

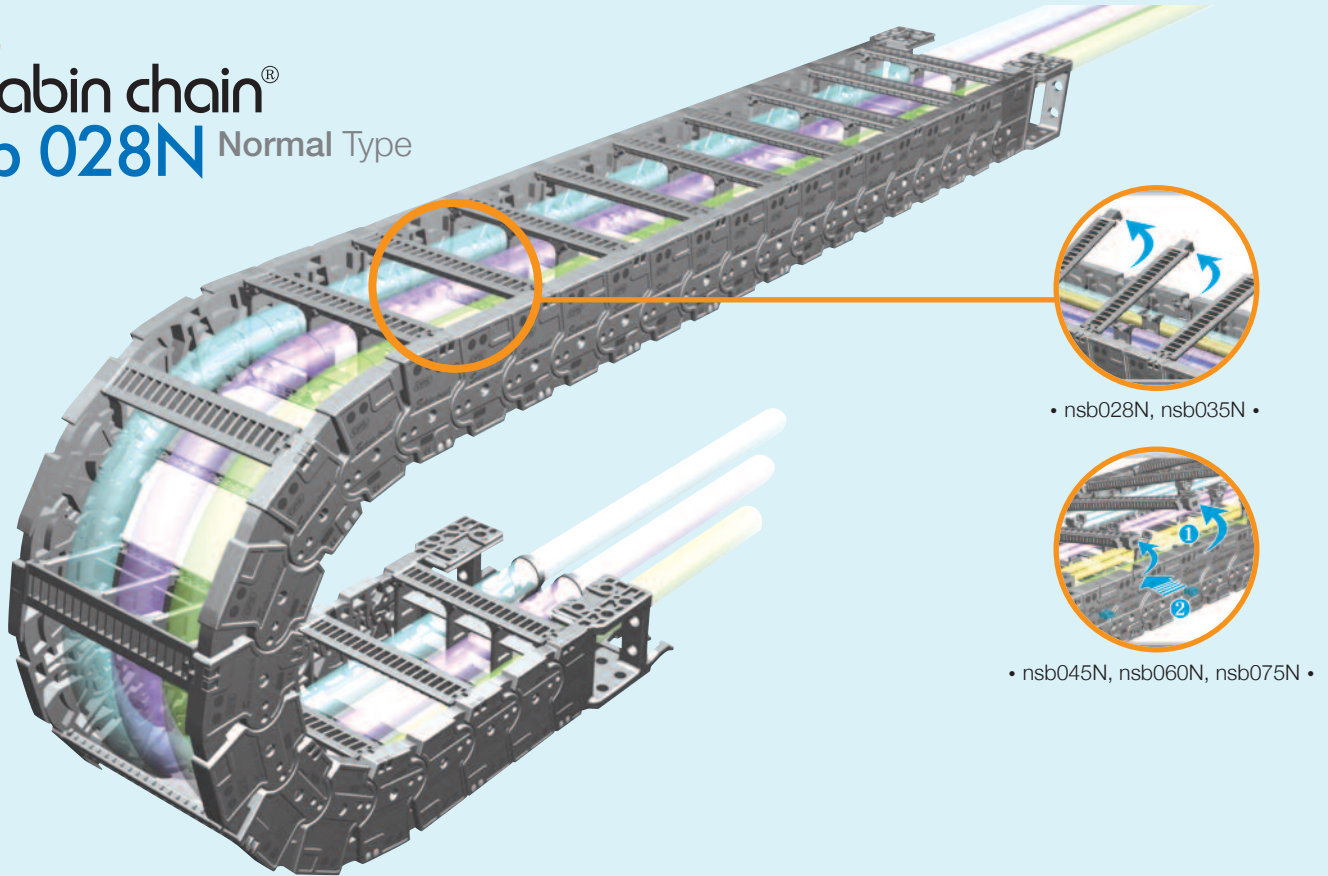
Sabin chain[®] N TYPE : Normal

- nsb028N - 300p
- nsb035N - 305p
- nsb045N - 310p
- nsb060N - 315p
- nsb075N - 320p



Min ●●●●●●●● Max

Sabin chain[®] nsb 028N Normal Type



• nsb028N, nsb035N •

• nsb045N, nsb060N, nsb075N •

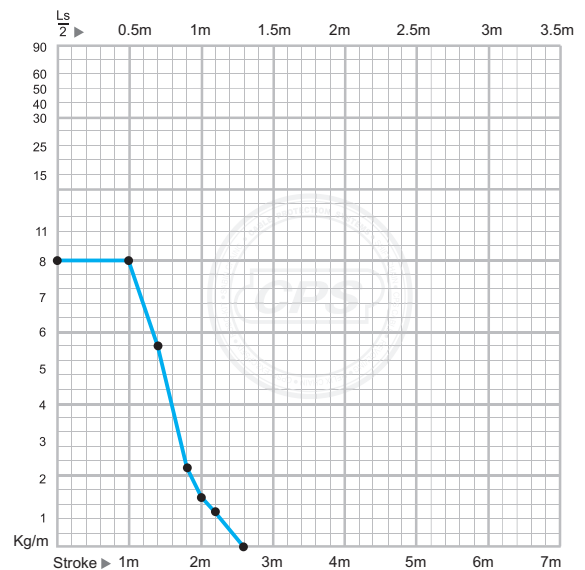
• Frames are assembled at every other link. (2링크마다 프레임 결합방식)

MATERIAL

- **Chain material:**
CPS-amide UL94-HB
- **Low Noise**
- **Low Mote**
- **Speed :** 15m / sec
- **Temperature :** -30°C ~ +130°C
- **Other installation Length:**
Vertical curve above, Unsupported= max 2.0m
Vertical curve below, Unsupported= max 40m
Side Mounted, Unsupported= max 1.0m
- **Applications**
Gantry robot, Machining center, Textile machine, Welding machine, Feeder unit, Assembly Loader, Wood work machine, Fabric machine.
저분진, 저소음을 요구하는 사업장 및 겐츨리로더, 로봇캐리지, 공작기계, 절단/용접기계, 인쇄기계등에 적용.
- **Calculation of the chain length**

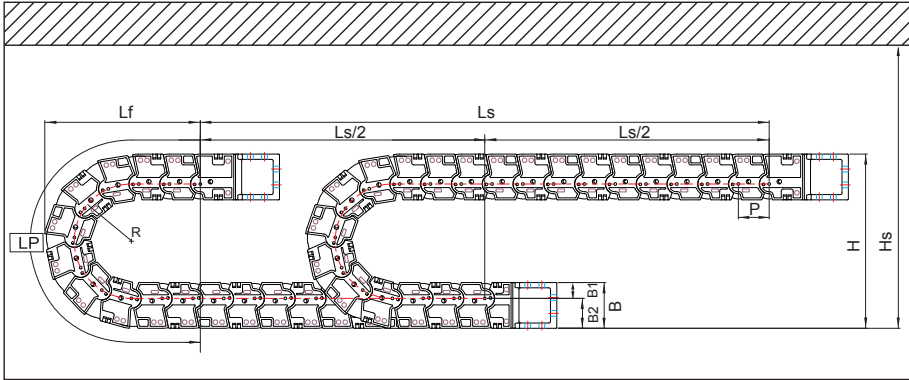
$$\left[L = \frac{Ls}{2} + Lp \right]$$

Load diagrams self-supporting length



Normal Type nsb 028N

LAYOUT OF THE CHAIN



(Dimensions in mm)

