

Cable Carrier Overview

Cable Carrier Selection

Step 1. Tentatively Select Cable Carrier Type

Step 2. Select Cable Carrier Size

Step 3. Calculate Free Span Length

Step 4. Check if the Carried Load is within the Free Span Running Range.

Step 5. Calculate Links

Selection Completed.

Step 1. Tentatively Select Cable Carrier Type

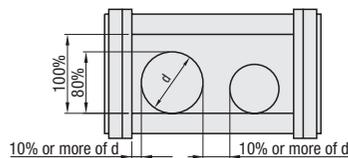
Please tentatively select type referring to the following features, open-close methods and sizes.

Type	Features	Open-Close System	Note																																																						
Slit Type Type SE / SZ P.639	Cables-hoses can be easily tucked in from both external and internal circumference sides. - Support clean room - No need for link assembly	Tuck the cable into the opening.	<p><Dimensions></p> <table border="1"> <thead> <tr> <th colspan="3">Minimum</th> <th colspan="3">Maximum</th> </tr> <tr> <th>WxB</th> <th>CxA</th> <th>Carried Load Max. Diameter</th> <th>WxB</th> <th>CxA</th> <th>Carried Load Max. Diameter</th> </tr> </thead> <tbody> <tr> <td>SE / SZ</td> <td>23x12.5</td> <td>16x9.4</td> <td>Ø7</td> <td>120x64</td> <td>96x48.5</td> <td>Ø25</td> </tr> <tr> <td>MHPKS</td> <td>16x12</td> <td>9x9</td> <td>Ø7</td> <td>59x22</td> <td>44x16</td> <td>Ø12</td> </tr> <tr> <td>MHPUS</td> <td>27x12</td> <td>20x9</td> <td>Ø7</td> <td>117x40</td> <td>97x24.5</td> <td>Ø19</td> </tr> <tr> <td>FHPS</td> <td>26x20</td> <td>14x13</td> <td>Ø10</td> <td>117x40</td> <td>97x25</td> <td>Ø20</td> </tr> <tr> <td>MPSPS</td> <td>32x21</td> <td>20x15</td> <td>Ø12</td> <td>101x50</td> <td>80x35</td> <td>Ø28</td> </tr> <tr> <td>MPSCS</td> <td>28x25</td> <td>20x15</td> <td>Ø12</td> <td>113x55</td> <td>100x35</td> <td>Ø28</td> </tr> </tbody> </table> <p><Cleanliness Characteristics></p> <p>Cleanliness Characteristics</p> <p><Noise Characteristics></p> <p>Comparison of Noise Level</p>	Minimum			Maximum			WxB	CxA	Carried Load Max. Diameter	WxB	CxA	Carried Load Max. Diameter	SE / SZ	23x12.5	16x9.4	Ø7	120x64	96x48.5	Ø25	MHPKS	16x12	9x9	Ø7	59x22	44x16	Ø12	MHPUS	27x12	20x9	Ø7	117x40	97x24.5	Ø19	FHPS	26x20	14x13	Ø10	117x40	97x25	Ø20	MPSPS	32x21	20x15	Ø12	101x50	80x35	Ø28	MPSCS	28x25	20x15	Ø12	113x55	100x35	Ø28
Minimum				Maximum																																																					
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MPSCS	28x25	20x15	Ø12	113x55	100x35	Ø28																																																			
Compact Type MHPKS P.641	Space-saving design enables protection and guide even for only one cable and hose.	Flaps do not open.																																																							
Open-Close Type MHPUS P.642	Flaps open on either side.	Flaps open from either left or right.																																																							
Open-Close Full Cover Type FHPS P.643	Full Cover Type protects cables · hoses from dust																																																								
Low Wear, Low Noise Type MPSPS P.645	Less wear and noise on Cables · Hoses																																																								
Low Particulates, Low Noise Type MPSCS P.644	Low dust contributes to achieving Clean Room Class 1000 level and low noise																																																								

<Selection Examples>
Select MPSCS to use in clean room environment.

Step 2. Select Cable Carrier Size

Select suitable Cable Carrier size for housing cables/hoses.



** For section dimensions/bending radius by type and size, please refer to product pages.

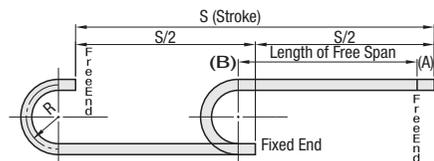
<Size Selection Tips>

- Height
Outer diameter of the cable and hose must be 80% or less than the internal height of the cable carrier.
- Space Occupied
Cable and hose must be within 60% of Cable Carrier Interior Content=Interior Height x Interior Width. (MPSPS and MPSCS can be stored up to 70% of interior content)
- Bending Radius
When housing different types of cables/hoses together, please select Cable Carrier bending radius meeting the maximum bending radius.
- Distance between the running cable/hose and internal wall
The distance between the running cable/hose and Cable Carrier interior wall must be at least 10% of the running cable/hose outer diameter.
- Cable / Hose Mutual Distances
The distance between adjacent cables/hoses must be at least 10% of the thicker cable outer diameter.

<Selection Examples>
One Ø20mm cable needs to be stored.
Select MPSCS2540-60 (Interior Height 25mm) because 20/0.8=25 or more interior height is required for the condition that the cable outer diameter must be within 80% of interior height

Step 3. Free Span Length Calculation

Calculate the length of free span by required moving stroke and the position of fixed end.



<Free Span Length>
Distance between the cable carrier moving end (A) and bending radius arc origin point (B).

When positioning the fixed end in the center of the moving stroke
Free Span Length=Moving Stroke/2

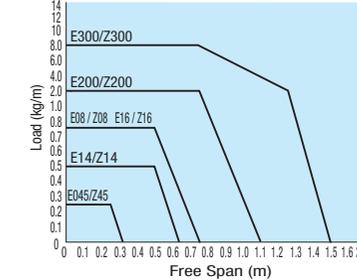
*Possible to minimize the quantity of Plastic Rail Chains by setting the fixed end at the intermediate point of moving stroke.

Step 4. Carried Weight and Free Span Running Range Check

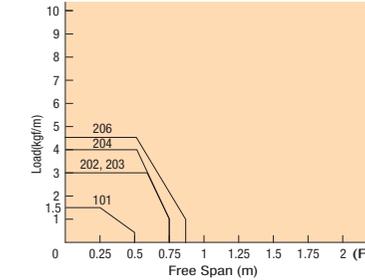
The relationship between the free span length and bearable load (weight of cables/hoses stored) depends on Cable Carrier types. Please check if housed cables/hoses weight falls within the free span travel allowable range (inside the line graph) in the graph below.

