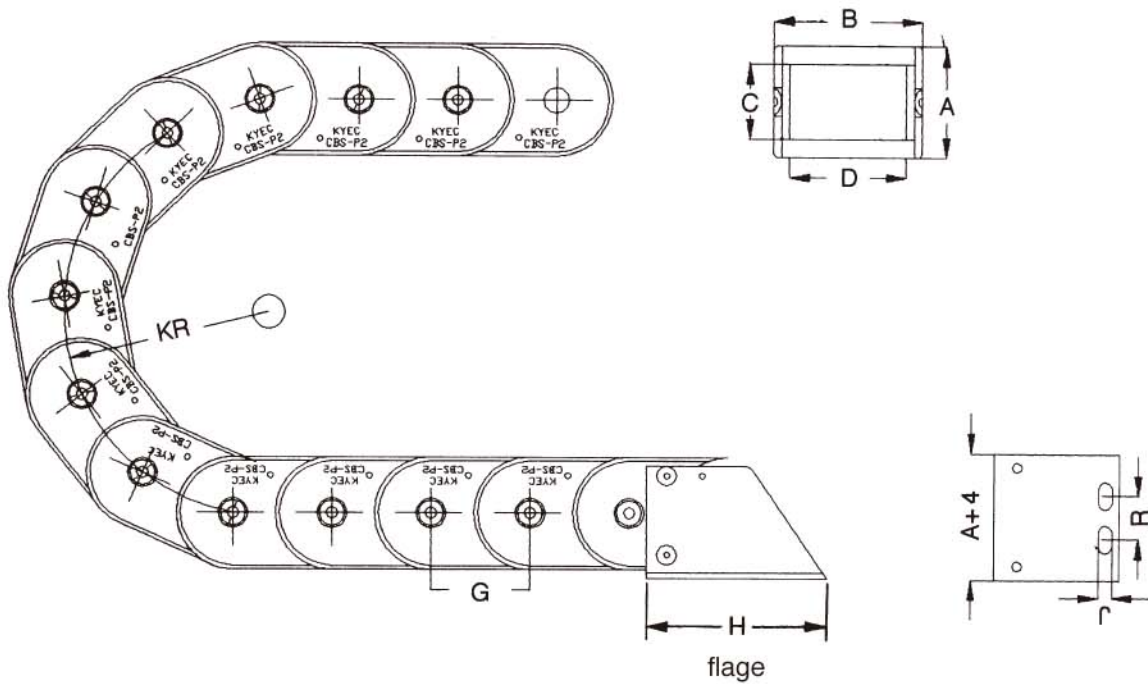
G : Pitch

Products Series I

Series no.	MODEL	Inner Height	Inner Widths	Outer Height	Outer Widths	Total Height	KR Winding radius	Pitch	Winding circumference
KY-CE	COS-2	26	58	40	80	245	102	45	0.6



Chip protection closed Cable chain



Dimensions in mm

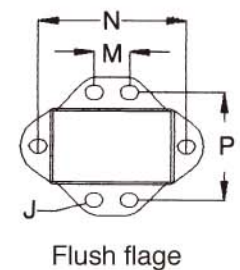
Series no.	MODEL	Inner Height	Inner Widths	Outer Height	Outer Widths	Pitch	KR Winding radius		Meter
									Link
KY-CD	CBSP1	24	46	36	60	36	R80	R100	28
KY-CD	CBSP2	38	75	57	92	50	R125	R225	20
KY-CD	CBSP3	52	102	67	118	50	R200	R250	20