Bending radius R	46	66	86	116	146
Lp	313	376	439	533	627
L f	153	173	193	223	253
H	138	178	218	278	338

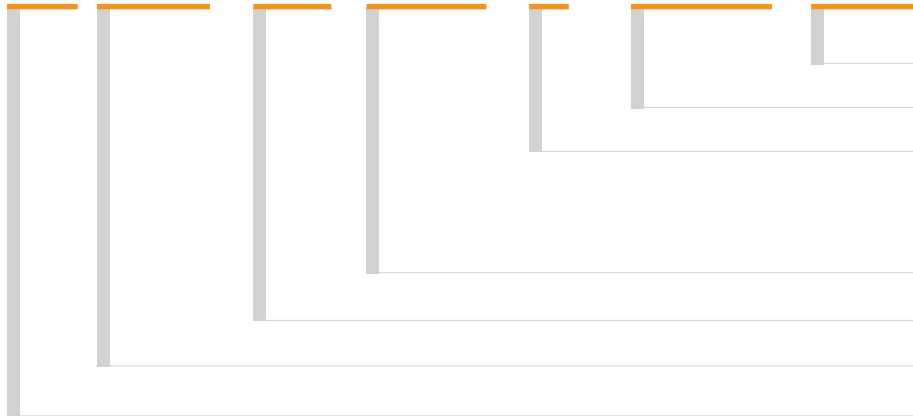
- Ls:** Stroke
- Lp:** Loop Length
- Lf:** Loop Projection
- Hs:** Safe Space

nsb 028N Type

- Pitch P:** 28mm
- Height B:** 38mm
- Height H:** 2R+46mm
- Hs ≥ H+30mm**
- B1:** 15mm **B2:** 23mm

ORDERING (주문방법)

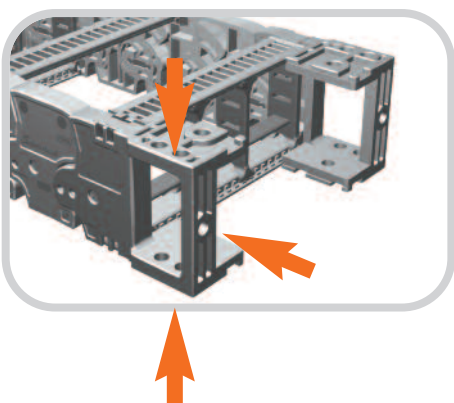
nsb 028N. 050. R66 / F -1000L : 10ST



- 주문수량 Q'ty(set)
- 체인길이 Length(mm)
- 브라켓 F : Free End Bracket
G : Guide Channel Type
V : Vertical Guide Type
- 곡률반경 Bending Radius
- 내폭 Inside Width
- 표준형타입 Normal Type

New Sabin Chain

BRACKET TYPE (브라켓타입)



FEB (Free End Bracket)

Fixes the cable chain to the machinery or moving application. CPS has improved mounting efficiency by unifying the existing Easy End Bracket and Normal End Bracket.

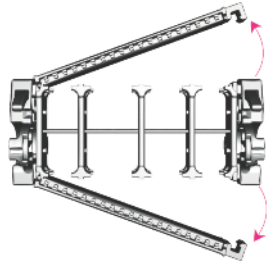
체인을 고정하는 끝부분으로 기존 Easy End Bracket 과 Normal End Bracket 을 하나로 통합한 방식으로 취부의 효율성을 높임.

▶ Above products are patent registered item which can be protected by industrial property right. (상기제품은 특허등록 제품으로 산업재산권의 보호를 받는 제품입니다.)

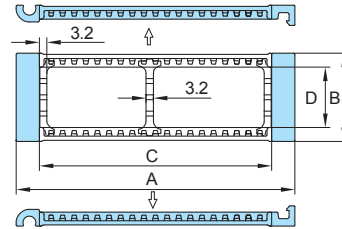


Normal Type **nsb 028N**

CHAIN CROSS SECTION

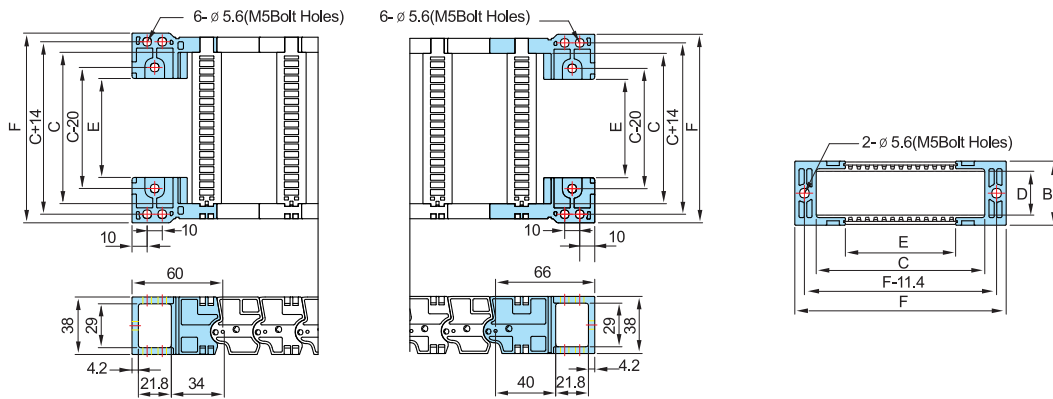


• Hinge Type



Chain Type	A	B	C	D	Bending Radius(R)	Weight in kg/m
nsb 028N.035	55		35			0.79
nsb 028N.050	70		50			0.82
nsb 028N.055	75		55			0.85
nsb 028N.075	95		75			0.90
nsb 028N.100	120	38	100	26	46, 66, 86, 116, 146	0.98
nsb 028N.125	145		125			1.08
nsb 028N.150	170		150			1.18
nsb 028N.175	195		175			1.45
nsb 028N.200	220		200			1.59

FREE END BRACKET



▲ Fixing point

▲ Moving point

▲ Front point

Chain Type	F	B	C	D	E	Hole Type
nsb 028N.035	60.4		35		0.4	M5 Bolt Holes
nsb 028N.050	75.4		50		15.4	
nsb 028N.055	80.4		55		20.4	
nsb 028N.075	100.4		75		40.4	
nsb 028N.100	125.4	38	100	26	65.4	
nsb 028N.125	150.4		125		90.4	
nsb 028N.150	175.4		150		115.4	
nsb 028N.175	200.4		175		140.4	
nsb 028N.200	225.4		200		165.4	

2014 NEW PRODUCT
Unity Systems®

Normal Type **nsb 028N**

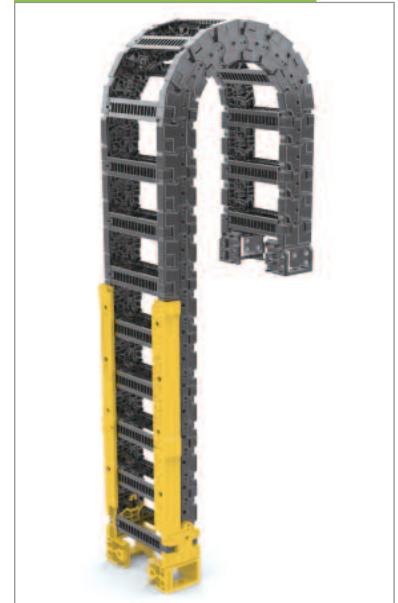
This type of bracket is to protect deflection of chain which will support the weight of certain section start from bracket, also will protect the damage of chain.