<Selection Examples>
Cable weight is 1.5kg/m. When free span length is 0.75m, it is applicable because 1.5kg falls within the weight capacity line in the graph.

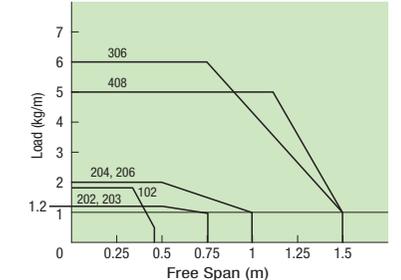
- Slit Type SE / SZ



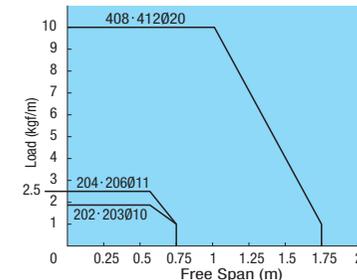
- Compact Type MHPKS



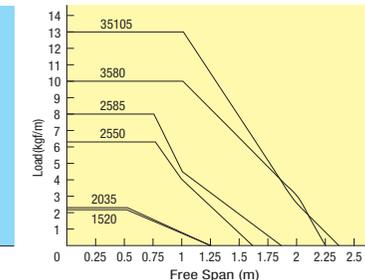
- Flap Open-Close Type MHPUS



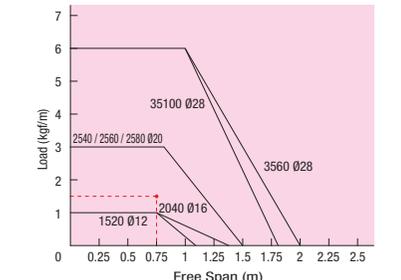
- Flap Open-Close Full Cover Type FHPS



- Low Friction, Low Noise Type MPSPS



- Low Particulate, Low Noise Type MPSCS



Step 5. Link Counting

Calculate the number of links by the following formula.

$$n = \frac{S + K + A}{P}$$

n: Link Qty. (Round up the numbers after the decimal point)

S: Travel Stroke

K: Arc+Margin (*)

A: Distance from an intermediate point (mm) when fixed end is not set at a travel stroke intermediate point.

(0 when at an intermediate point)

P: Pitch (*)

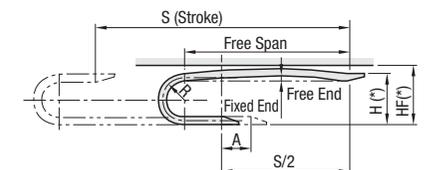
⚠Note

- In the case of new designs, there may be a possibility that carrier links run short.
- It is recommended that links are selected longer by one or two links, and are adjusted (removed) at the time of installing (removing) device.
- Links can be easily removed manually.

<Selection Examples>
As 1500mm is required for MPSCS2510-60 and strokes, and the fixed end is set at a stroke intermediate point,

$$\frac{1500}{2} + 251.5 (\text{Arc+Allowance}) + 0 \approx 34 \text{ (Required Link Qty.)}$$

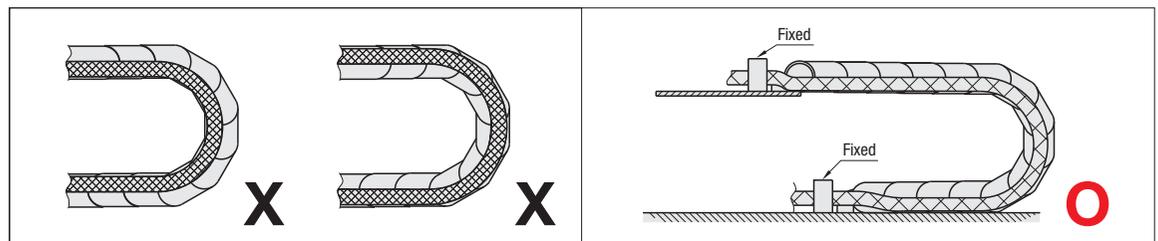
30 (Pitch)



* Drawing mark "HF" indicates a height with a potential bow that may occur when no cable hoses are inserted.

*For K (Arc + Allowance), P (Pitch) and H / HF (Physical Height), see product pages.

Cautions on Cable Installation and Mounting



Please arrange wiring to allow cable free movement.

Please fix cables at both moving and fixed ends so that no undue tension force applies.

For Cable Carrier Slit Type (P.639), cables can be tied at the Comb Teeth ends with cable ties.



Cable Carriers

- SlitType-



CAD Data

RoHS

Outer Radius Mount Main Body + Flange	Inner Radius Mount Main Body + Flange
SE045F	SZ045F
SE08F	SZ08F
SE14F	SZ14F
SE16F	SZ16F
SE200F	SZ200F
SE300F	SZ300F

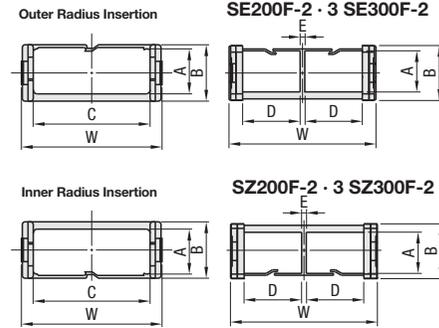
<Cautions>

Ⓜ A package includes a cable carrier assembled with specified no. of links and two corresponding flanges (1 Moving End + 1 Fixed End).