Non-available

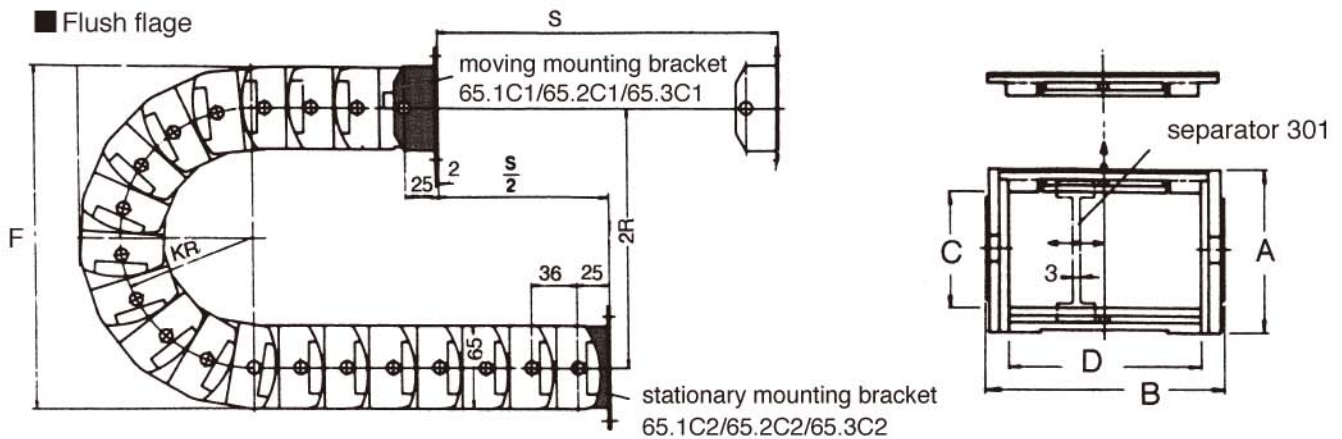
- ⊙ Body: reinforced plastic
- ⊙ Length: fixed point in the middle – total length = stroke/2 + 3 (KR + G)
fixed point in one side – total length = stroke + 3 (KR + G)
- ⊙ Model: To choose fit model, it's recommended 20% plus to the inside cable's outer diameter.
- ⊙ Curve: To choose winding radius, it's recommended 8~10 times to the inside cable's diameter.

Mounting Bracket Dimensions in mm

MODEL	Flush flange			R	J	H
	M	N	P			
KY-CDCBSP1C	18	75	55	22	7	64
KY-CDCBSP2C	45	105	70	50	7	91
KY-CDCBSP3C	60	140	90	70	9	117



Snap-open chip protection Cable chain

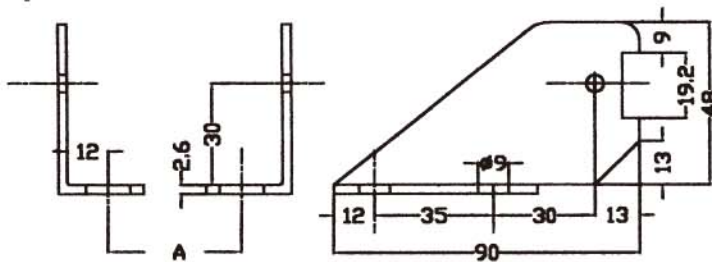


Dimensions in mm

Series no.	MODEL	Outer Height	Outer Widths	Inner Height	Inner Widths	Pitch	Winding radius			Meter / Link
							R100	R150	R200	
KY-CE	CBS65.1	65	93	45	75	36	R100	R150	R200	28
KY-CE	CBS65.2	65	133	45	115	36	R100	R150	R200	28
KY-CE	CBS65.3	64	195	45	175	36	R100	R150	R200	28

1~3 point firm method

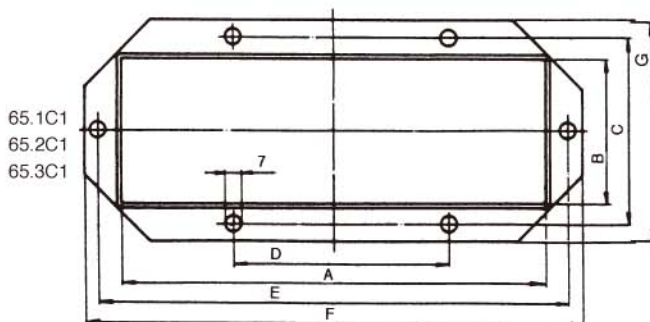
Order then available



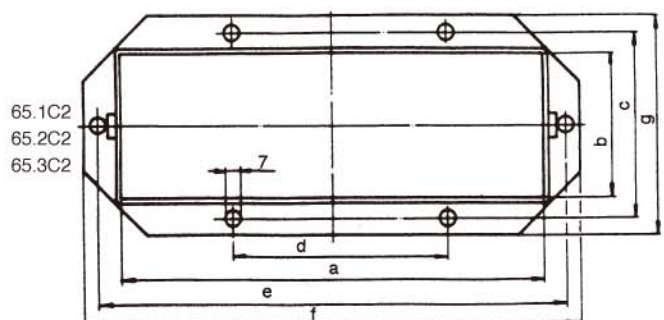
MODEL	A
CDCBS65.1C	58
CDCBS65.2C	98
CDCBS65.3C	158