케이블 보호 장치에 전해지는 하중을 지지하여 케이블 체인의 처짐이 없이 일정구간을 끈게 유지 하므로, 케이블 체인의 파손을 방지하는 Guide Channel 일체형 브라켓입니다.

▼ Horizon Type 수평형

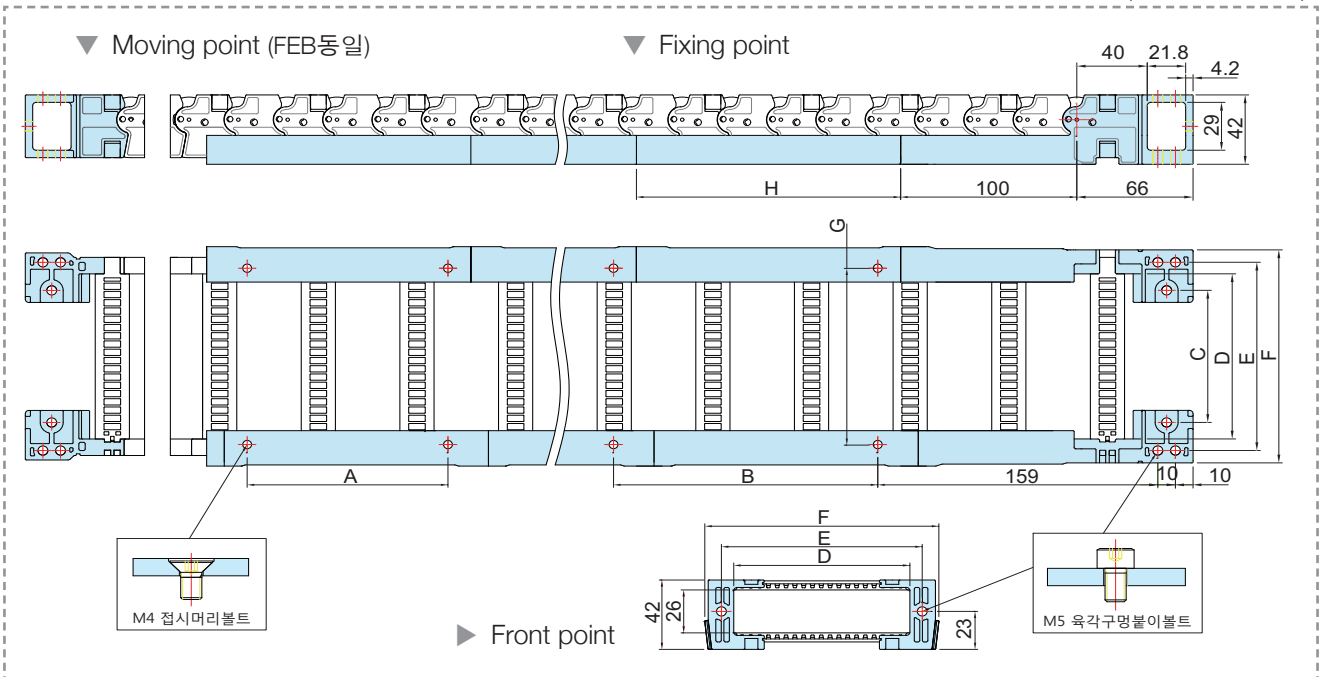


▼ Vertical Type 수직형



GUIDE CHANNEL TYPE END BRACKET

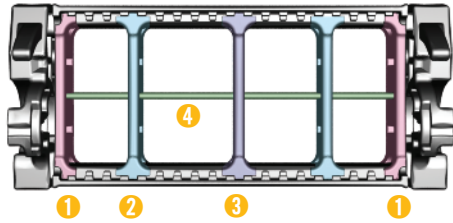
(Dimensions in mm)



Chain Type	C FEB fix hole(inner)	D Frame length dimension	E FEB width	F FEB width	G GC hole width	GC TYPE	H GC length	B GC fixing hole	A GC hole dimension
nsb 028N.035	15	35	49	68	41.8	GC150	150	151	114
nsb 028N.050	30	50	64	83	56.8				
nsb 028N.055	35	55	69	88	61.8				
nsb 028N.075	55	75	89	108	81.8				
nsb 028N.100	80	100	114	133	106.8				
nsb 028N.125	105	125	139	158	131.8				
nsb 028N.150	130	150	164	183	156.8	GC250	250	251	214
nsb 028N.175	155	175	189	208	181.8				
nsb 028N.200	180	200	214	233	206.8				

Normal Type **nsb 028N**

DIVIDERS & SEPARATORS

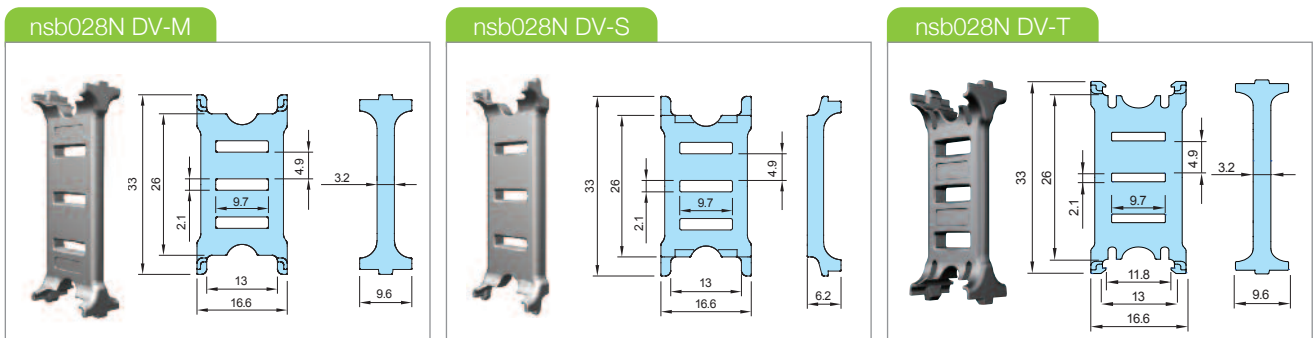


- 1 DV-S (측면전용디바이더)
- 2 DV-M
- 3 DV-T
- 4 Separator (SP)

Dividers (Vertical) and Separators (Horizontal) divide the inner chamber of the cable chain to give each cable diameter its own center and keep the cables separated from each other. The use of a separator in some cases, can also reduce the width requirements as two or more levels can be made within the same chamber. To prevent twisting or damage to the cables, as a rule, there needs to be at least 10% space between the inserted cable and its enclosure.