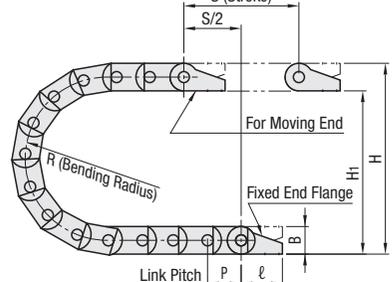
Ⓜ Should be mounted as the fixed end of the flange on the lower part and the moving end on the upper part
(Refer to the Positional Relationship in External Dimension Diagram)

Ⓜ Insert cables through slits (openings) on the external or internal circumference

Cross-Section



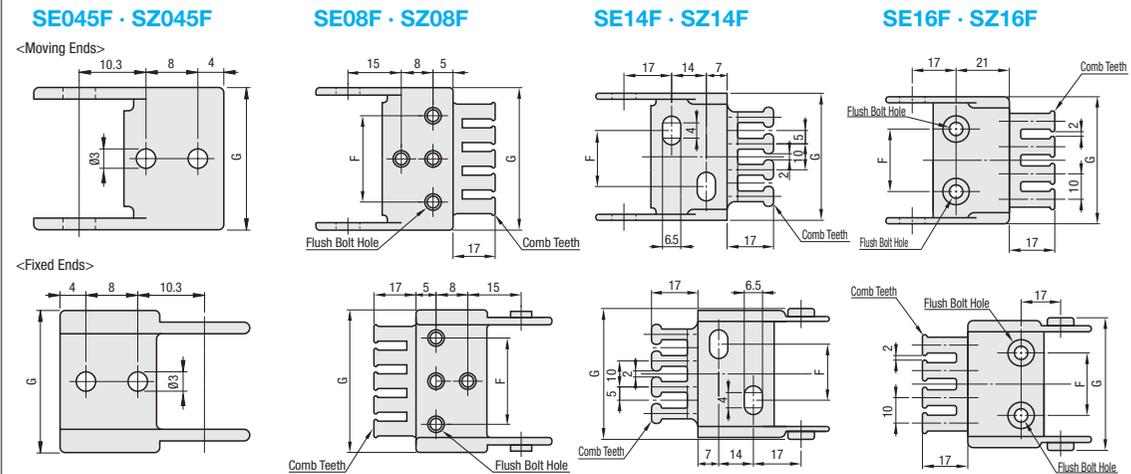
External Dimension Diagram



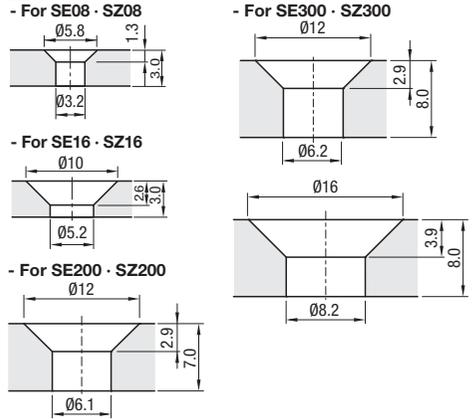
Ⓜ Material: Special Plastic Operating Temp. -30°C ~ 100°C Flammability Standard UL94-V2

- No need for link assembly

Flange Dimension Diagram



Flat Head Countersunk Screws



Tucking In Cables



Removing Cables

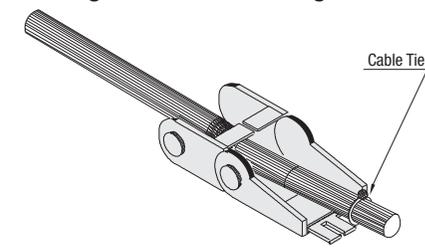


The cable can be removed by just pulling out.

Part Number Type	No.	Bending Radius Selectable	No. of Links	H (Mounting Height)	H ₁	HF (Required Physical Height)	K (Arc-Allowance)	P	B	ℓ
SE045F SZ045F	16	018	1~27	50	37.5	60	95	13	12.5	22.3
		028	1~29	70	57.5	80	120			
		038	1~31	90	77.5	100	145			
SE08F SZ08F	16 20 30 40 50	028	1~37	76	56.7	91	130	20	19.3	28
		048	1~40	116	96.7	131	190			
		028	1~30	82	57	92	150			
		038	1~30	102	77	112	185			
		048	1~30	122	97	132	215			
SE14F SZ14F	1 2 3 4	075	1~30	177	152	187	300	30.5	25	38
		100	1~33	227	202	237	375			
		060	1~30	159	120	174	270			
		075	1~30	189	150	204	305			
SE16F SZ16F	2 3 4	100	1~33	239	200	254	395	30.5	39	38
		055	1~28	145	110	185	276			
		075	1~30	185	150	225	346			
		100	1~30	235	200	275	414			
SE200F SZ200F	1 2 3	150	1~35	335	300	375	578	46	35	72
		200	1~38	435	400	475	742			
		075	1~29	215	148	255	400			
		100	1~30	265	198	305	500			
		125	1~33	315	248	355	650			
SE300F SZ300F	1 2	150	1~33	365	298	405	725	67	64	94
		200	1~36	465	398	505	875			
		250	1~38	565	498	605	1050			
		075	1~29	215	148	255	400			
		100	1~30	265	198	305	500			
		125	1~33	315	248	355	650			

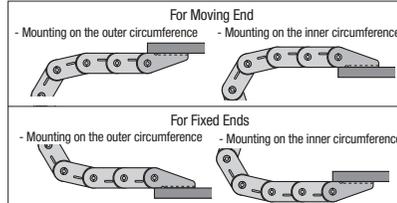
Part Number Type	No.	Bending Radius Selectable	A	B	C	D	E	W	F	G	Number of Comb Teeth	Per Link Weight (g)	€ Unit Price (One Link € Unit Price x Link Qty.) +Flange (2 pcs.) Price
SE045F SZ045F	16	018	9.4	12.5	16	-	-	23	-	22	-	1.4	
		028											
		038											
SE08F SZ08F	16 20 30 40 50	028	14.6	19.3	16	-	-	24.2	-	24.2	2	3.1	
		038			20	-	-	28.2	-	28.2	2	3.2	
		048			30	-	-	38.2	22	38.2	3	3.6	
					40	-	-	48.2	32	48.2	4	4	
					50	-	-	58.2	42	58.2	5	4.8	
SE14F SZ14F	1 2 3 4	028	19	25	15	-	-	27	-	26.3	2	9.3	
		038			25	-	-	37	10	36.3	3	9.6	
		048			38	-	-	50	23	49.3	4	12	
		100			50	-	-	62	35	61.3	5	13	
SE16F SZ16F	2 3 4	060	32	39	23	-	-	37.5	12	35.5	3	15.5	
		075			36	-	-	50.5	25	48.5	4	17.3	
		100			48	-	-	62.5	37	60.5	5	18.8	
		075			57	-	-	74.4	44	-	6	32	
SE200F SZ200F	1 2 3	055	24.3	35	-	37	3	94.4	64	-	8	36	
		075			-	50	3	120.4	90	-	10	38	
		100			-	-	-	-	-	-	-	-	-
SE300F SZ300F	1 2	075	48.5	64	75	-	-	95	53	95	7	107	
		100			-	48	4	120	78	120	10	119	
		125			-	-	-	-	-	-	-	-	-
		150			-	-	-	-	-	-	-	-	-
		200			-	-	-	-	-	-	-	-	-
		300			-	-	-	-	-	-	-	-	-

Flange and Cable Securing Methods



Cables are tucked in from the outer and inner circumference, and its end comb teeth are fixed in place with cable ties.