Mounting Bracket Dimensions in mm

MODEL	A	B	C	D	E	F	G
KY-CDCBS65.1C1	83	62	80	30	104	116	94
KY-CDCBS65.2C1	123	62	80	50	144	156	94
KY-CDCBS65.3C1	184	62	80	100	204	216	94
	a	b	c	d	e	f	g
KY-CDCBS65.1C2	78	55	80	30	104	116	94
KY-CDCBS65.2C2	118	55	80	50	144	156	94
KY-CDCBS65.3C2	179	55	80	100	204	216	94



flush flage with bore



flush flage with pin

○ **Speed of travel**

For unsupported applications, kyec cable chains achieve speeds in excess of 5 m/s and rates of acceleration of more than (10 m/s). These guidelines apply to kyec energy chains of every size if they are used "unsupported straight". In specific applications, the top speed is influenced and limited by the length of travel, additional load and the frequency of travel.

○ **Service life**

In order to estimate the service life of an unsupported application, all technical data must be provided: type and number of conduits, additional load, speed, acceleration, travel frequency and details of the technical environment. Wear of the energy chains is very low, due to a special material compound and plastic-oriented design. A service life of between 15-30 million cycles can be achieved for "unsupported straight" applications even in high speed application.

○ **Unsupported lengths**

The maximum length of travel possible of an unsupported application depends on the stability of the chain used, and on the weight of the cables and hoses inside the chain (additional load). Figure 1 shows the maximum permissible "unsupported lengths with sag (FL)" of all kyec cable chains depending on the additional load. Unsupported length is defined here in such a way that the upper section of the has a permission sag. In this case the upper section is bent over the back.

The largest possible travel is in any case equal to twice the largest possible unsupported length:

$$S \text{ max.} = FL \cdot 2$$

S max. = maximum travel

FL = unsupported length with sag taking the additional load into account

The sag of the kyec chains does not pose a problem in many applications. It may become critical however when acceleration and frequency of travel are very high. In such cases the cable chain may be additionally supported.

Figure 2 show the conditions for the application of the chains "unsupported straight". "Unsupported straight" means that the upper section hangs parallel to the lower section. This configuration permits maximum travel speeds, accelerations and bending cycles.

Figure 1 FLB

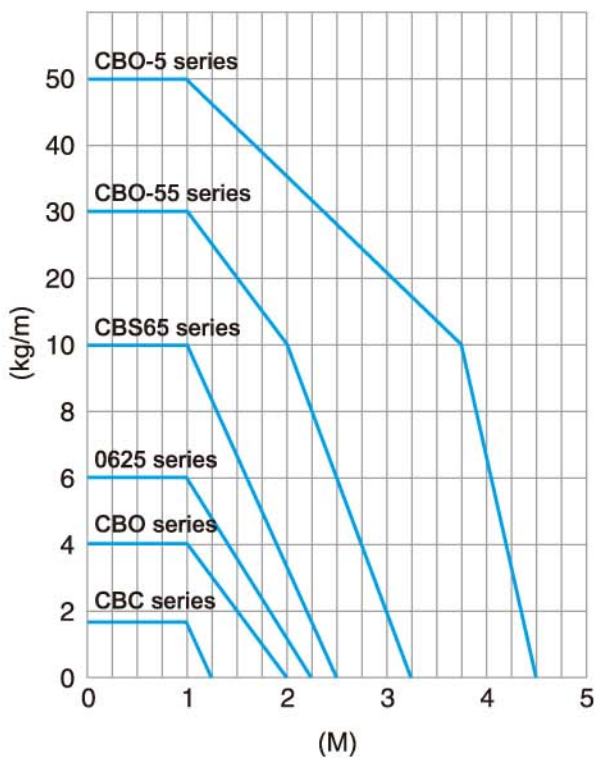
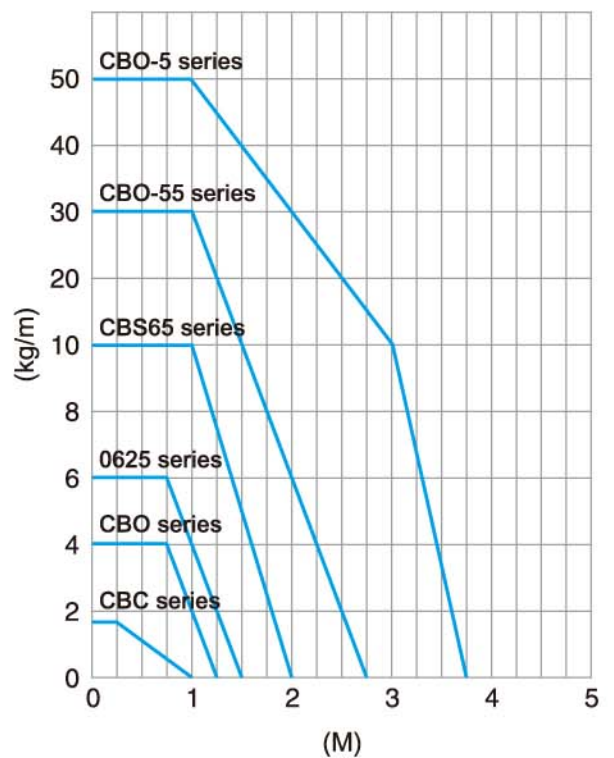