디바이더(세로분리대)와 세퍼레이터(가로분리대)는 체인내에 많은 케이블들이 입선될 시 케이블들을 서로 분리하여 케이블상호간의 마찰로 인한 **피복손상 및 단선을 방지**하는 역할을 하며 케이블과 10%이상의 여유공간을 확보해야 합니다.

또한 케이블을 체인내 2단이상 입선시 반드시 세퍼레이터를 디바이더에 결합하여 사용해야 케이블의 꼬임방지과 피복손상을 방지할 수 있습니다.



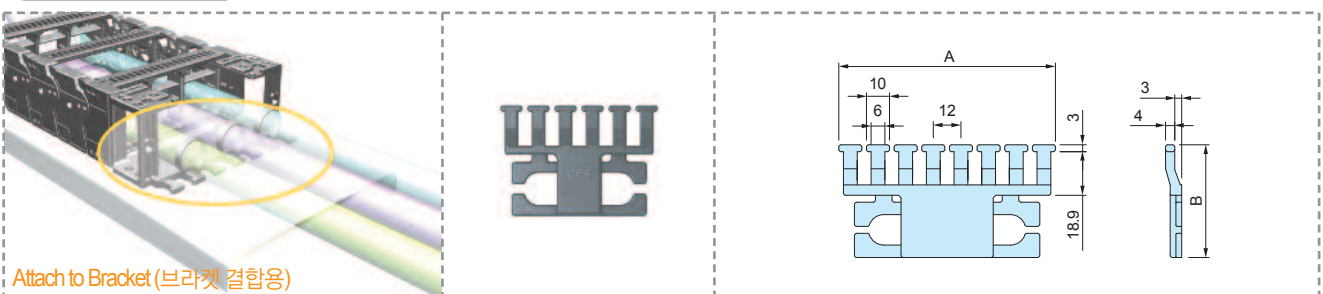
▶ Assemble divider every Four links. / 4링크마다 결합

▶ DV-T : Frame 300~600적용(상하 프레임을 연결)

nsb028N Separators (SP) (No. : S-SP/M)

Chain Type	Separators	SP035	SP050	SP055	SP075	SP100	SP125	SP150	SP175	SP200
nsb028N		○	○	○	○	○	○	○	○	○
nsb035N		○	○	○	○	○	○	○	○	○

TIE WRAP



Attach to Bracket (브라켓 결합용)

(Dimensions in mm)

Tie Wrap	035	055	075	100	125
A	46	70	94	118	142
B	35.4	48.9	48.9	48.9	48.9

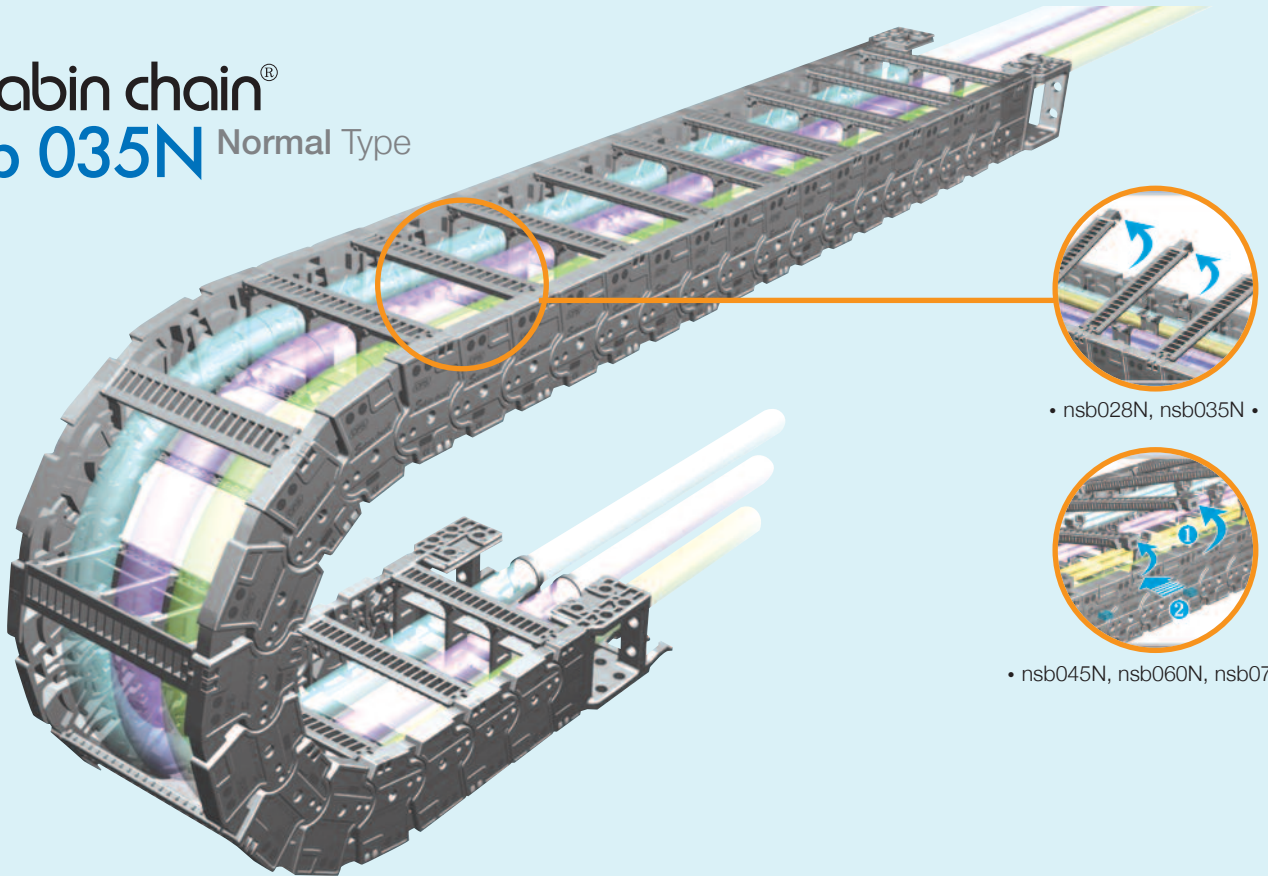
The tie wrap separated from the Sabin Chain bracket, when installed properly, protects the inserted cables from becoming entangled and twisted during operation.

There are two types in the tie wrap; Attached & Unattached to the bracket.

Tiewrap은 Sabin Chain 의 브라켓을 기준으로 설치함으로써 체인의 움직임으로 인해 체인내의 케이블이나 호스가 당겨져 단선되는 경우를 방지할 수 있다. Sabin Chain의 Tiewrap은 브라켓부분과 근접해서 사용할 수 있는 사양 과 브라켓에 결합해서 사용할 수 있는 사양으로 구분되어 사용할 수 있다.