Ⓜ Mounting Direction Ⓜ Commonly used for both outer and inner circumferences. Except SE045F and SZ045F moving ends can not be mounted on the outer circumference.



Ⓜ In the case of new designs, there may be a possibility that carrier links run short. It is recommended that links are selected longer by one or two links, and are adjusted (removed) at the time of installing (removing) device.

Order Example	Part Number	Bending Radius	No. of Links
	SE14F-3	048	20
Price	Volume Discount (Round down to one Cent) P87		
	Quantity	1-29	30-39
	Rate	€ Unit Price	35%

Days to Ship **8 Days** P.88
Ⓜ Working days for this product do not include Saturday and other holidays.

Ⓜ For orders larger than indicated quantity, please request a quotation.



Cable Carriers

-Compact Type-

CAD Data

RoHS

Type	MHPKS	Main Body		Mounting Bracket	
		M	Material	M	Surface Treatment
Main Body + Mounting Bracket	MHPKS	Nylon 6+Glass Fiber 20% (Operation Temperature -10 ~ 80°C) Flammability Standard UL94-HB	1.0330/DC01	Trivalent STKM Bright Chromate Plating	

External Dimension Diagram: S (Stroke), S/2, R (Bending Radius), Free End, Fixed End, Link Pitch P, l, H, B.

Cross-Section: A, B, C, W.

ⓈThe above is a drawing of Cable Carrier assembled with 10 links and mounting brackets.

<Cautions>

- Ⓢ Cable Carrier (10 Links and 1 Link) and mounting brackets are not assembled together at the time of delivery. Links must be connected and mounting brackets must be assembled for use.
- Ⓢ Please install the mounting bracket fixed end on the lower side, and moving end on the upper side (Refer to Positional Relationship in External Dimension Diagram).
- Ⓢ Mounting bracket shape varies depending on size.

Ⓢ Only MHPKS101 is as shown below.

Part Number	Bending Radius Selectable	No. of Links	Mounting Direction *	Cable Carrier Dimensions										Mounting Dimensions				H (Mounting Height)	H ₁	HF (Required Physical Height)	K (Arc+ Allowance)	(Reference) Per 1m Long Weight (kg)		
				A	B	C	W	P	l	F	T	J	N	P ₁	P ₂	P ₁	P ₂							
MHPKS (Cable Carrier+ Mounting Brackets)	101	19	5~25	A	9	12	9	16	20	18	-	8	9	3.2	-	-	-	-	50	38	62	109.7	0.105	
	202	30	6~34		16	20	18	26	25	30	-	20	10	10	4.5	12.4	24.4	10.4	22.4	80	60	95	144.2	0.222
		45	8~36		16	20	18	26	25	30	-	20	10	10	4.5	12.4	24.4	10.4	22.4	110	90	125	191.3	
	203	30	6~34		16	20	24	32	25	30	-	18.4	30.4	16.4	28.4	80	60	95	144.2	80	60	95	144.2	0.24
		45	8~36		16	20	24	32	25	30	-	18.4	30.4	16.4	28.4	110	90	125	191.3	110	90	125	191.3	
	204	38	6~31		16	22	29	43	32	43	-	23.6	39.6	20	36	98	76	118	179.3	98	76	118	179.3	0.45
50		7~32	16	22	29	43	32	43	-	23.6	39.6	20	36	122	100	142	217	122	100	142	217			
206	38	6~31	16	22	44	59	32	43	-	39.6	55.6	36	52	98	76	118	179.3	98	76	118	179.3	0.51		
	50	7~32	16	22	44	59	32	43	-	39.6	55.6	36	52	122	100	142	217	122	100	142	217			

Part Number	Bending Radius Selectable	No. of Links	Mounting Direction *	€ Unit Price	
				Main Body + Mounting Bracket	(One Link € Unit Price x Link Qty)+Mounting Bracket Price
MHPKS (Cable Carrier+Mounting Brackets)	101	19	5~25	A	
	202	30	6~34		
		45	8~36		
	203	30	6~34		
		45	8~36		
	204	38	6~31		
50		7~32			
206	38	6~31			
	50	7~32			

Mounting Direction

For Moving End: - Mounting on the outer circumference, - Mounting on the inner circumference.

For Fixed Ends: - Mounting on the outer circumference, - Mounting on the inner circumference.

Ⓢ In the case of new designs, there may be a possibility that carrier links run short. It is recommended that links are selected longer by one or two links, and are adjusted (removed) at the time of installing (removing) device.

*** Mounting Bracket Structural Components**

No.	Mounting Direction	Mounting Bracket Structural Components	
		For Moving End	For Fixed Ends
101	S (Common to the Outer and Inner Circumference)	Common to the Outer and Inner Circumference	Common to the Outer and Inner Circumference
202-206	A	Mounting on the Outer Circumference	Common to the Outer and Inner Circumference
	B	Mounting on the Inner Circumference	Common to the Outer and Inner Circumference

Link Connection and Disconnection

- Link Connection: - To connect links, mate the links and push the ends together.

- Link Disconnection: - To disconnect links, insert a flat head screwdriver tip between the links and pry.

<Cautions on Model Selection>

- Ⓢ A Cable Carrier and suitable Mounting Brackets (Moving Ends x 1 set, Fixed Ends x 1 set) are in a set.
- Ⓢ Please note that part number varies depending on outer/inner circumference mounting.

<Calculation Example>
For MHPKS101-19-25-S (Cable Carrier + Mounting Brackets, 25 Links), 0,60 EUR x 25+6,70 EUR=21,70 EUR

Order Example Part Number - Bending Radius - No. of Links - Mounting Direction
MHPKS203 - 30 - 18 - A

Days to Ship 6 Days P.87

Volume Discount (Round down to one Cent) P.87

Quantity	1~29	30~39	40~49
Rate	€ Unit Price	5%	10%

Ⓢ For orders larger than indicated quantity, please request for quotation.