Figure 2 FLG



Support roller set

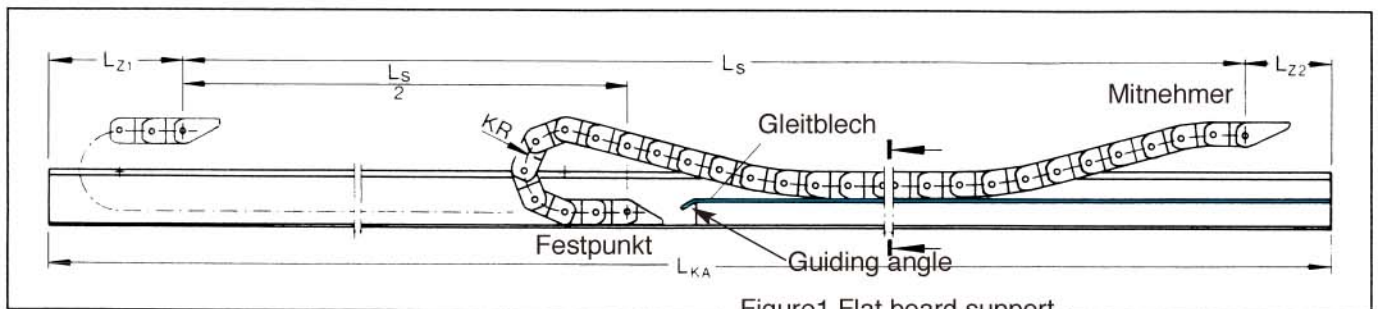
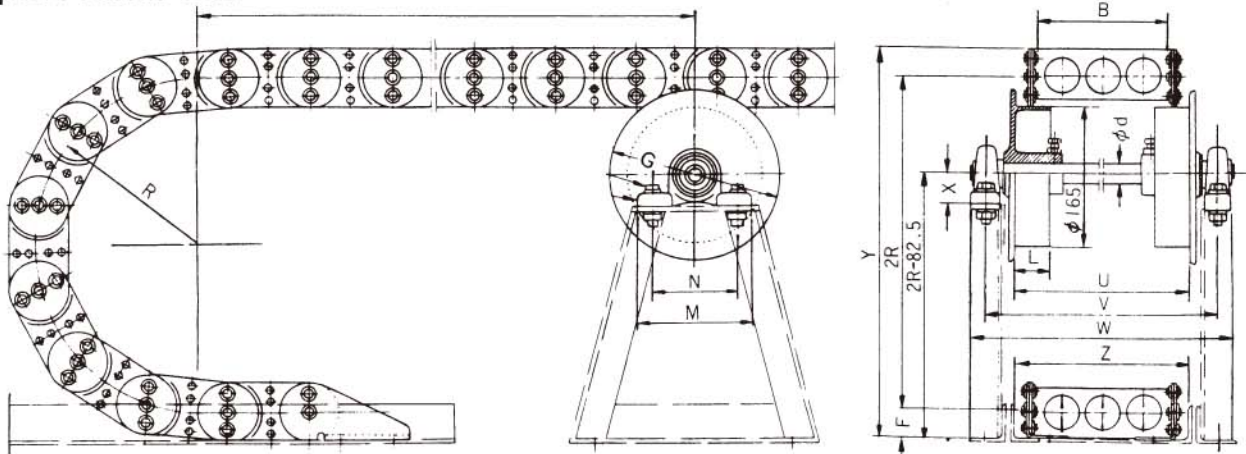


Figure 1 Flat board support

IF cable chain is too long, that will lead to sag, two ways to solve it:

1 support with flat board (as figure 1) 2 support with roller (as figure 2)

$$L_{KA} = L_s + X_{max} + 2L_{Z1}$$

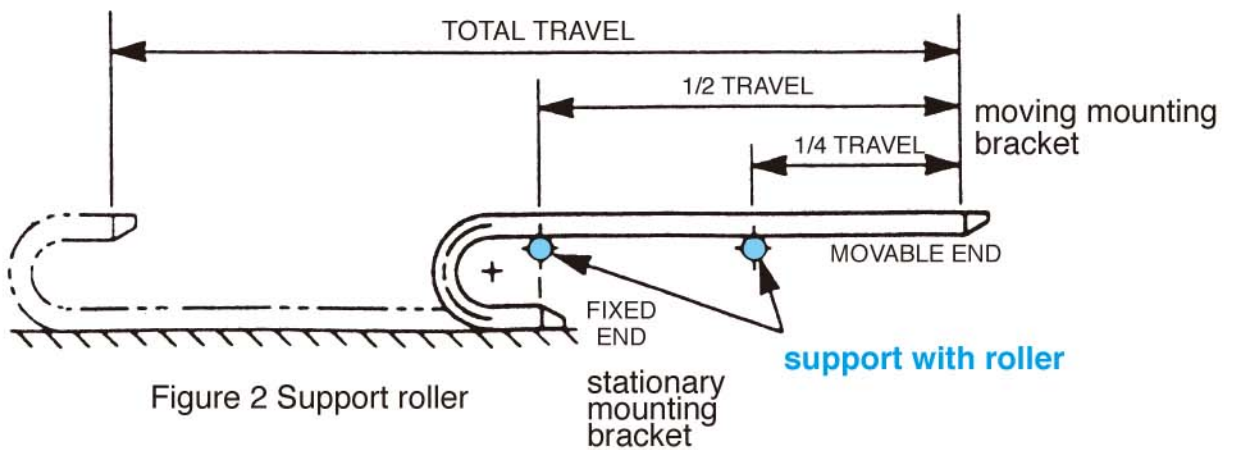


Figure 2 Support roller

Guiding trough

guiding troughs are used for long travels, figure 3 is the basic shape . height of guiding trough should be at least double to the height of cable chains

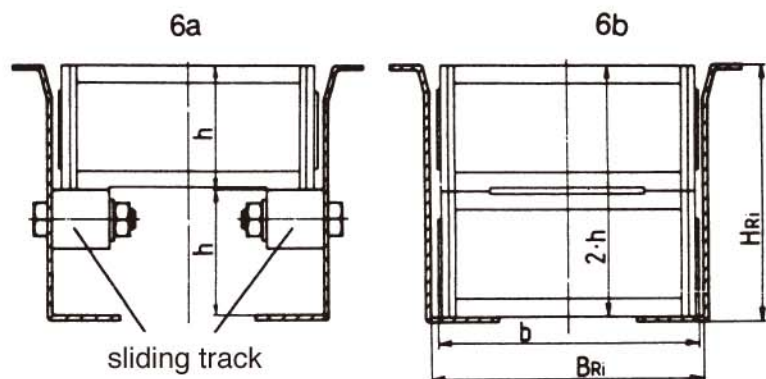
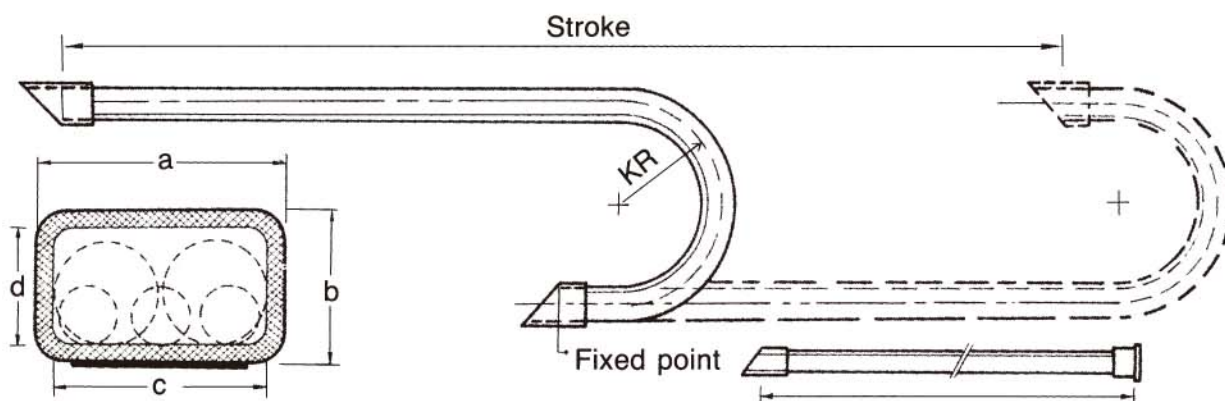