Min ●●●●●●●● Max

Sabin chain® nsb 035N Normal Type



• nsb028N, nsb035N •

• nsb045N, nsb060N, nsb075N •

• Frames are assembled at every other link. (2링크마다 프레임 결합방식)

CPS CABLE CHAIN

SHIFT CHAIN

SABIN CHAIN

REVOLVING CHAIN

HELIX CHAIN

ROBO-KIT

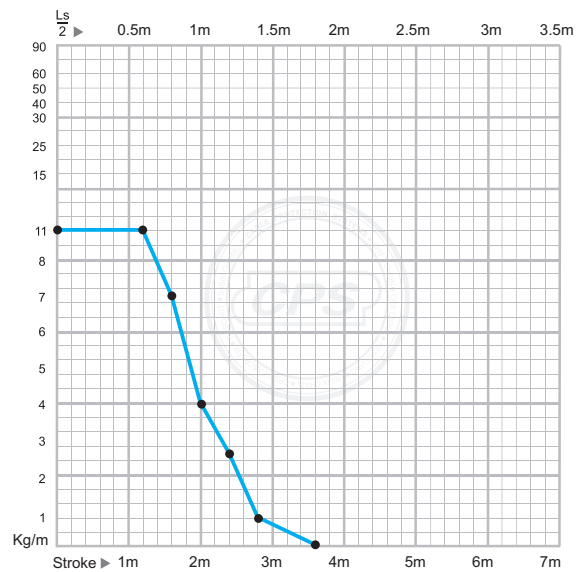
CP5FLEX

CP5FX

MATERIAL

- **Chain material:**
CPS-amide UL94-HB
- **Low Noise**
- **Low Mote**
- **Speed :** 15m / sec
- **Temperature :** -30°C ~ +130°C
- **Other installation Length:**
Vertical curve above, Unsupported= max 2.0m
Vertical curve below, Unsupported= max 50m
Side Mounted, Unsupported= max 1.0m
- **Applications**
Gantry robot, Machining center, Textile machine, Welding machine, Feeder unit, Assembly Loader, Wood work machine, Fabric machine.
저분진, 저소음을 요구하는 사업장 및 겐츨리로더, 로봇캐리지, 공작기계, 절단/용접기계, 인쇄기계등에 적용.

Load diagrams self-supporting length



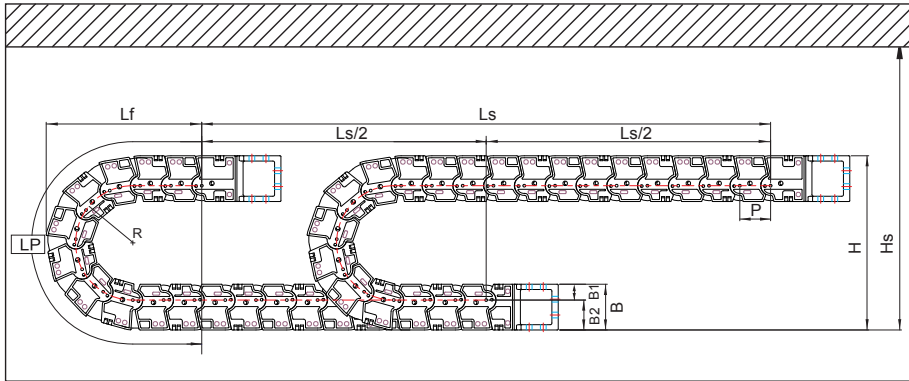
Calculation of the chain length

$$[L = \frac{Ls}{2} + Lp]$$



Normal Type **nsb 035N**

LAYOUT OF THE CHAIN



(Dimensions in mm)

Bending radius R	55	65	90	115	140	190
Lp	383	414	493	572	650	807
L f	194	204	229	254	279	329
H	178	198	248	298	348	448

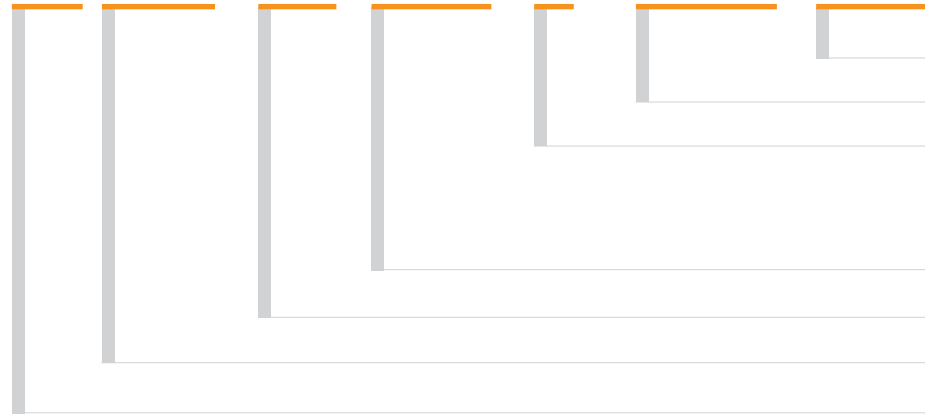
- Ls:** Stroke
- Lp:** Loop Length
- L f:** Loop Projection
- Hs:** Safe Space

nsb 035N Type

- Pitch P:** 35mm
- Height B:** 52mm
- Height H:** 2R+68mm
- Hs ≥ H+30mm**
- B1:** 18mm **B2:** 34mm

ORDERING (주문방법)

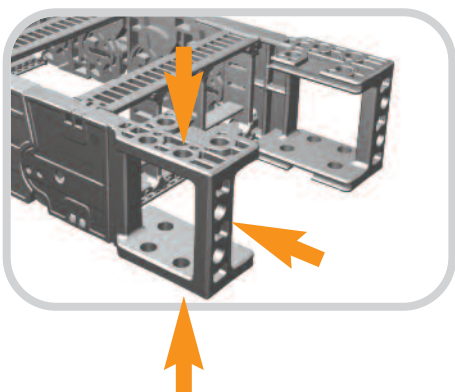
nsb 035N. 075. R90 / F -1000L : 10ST



- 주문수량 Q'ty(set)
- 체인길이 Length(mm)
- 브라켓 F : Free End Bracket
G : Guide Channel Type
V : Vertical Guide Type
- 곡률반경 Bending Radius
- 내폭 Inside Width
- 표준형태입 Normal Type

New Sabin Chain

BRACKET TYPE (브라켓타입)



FEB (Free End Bracket)

Fixes the cable chain to the machinery or moving application. CPS has improved mounting efficiency by unifying the existing Easy End Bracket and Normal End Bracket.

체인을 고정하는 끝부분으로 기존 Easy End Bracket 과 Normal End Bracket 을 하나로 통합한 방식으로 취부의 효율성을 높임.