Cable Carriers

-Flap Open-Close-

CAD Data

RoHS

Type	MHPUS	Main Body		Mounting Bracket	
		M	Material	M	Surface Treatment
Main Body + Mounting Bracket	MHPUS	Nylon 6+Glass Fiber 20% (Operation Temperature -10 ~ 80°C) Flammability Standard UL94-HB	1.0330/DC01	Trivalent STKM Bright Chromate Plating	

External Dimension: S (Stroke), S/2, R (Bending Radius), Free End, Fixed End, Link Pitch P, l, H, B, W.

Section View: A, B, C, W.

Ⓢ No. 1.4301/X5CrNi18-10 surface treatment is applicable to Mounting Bracket for MHPUS102 only.

<Cautions>

- Ⓢ Cable Carrier (10 Links and 1 Link) and mounting brackets are not assembled together at the time of delivery. Links must be connected and mounting brackets must be assembled for use.
- Ⓢ Please install the mounting bracket fixed end on the lower side, and moving end on the upper side (Refer to Positional Relationship in External Dimension Diagram).
- Ⓢ Mounting bracket shape varies depending on size.

Ⓢ Only MHPUS102 is as shown below.

Part Number	Bending Radius Selectable	No. of Links	Mounting Direction *	Cable Carrier Dimensions										Mounting Dimensions				H (Mounting Height)	H ₁	HF (Required Physical Height)	K (Arc+ Allowance)	(Reference) Per 1m Long Weight (kg)			
				A	B	C	W	P	l	F	T	J	N	P ₁	P ₂	P ₁	P ₂								
MHPUS (Cable Carrier+ Mounting Brackets)	102	19	5~23	A	S (Common to the Outer and Inner Circumference)	9	12	20	27	20	30	22	12	25 (23)	4.5	-	-	-	-	50	38	65	99.7	0.12	
		25	6~34			14	20	14	26	25	30	-	20	10	10	4.5	9.8	21.8	8	20	70	50	85	128.5	
	202	30	6~34			14	20	14	26	25	30	-	20	10	10	4.5	80	60	95	144.2	80	60	95	144.2	0.25
		45	8~36			14	20	14	26	25	30	-	20	10	10	4.5	110	90	125	191.3	110	90	125	191.3	
	203	30	6~34			14	20	20	32	25	30	-	15.8	27.8	14	26	80	60	95	144.2	80	60	95	144.2	0.26
		45	8~36			14	20	20	32	25	30	-	15.8	27.8	14	26	110	90	125	191.3	110	90	125	191.3	
	204	38	6~36			14	22	20	40	32	43	-	17.4	33.4	14	30	98	76	118	179.3	98	76	118	179.3	0.5
		50	7~37			14	22	20	40	32	43	-	17.4	33.4	14	30	122	100	142	217	122	100	142	217	
	206	38	6~36			14	22	40	60	32	43	-	37.4	53.4	34	50	98	76	118	179.3	98	76	118	179.3	0.56
		50	7~37			14	22	40	60	32	43	-	37.4	53.4	34	50	122	100	142	217	122	100	142	217	
	306	50	6~38			24	34	44	60	45	60	40	24	20	7	35.6	134	100	160	257	134	100	160	257	0.64
		100	10~42			24	34	44	60	45	60	40	24	20	7	35.6	234	200	260	414	234	200	260	414	
408	75	8~40	24.5	40	58	78	45	60	40	24	22	7	44	140	100	170	257	140	100	170	257	1.1			
	100	10~42	24.5	40	58	78	45	60	40	24	22	7	44	190	150	220	335.5	190	150	220	335.5				
412	75	9~41	24.5	40	97	117	45	60	40	24	22	7	83	140	100	170	257	140	100	170	257	1.3			
	100	10~42	24.5	40	97	117	45	60	40	24	22	7	83	190	150	220	335.5	190	150	220	335.5				

Part Number	Bending Radius Selectable	No. of Links	Mounting Direction *	€ Unit Price	
				Main Body + Mounting Bracket	(One Link € Unit Price x Link Qty)+Mounting Bracket Price
MHPUS (Cable Carrier+Mounting Brackets)	102	19	5~23	A	
		25	6~34		
	202	30	6~34		
		45	8~36		
	203	30	6~34		
		45	8~36		
	204	38	6~36		
		50	7~37		
	206	38	6~36		
		50	7~37		
	306	50	6~38		
		100	10~42		
408	75	8~40			
	100	10~42			
412	75	9~41			
	100	10~42			

Mounting Direction

For Moving End: - Mounting on the outer circumference, - Mounting on the inner circumference.

For Fixed Ends: - Mounting on the outer circumference, - Mounting on the inner circumference.

Ⓢ In the case of new designs, there may be a possibility that carrier links run short. It is recommended that links are selected longer by one or two links, and are adjusted (removed) at the time of installing (removing) device.

*** Mounting Bracket Structural Components**

No.	Mounting Direction	Mounting Bracket Structural Components	
		For Moving End	For Fixed Ends
102	S (Common to the Outer and Inner Circumference)	Common to the Outer and Inner Circumference	Common to the Outer and Inner Circumference
202-206	A	Mounting on the Outer Circumference	Common to the Outer and Inner Circumference
	B	Mounting on the Inner Circumference	Common to the Outer and Inner Circumference
306-412	A	Common to the Outer and Inner Circumference	Mounting on the Outer Circumference
	B	Common to the Outer and Inner Circumference	Mounting on the Inner Circumference

<Cautions on Model Selection>

- Ⓢ A Cable Carrier and suitable Mounting Brackets (Moving Ends x 1 set, Fixed Ends x 1 set) are in a set.
- Ⓢ Please note that part number varies depending on outer/inner circumference mounting.

<Calculation Example>
For MHPUS206-38-21-S (Cable Carrier + Mounting Brackets, 21 Links), 1,60 EURx21+13,40 EUR=47,00 EUR

Order Example Part Number - Bending Radius - No. of Links - Mounting Direction
MHPUS408 - 50 - 25 - A

Days to Ship 6 Days P.87

Volume Discount (Round down to one Cent) P.87

Quantity	1~29	30~39	40~49
Rate	€ Unit Price	5%	10%

Ⓢ For orders larger than indicated quantity, please request a quotation.

- Flap Opening and Closing: - To open the flap, insert the tip of a flat head screwdriver into the side window and pry. To close the flap, push down.

- Link Connection (Common): - Open connected link flaps, mate the blocks with each other and push the both ends to joint fit together.

- Link Disconnection (Common): - Open disconnected link flaps, insert and push down a flat head screwdriver in a gap between the links to disconnect.