Figure 3 Guiding trough

$$H_{Ri} \geq 2 \cdot h$$

$$B_{Ri} \geq b + 5$$

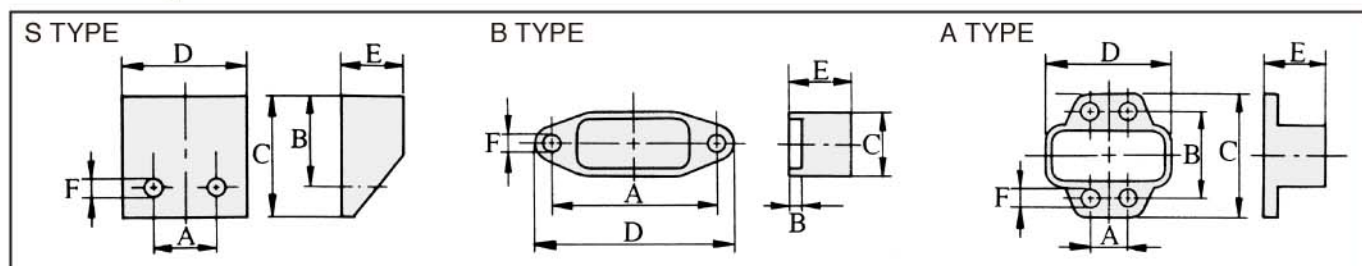
Cable chain stainless



Size (mm)										
Series no.	Item	a	b	c	d	KR				
KY-CBS-1		60	36	45	25	60	100	150		
KY-CBS-2		90	53	74	40	100	150	200	250	
KY-CBS-3		118	67	102	52	100	150	200	250	300
KY-CBS-4		182	92	162	72	150	250	350	450	

● Body: stainless 304 ● Assemble: Two flange connected to the tube's both end As shown figure S type : B type : A type