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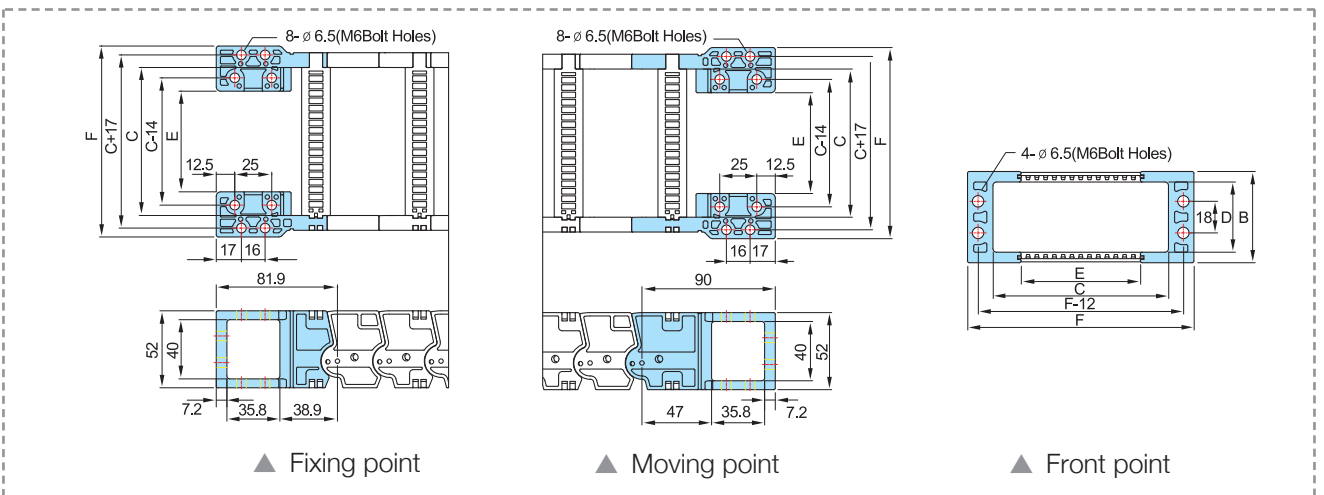
Normal Type nsb 035N

CHAIN CROSS SECTION



Chain Type	A	B	C	D	Bending Radius(R)	Weight in kg/m
nsb 035N.035	55		35			1.10
nsb 035N.050	70		50			1.13
nsb 035N.055	75		55			1.15
nsb 035N.075	95		75			1.18
nsb 035N.100	120	52	100	40	55, 65, 90, 115, 140, 190	1.25
nsb 035N.125	145		125			1.32
nsb 035N.150	170		150			1.41
nsb 035N.175	195		175			1.62
nsb 035N.200	220		200			1.72

FREE END BRACKET



Chain Type	F	B	C	D	E	Hole Type
nsb 035N.035	64		35		3	M6 Bolt Holes
nsb 035N.050	79		50		18	
nsb 035N.055	84		55		23	
nsb 035N.075	104		75		43	
nsb 035N.100	129	52	100	40	68	
nsb 035N.125	154		125		93	
nsb 035N.150	179		150		118	
nsb 035N.175	204		175		143	
nsb 035N.200	229		200		168	

2014 NEW PRODUCT

Unity Systems®

Normal Type **nsb 035N**

This type of bracket is to protect deflection of chain which will support the weight of certain section start from bracket, also will protect the damage of chain.

케이블 보호 장치에 전해지는 하중을 지지하여 케이블 체인의 처짐이 없이 일정구간을 곧게 유지 하므로, 케이블 체인의 파손을 방지하는 Guide Channel 일체형 브라켓입니다.

▼ Horizon Type 수평형

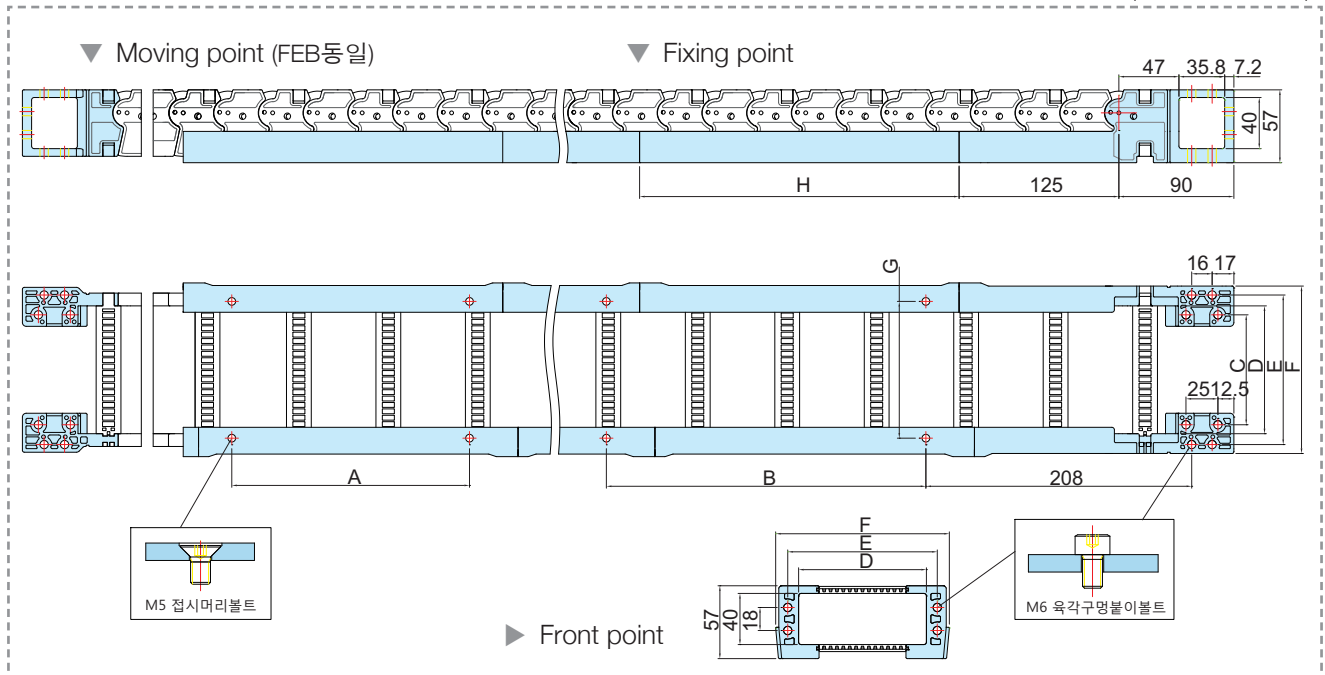


▼ Vertical Type 수직형



GUIDE CHANNEL TYPE END BRACKET

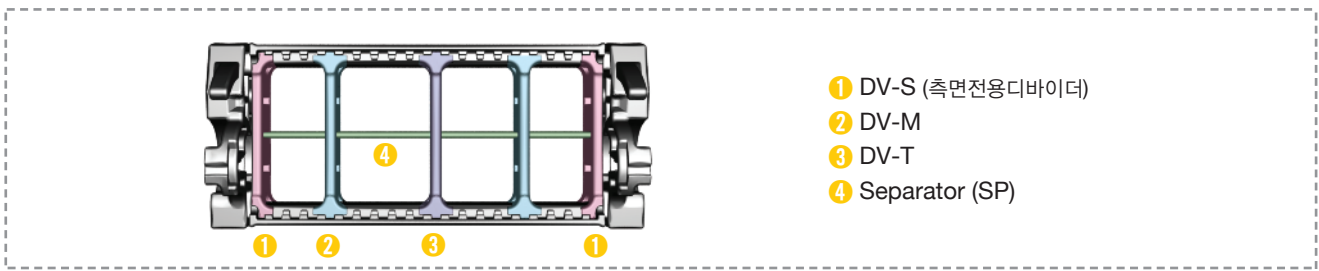
(Dimensions in mm)