Cable Carriers

-Flap Open/Close Full Cover Type-

CAD Data

Low Particulate, Low Noise Type

CAD Data

RoHS

Type	Main Body	Mounting Bracket
	Material	Material Surface Treatment
Main Body + Mounting Bracket	FHPS Nylon 6+Glass Fiber 20% (Operation Temperature -10 ~ 80°C) Flammability Standard UL94-HB	1.0330/DC01 Trivalent STKM Bright Chromate Plating

External Dimension Diagram

Cross-Section

<Moving Ends>

<Fixed Ends>

<Cautions>

- ⊕ Cable Carrier (10 Links and 1 Link) and mounting brackets are not assembled together at the time of delivery. Links must be connected and mounting brackets must be assembled for use.
- ⊕ Please install the mounting bracket fixed end on the lower side, and moving end on the upper side (Refer to Positional Relationship in External Dimension Diagram).
- ⊕ Mounting bracket shape varies depending on size.

⊕ The above is a drawing of Cable Carrier assembled with 10 links and mounting brackets.

Part Number	Bending Radius Selectable	No. of Links	Mounting Direction	Cable Carrier Dimensions											H (Mounting Height)	H ₁	HF (Required Physical Height)	K (Arc+ Allowance)	(Reference) Per 1m Long Weight (kg)				
				A	B	C	W	P	ℓ	F	T	J	N	Moving End P ₁ P ₂						Fixed End P ₁ P ₂			
FHPS (Cable Carrier+Mounting Brackets)	202	30	8-43	A	13	20	14	26	20	30	20	10	10	4.5	9.8	21.8	8	20	80	60	95	144.2	0.28
	203	30	8-43		13	20	20	32	20	30	15.8	27.8	14	26	80	60	95	144.2	0.31				
	204	38	7-34		13	22	22	40	26	43	18.6	34.6	15	31	98	76	118	179.3	0.5				
	206	38	7-34		13	22	42	60	26	43	32	18	14	5.8	38.6	54.6	35	51	98	76	118	179.3	0.6
	206	50	9-36		13	22	42	60	26	43	122	100	142	217	180	140	210	319.8	1.36				
	408	70	8-45	B	25	40	58	78	45	60	40	24	22	7	44	72	40	68	180	200	270	414	1.36
	408	100	10-47		25	40	58	78	45	60	180	140	210	319.8	240	200	270	414	1.36				
	412	70	8-45		25	40	97	117	45	60	40	24	22	7	83	111	79	107	180	140	210	319.8	1.7
	412	100	11-49		25	40	97	117	45	60	240	200	270	414	240	200	270	414	1.7				

Part Number	Bending Radius Selectable	No. of Links	Mounting Direction	€ Unit Price	
				Main Body + Mounting Bracket (One Link € Unit Price x Link Qty.)	+Mounting Bracket Price
FHPS (Cable Carrier+Mounting Brackets)	202	30	8-43		
	203	30	8-43		
	204	38	7-34		
	206	38	7-34		
	206	50	9-36		
	408	70	8-45		
	408	100	10-47		
	412	70	8-45		
	412	100	11-49		

<Cautions on Model Selection>

- ⊕ A Cable Carrier and suitable Mounting Brackets (Moving Ends x 1 set, Fixed Ends x 1 set) are in a set.
- ⊕ Please note that parts number varies depending on mounting on outer/inner circumference mounting.

<Calculation Example>

For FHPS412-70-38-A (Main Body+Mounting Brackets, 38 Links), 5,90 EUR x 38+13,40 EUR=0,23 EUR 760

Order Example

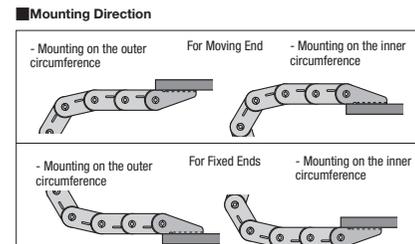
Part Number: FHPS204 - Bending Radius: 38 - No. of Links: 12 - Mounting Direction: A

Days to Ship: 6 Days P.87

Price

Quantity	1-29	30-39	40-49
Rate	€ Unit Price	5%	10%

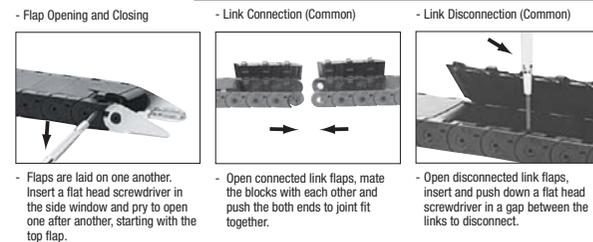
⊕ For orders larger than indicated quantity, please request a quotation.



⊕ In the case of new designs, there may be a possibility that carrier links run short. It is recommended that links are selected longer by one or two links, and are adjusted (removed) at the time of installing (removing) device.

Mounting Bracket Structural Components

No.	Mounting Direction	For Moving End	For Fixed Ends
202-206	A	Mounting on the Outer Circumference	Common to the Outer and Inner Circumference
202-206	B	Mounting on the Inner Circumference	Common to the Outer and Inner Circumference
408 / 412	A	Common to the Outer and Inner Circumference	Mounting on the Outer Circumference
408 / 412	B	Common to the Outer and Inner Circumference	Mounting on the Inner Circumference



RoHS

Type	Main Body	Mounting Bracket
	Material	Material Surface Treatment
Main Body + Mounting Bracket	MPSCS Nylon 6+Glass Fiber 30% TPEE (Operation Temperature -3 ~ 80°C) Flammability Standard UL94-HB	1.0330/DC01 Trivalent STKM Bright Chromate Plating

External Dimension Diagram

Cross-Section

<Common to Moving and Fixed Ends>

- MPSCS3560

- MPSCS35100

<Cautions>

- ⊕ Cable Carrier (10 Links and 1 Link) and mounting brackets are not assembled together at the time of delivery. Links must be connected and mounting brackets must be assembled for use.
- ⊕ Please install the mounting bracket fixed end on the lower side, and moving end on the upper side (Refer to Positional Relationship in External Dimension Diagram).
- ⊕ Mounting bracket shape varies depending on size.