Connector type

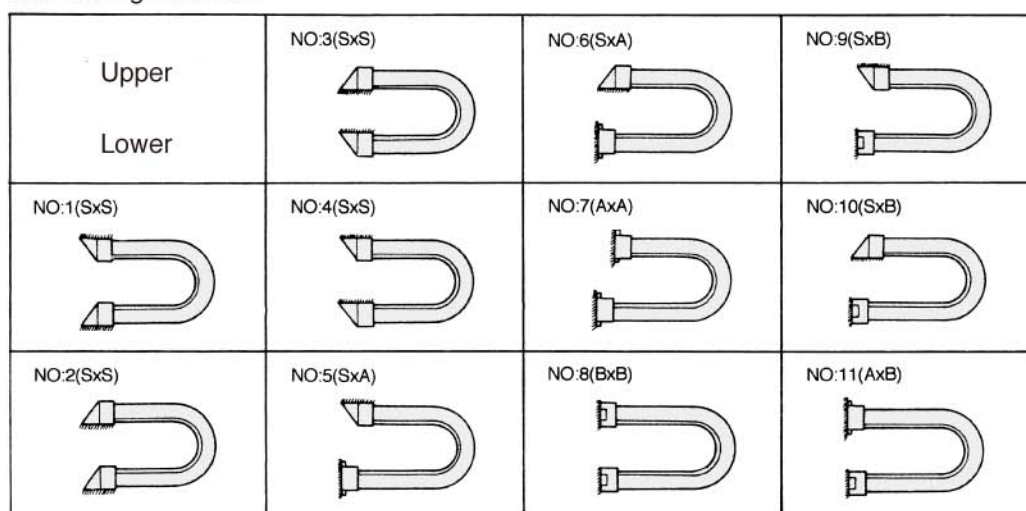


S TYPE	A	B	C	D	E	F
I	22	16	25	60	35	7
II	50	16	25	90	51	7
III	70	16	25	118	66	9
IV	100	21	30	180	90	9

B TYPE	A	B	C	D	E	F
I	75	6	35	90	25	7
II	105	6	51	122	25	7
III	140	7	66	160	25	9
IV	200	8	90	225	30	9

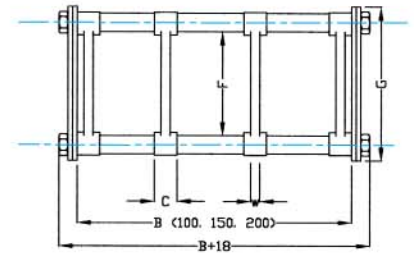
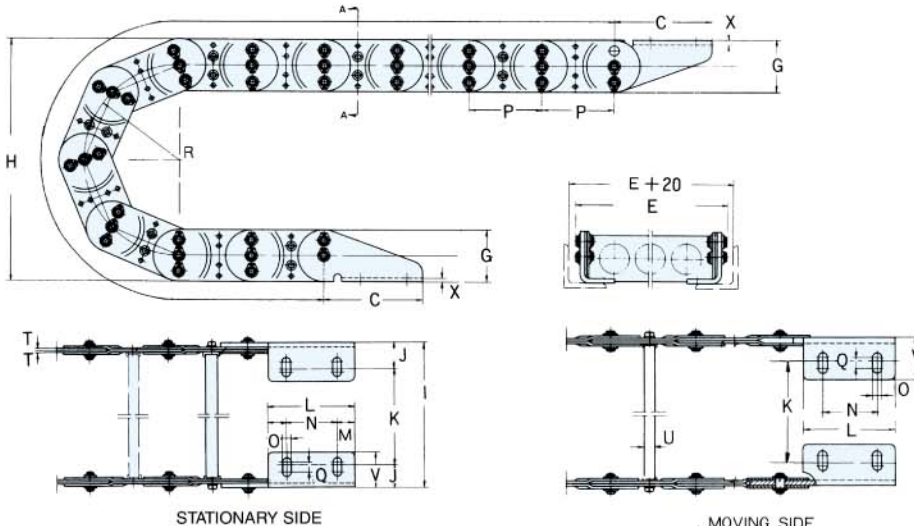
A TYPE	A	B	C	D	E	F
I	18	55	70	60	25	7
II	45	70	85	90	25	7
III	60	90	110	118	25	9
IV	95	110	145	180	30	9

Connecting methods



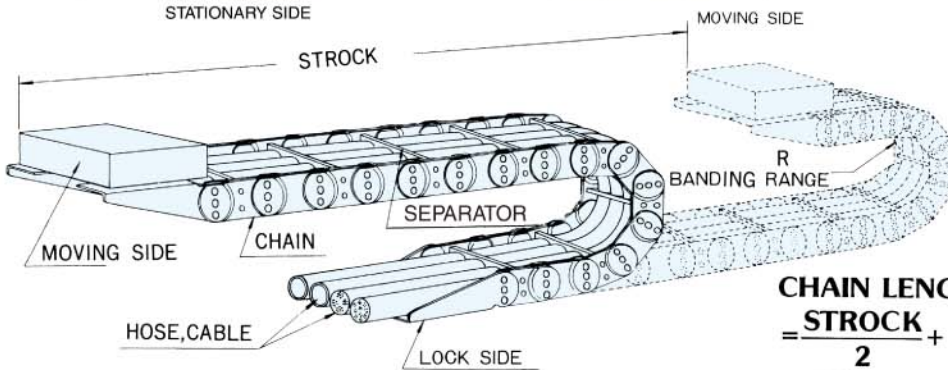
Metal chain type

KYS-070 — **125R** — **200W** — **5S**
 Model Stationary side Width Separator



MODEL	C	W	F
KYS-070	10	4	30
KYS-100	10	4	50
KYS-130	15	5	72
KYS-180	15	5	116

The amount of separator should be considered when assemble.