Chain Type	C FEB fix hole(inner)	D Frame length dimension	E FEB width	F FEB width	G GC hole width	GC TYPE	H GC length	B GC fixing hole	A GC hole dimension
nsb 035N.035	21	35	52	71	42	GC250	250	251	186
nsb 035N.050	36	50	67	86	57				
nsb 035N.055	41	55	72	91	62				
nsb 035N.075	61	75	92	111	82				
nsb 035N.100	86	100	117	136	107				
nsb 035N.125	111	125	142	161	132				
nsb 035N.150	136	150	167	186	157				
nsb 035N.175	161	175	192	211	182	GC400	400	401	336
nsb 035N.200	186	200	217	236	207				

Normal Type nsb 035N

DIVIDERS

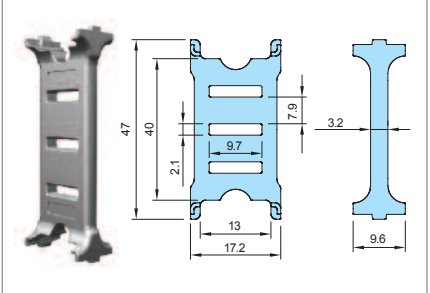


- 1 DV-S (측면전용디바이더)
- 2 DV-M
- 3 DV-T
- 4 Separator (SP)

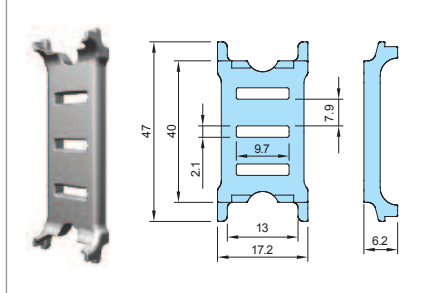
Dividers (Vertical) and Separators (Horizontal) divide the inner chamber of the cable chain to give each cable diameter its own center and keep the cables separated from each other. The use of a separator in some cases, can also reduce the width requirements as two or more levels can be made within the same chamber. To prevent twisting or damage to the cables, as a rule, there needs to be at least 10% space between the inserted cable and its enclosure.

디바이더(세로분리대)와 세퍼레이터(가로분리대)는 체인내에 많은 케이블들이 입선될 시 케이블들을 서로 분리하여 케이블상호간의 마찰로 인한 **피복손상 및 단선을 방지하는 역할**을 하며 케이블과 10%이상의 여유공간을 확보해야 합니다. 또한 케이블을 체인내 2단이상 입선시 반드시 세퍼레이터를 디바이더에 결합하여 사용해야 케이블의 꼬임방지과 피복손상을 방지할 수 있습니다.

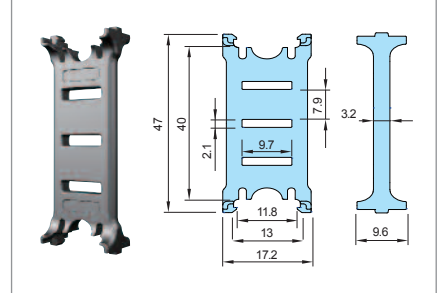
nsb035N DV-M



nsb035N DV-S



nsb035N DV-T



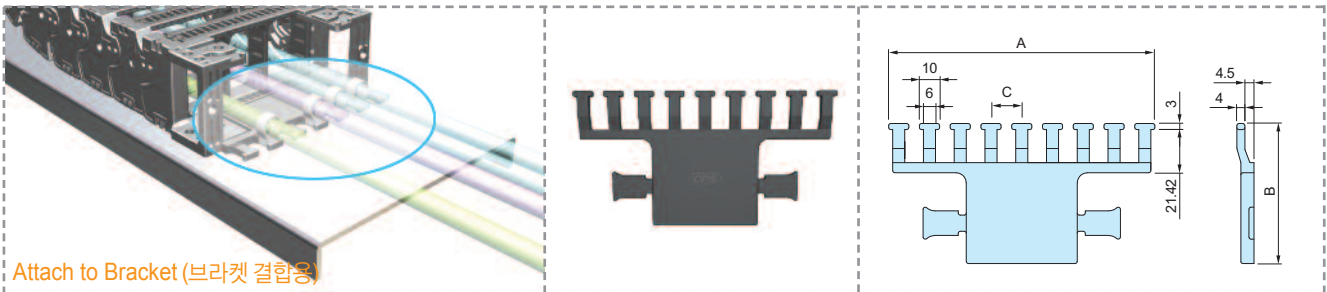
▶ Assemble divider every Four links. / 4링크마다 결합

▶ DV-T : Frame 300~600적용(상하 프레임을 연결)

nsb035N Separators (SP) (No. : S-SP/M)

Chain Type	Separators	SP035	SP050	SP055	SP075	SP100	SP125	SP150	SP175	SP200
nsb028N		○	○	○	○	○	○	○	○	○
nsb035N		○	○	○	○	○	○	○	○	○

TIE WRAP



Attach to Bracket (브라켓 결합용)

(Dimensions in mm)

Tie Wrap	050	075	100	125	150	175	200
A	82	107	132	157	182	203	232
B	69.42	69.42	69.42	69.42	69.42	69.42	69.42
C	12	12.13	15.25	14.7	14.35	12.31	13.88

When using the tie wrap option for the Sabin Chain nsb035 series, the corresponding frame sizes will be 50, 75, 100, 125, 150, 175 and 200mm respectively. nsb035 제품은 삽입형 Tie Wrap을 사용하며 적용되는 Frame은 50, 75, 100, 125, 150, 175, 200 입니다.

The tie wrap separated from the Sabin Chain bracket, when installed properly, protects the inserted cables from becoming entangled and twisted during operation. There are two types in the tie wrap; Attached & Unattached to the bracket.