Part Number	Bending Radius Selectable	No. of Links	Mounting Direction	Cable Carrier Dimensions											H (Mounting Height)	H ₁	HF (Required Physical Height)	K (Arc+ Allowance)	(Reference) Per 1m Long Weight (kg)																										
				A	B	C	W	P	ℓ	F	T	J	X	D						Applicable screws (D)	P ₁	P ₂	P ₃	P ₄	P ₅																				
MPSCS (Cable Carrier+Mounting Brackets)	1520	28	8-67	S (Common to Mounting on Outer and Inner Circumference)	15	25	20	28	18	29	22	10	32.8	30.4	4.2	M4	12	15	8	8	3	95	70	115	128.6	0.34																			
		31	8-68																								105	80	125	144.3															
		34	8-77																								115	82	145	150.4															
	2040	38	9-78																								20	33	40	50	20	35	26	14	54.8	52.4	6.5	M6	21	27	130	97	160	174	0.7
		58	12-81																								170	137	200	236.8															
		60	9-57																								185	145	215	251.5															
	2540	85	11-60																								25	40	40	50	30	52.5	40	24	58.4	53.2	7	M6	21	40	235	195	265	330	0.77
		60	9-57																								185	145	215	251.5															
		60	9-57																								235	195	265	330															
		2580	60																								9-57	25	40	60	70	30	52.5	40	24	76.4	73.2	7	M6	35	47	185	145	215	251.5
3560		75	8-51	35	55	60	73	45	68.5	-	-	96.4	93.2	-	M6	60	75.2	185	145	215	251.5	1.2																							
100		10-53	240	185	270	323.9																																							
75		8-47	240	185	270	323.9																																							
100		10-49	295	240	325	410.2																																							

Part Number	Bending Radius Selectable	No. of Links	Mounting Direction	€ Unit Price	
				Main Body + Mounting Bracket (One Link € Unit Price x Link Qty.)	+Mounting Bracket Price
MPSCS (Cable Carrier+Mounting Brackets)	1520	28	8-67		
		31	8-68		
		34	8-77		
	2040	38	9-78		
		58	12-81		
		60	9-57		
	2540	85	11-60		
		60	9-57		
		60	9-57		
		2580	60	9-57	
3560		75	8-51		
100		10-53			
75		8-47			
100		10-49			

<Cautions on Model Selection>

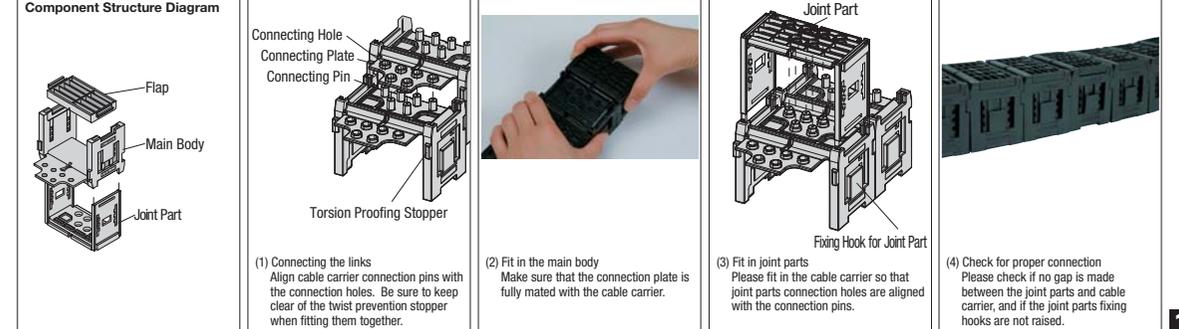
- ⊕ A Cable Carrier and suitable Mounting Brackets (Moving Ends x 1 set, Fixed Ends x 1 set) are in a set.
- <Calculation Example>

Order Example

Part Number: MPSCS2540 - Bending Radius: 85 - No. of Links: 20 - Mounting Direction: S

Days to Ship: 6 Days P.87

Low Particulate / Low Noise Cable Carrier (MPSCS)-Link Connection-





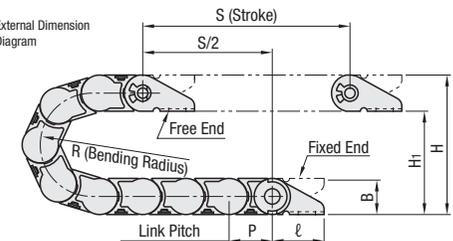
Low Friction · Low Noise Type

CAD Data

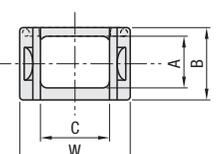


Type	Main Body		Mounting Bracket	
	Material		Material	Surface Treatment
Main Body + Mounting Bracket	MPSPS	Nylon 6+Glass Fiber 30% (Operation Temperature -10 ~ 80°C) Flammability Standard UL94-HB	1.0330/DC01	Trivalent JIS STKM Bright Chromate Plating

External Dimension Diagram

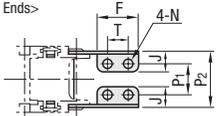


Cross-Section

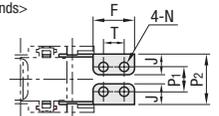


① The above is a drawing of Cable Carrier assembled with 10 links and mounting brackets.

<Moving Ends>



<Fixed Ends>



<Cautions>

- ① Cable Carrier (10 Links and 1 Link) and mounting brackets are not assembled together at the time of delivery. Links must be connected and mounting brackets must be assembled for use.
- ② Please install the mounting bracket fixed end on the lower side, and moving end on the upper side (Refer to Positional Relationship in External Dimension Diagram).
- ③ Mounting bracket shape varies depending on size.

Part Number	Bending Radius Selectable	No. of Links	Mounting Direction	Cable Carrier Dimensions										Mounting Dimensions		H (Mounting Height)	H1	HF (Required Physical Height)	K (Arc+ Allowance)	(Reference) Per 1m Long Weight (kg)			
				A	B	C	W	P	ℓ	F	T	J	N	P1	P2								
MPSPS (Cable Carrier+ Mounting Brackets)	1520	30	7-55	S (Common to Mounting on Outer and Inner Circumference)	15	21	20	32	25	30	20	10	10	4.5	15	27.2 (12)	81	60	100	154.2	0.36		
		50	9-57		20	26	35	47	32	35	26	14	15	7	27 (24)	121	100	140	217	0.5			
	2035	45	7-45		25	35	50	65	36	55						40 (35.4)	60.6 (56)	185	150	210	333.5	0.86	
		50	8-51		25	35	85	100	43.5	55	40	24	20	7		75 (70.4)	95.6 (91)	185	150	210	335.5	1.05	
	2550	75	10-53		25	35	85	100	43.5	55	40	24	20	7		70 (65)	93.6 (88)	250	200	280	440	1.76	
		100	12-55		35	50	80	101	62.5	65	40	24	20	7				350	300	380	597		
	2585	60	8-49																				
		75	9-50																				
	3580	100	11-52																				
		150	10-45																				

① (*) indicates Fixed End dimensions.