$$\text{CHAIN LENGTH} = \frac{\text{STROCK}}{2} + \pi R + 2P + 2C$$

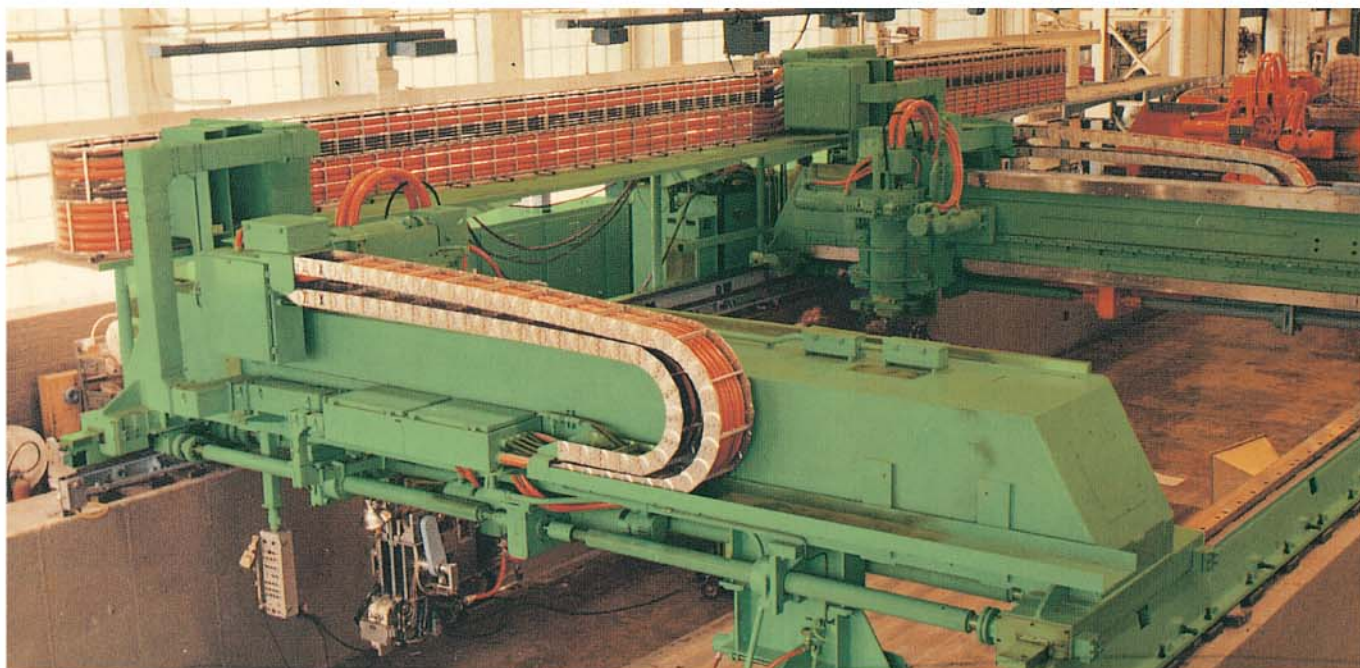
CHAIN SIZE

CHAIN NO	R	P	G	U	T	H	Min B	E	WEIGHT KG/M	
KYS-070	75R	90R	70	50	10	2.3	2R+G	70	B+30	5.2
	125R	145R								
KYS-100	145R	200R	100	70	12	2.3	2R+G	90	B+32	7.5
	250R	300R								
KYS-130	200R	250R	130	96	16	2.3	2R+G	120	B+35	16
	300R	400R								
KYS-180	300R	400R	180	140	19	3.2	2R+G	150	B+35	22
	500	600R								
	700R									
KYS-250	350R	450R	250	220	20	3.2	2R+G	350	B+48	30
	600R	750R								

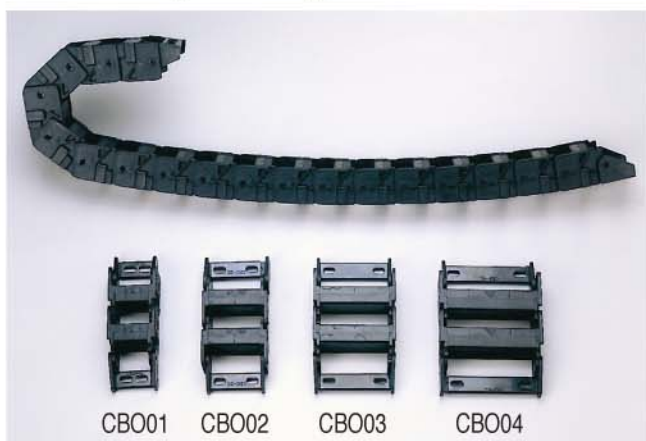
Order then available

BRACKET SIZE

CHAIN NO	I	J	K	L	C	N	O	Q	V	X	WEIGHT KG/M
KYS-070	B+18	23	B-33	77	100	45	9	10	34.5	4.5	0.1
KYS-100	B+18	30	B-35	104	125	65	11	12	44.5	4.5	0.35
KYS-130	B+25	34	B-35	127	158	80	13.5	12	56	6	0.9
KYS-180	B+25	38	B-55	175	215	115	13.5	20	60	6	1.5
KYS-250	B+201	50	B-90	250	300	85	18	18	90	8	2



▲ Metal heavy-loaded type



▲ Standard type



▲ Metal type



▲ Upgraded type



▲ Chip protection snap-on type

※ We are happy to provide all kinds of engineering or technical service, please call then consult.



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