Part Number	Bending Radius Selectable	No. of Links	Mounting Direction	€ Unit Price		
				Main Body + Mounting Bracket (One Link € Unit Price x Link Qty.)	+ Mounting Bracket Price	
MPSPS (Cable Carrier+ Mounting Brackets)	1520	30	7-55	S (Common to Mounting on Outer and Inner Circumference)		
		50	9-57			
	2035	45	7-45			
		50	8-51			
	2550	75	10-53			
		100	12-55			
	2585	60	8-49			
		75	9-50			
	3580	100	11-52			
		150	10-45			

<Cautions on Model Selection>

① A Cable Carrier and suitable Mounting Brackets (Moving Ends x 1 set, Fixed Ends x 1 set) are in a set.

<Calculation Example>

For MPSPS2585-75-22-S (Cable Carrier+Mounting Brackets, 22 Links), 4,00 EUR x 22 + 10,90 EUR=98,90 EUR

Order Example: **Part Number** - **Bending Radius** - **No. of Links** - **Mounting Direction**
 MPSPS3580 - 100 - 18 - S

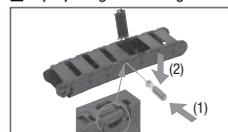
Price Volume Discount (Round down to one Cent) P. 87

Quantity	1-29	30-39	40-49
Rate	€ Unit Price	5%	10%

① For orders larger than indicated quantity, please request a quotation.

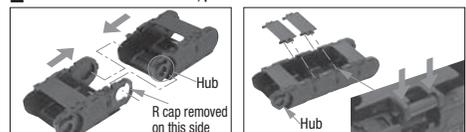
Days to Ship **6 Days** P. 87

Flap Opening and Closing



To open the flap, insert a flat head screw driver into the window and pry. To close the flap, push down.

For details of link connection, please refer to attached Instruction Manual.



Remove the connected link flap and R cap, and insert the connected main body cap into the main body equipped with the removed cap, then push the entire body in. After checking if the pilots and holes are connected, align removed R cap with the cable carrier groove shape, then push it in to install the flap.

Cable Carrier Supporter Channels

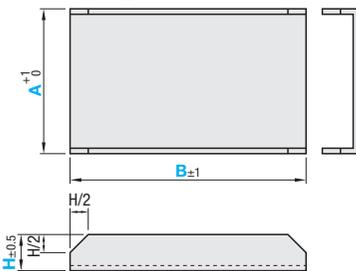
CAD Data



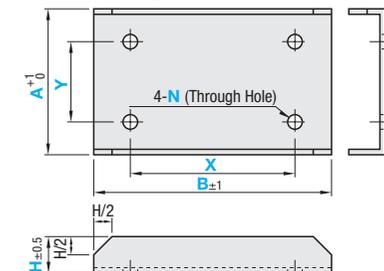
Type	Mounting Hole	Material	Plate Thickness (mm)	Surface Treatment
CBC	Not Provided	JIS SECC	1.6	Electrolytic Zinc Plating
CBCH		1.4016/X6(8)Cr17	1.5	-
CBCH	Provided	JIS SECC	1.6	Electrolytic Zinc Plating
CBCSH		1.4016/X6(8)Cr17	1.5	-

<Machining Conditions>
 4+N≤Y≤A-(14+N)
 4+N≤X≤B-(10+N)

No Mounting Hole



Mounting Hole



Part Number	A	B	H	X	Y	N
Type	Selectable	5mm Increment		Specify in 1mm Increment		Selectable (Hole Dia.)
CBC CBCH CBCH CBCSH	40	200~1000	10	10~984		10~20
	50					10~30
	60		10~40			
	70		10~50			
	80		10~60			
	90		10~70			
	120		10~100			
			20			6 7 9 11

Order Example: **Part Number** - **A** - **B** - **H** - **X** - **Y** - **N**
 CBCH - A70 - B800 - H10 - X700 - Y30 - N11

Days to Ship **10 Days**

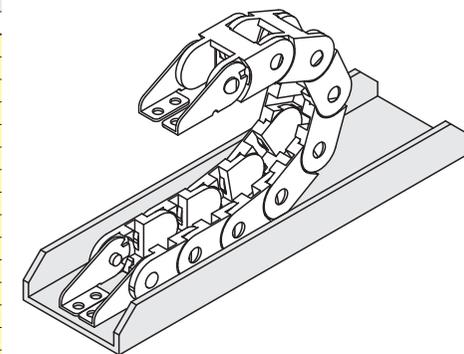
Price Volume Discount (Round down to one Cent) P. 87

Quantity	1-9	10-14	15-19
Rate	€ Unit Price	5%	10%

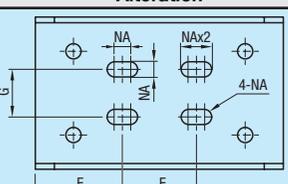
① For orders larger than indicated quantity, please request a quotation.

Example **ex**

A	B	€ Unit Price			
		CBC	CBCH	CBCH	CBCSH
40	200~395				
	400~695				
	700~1000				
50	200~395				
	400~695				
	700~1000				
60	200~395				
	400~695				
	700~1000				
70	200~395				
	400~695				
	700~1000				
80	200~395				
	400~695				
	700~1000				
90	200~395				
	400~695				
	700~1000				
120	200~395				
	400~695				
	700~1000				



Alterations Example: **Part Number** - **A** - **B** - **H** - **X** - **Y** - **N** - (TC)
 CBCH - A70 - B800 - H10 - X700 - Y30 - N11 - TC - E70 - F30 - G30 - NA5

Alteration	Code	Spec.	Price Adder
	TC	Applicable to Mounting Hole Type. Adds cable carrier mounting holes. E/F/G specified in 1mm increment. Select NA from 5•6•7. Order Code TC-E30-F30-G40-NA5 <Machining Conditions> 4+NA≤G≤A-(14+NA) 4+NAx2≤F≤B-(10+NAx2) 4+NA≤E≤B-(F+4+NA)	13,00