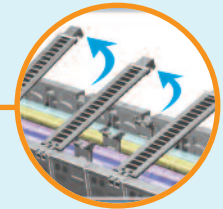
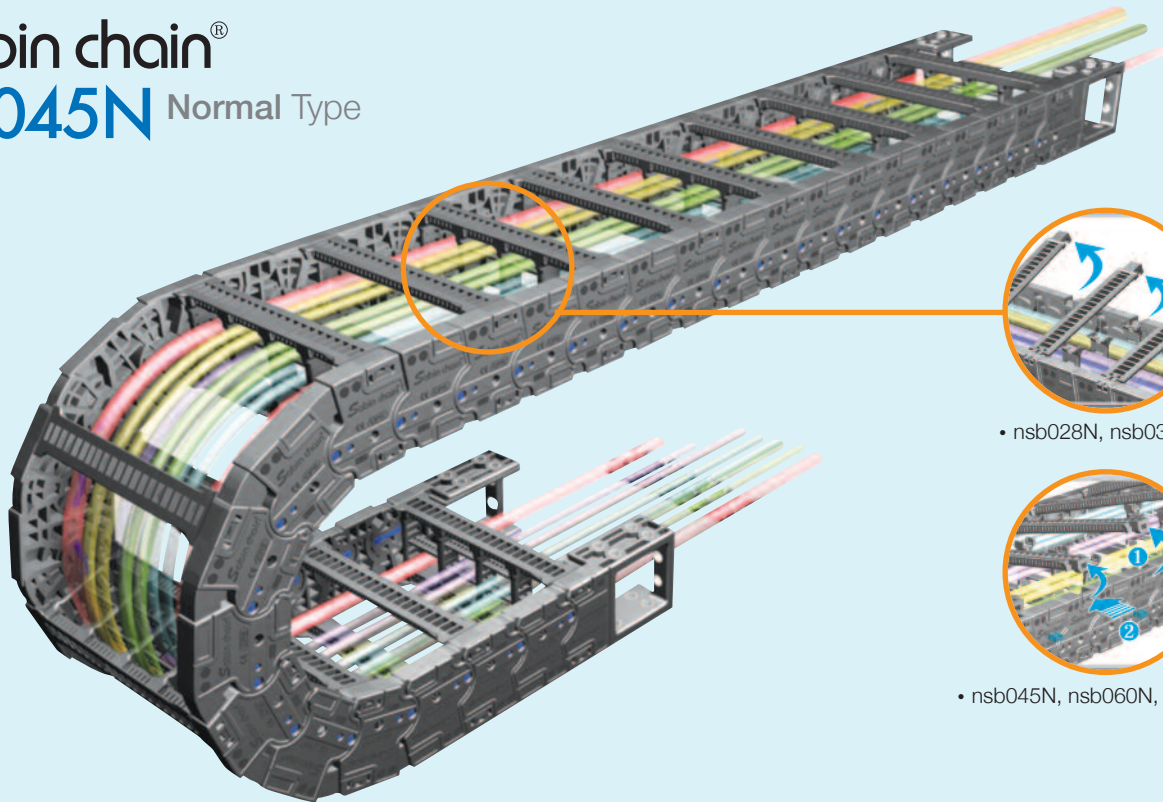
Tiewrap은 Sabin Chain의 브라켓을 기준으로 설치함으로써 체인의 움직임으로 인해 체인내의 케이블이나 호스가 당겨져 단선되는 경우를 방지할 수 있다. Sabin Chain의 Tiewrap은 브라켓부분과 근접해서 사용할 수 있는 사양과 브라켓에 결합해서 사용할 수 있는 사양으로 구분되어 사용할 수 있다.

CPS CABLE CHAIN, SHIFTS CHAIN, SABIN CHAIN, REVOLVING CHAIN, HELIX CHAIN, ROBO-KIT, CPSFLEX, CPSFIX

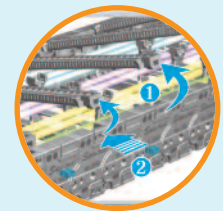


Min ●●●●●●●●●● Max

Sabin chain[®] nsb 045N Normal Type



• nsb028N, nsb035N •



• nsb045N, nsb060N, nsb075N •

• Frames are assembled at every other link. (2링크마다 프레임 결합방식)

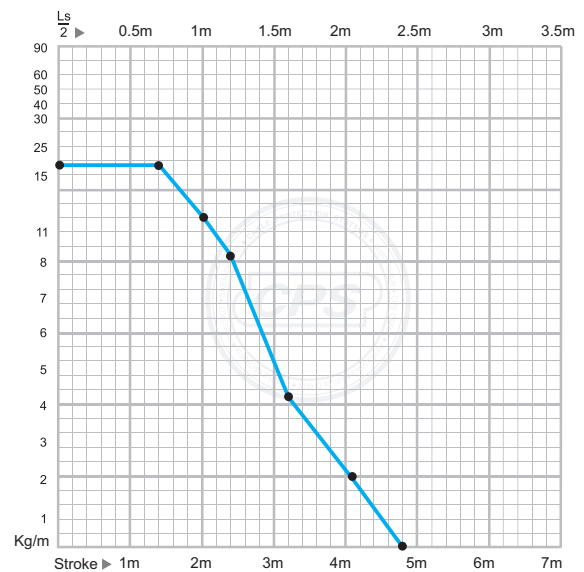
MATERIAL

- **Chain material:**
CPS-amide UL94-HB
- **Low Noise**
- **Low Mote**
- **Speed :** 15m / sec
- **Temperature :** -30°C ~ +130°C
- **Other installation Length:**
Vertical curve above, Unsupported= max 6.0m
Vertical curve below, Unsupported= max 100m
Side Mounted, Unsupported= max 2.5m
- **Applications**
Gantry robot, Machining center, Textile machine, Welding machine, Feeder unit, Assembly Loader, Wood work machine, Fabric machine.
저분진, 저소음을 요구하는 사업장 및 겐츨리로더, 로봇캐리지, 공작기계, 절단/용접기계, 인쇄기계등에 적용.

Calculation of the chain length

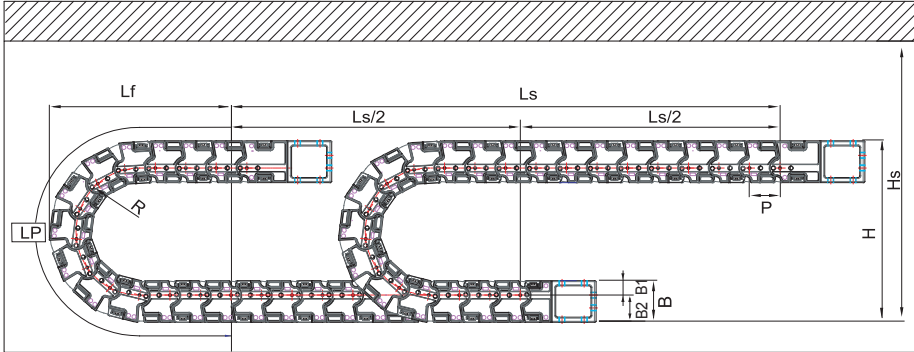
$$\left[L = \frac{Ls}{2} + Lp \right]$$

Load diagrams self-supporting length



Normal Type nsb 045N

LAYOUT OF THE CHAIN



- Ls:** Stroke
- Lp:** Loop Length
- Lf:** Loop Projection
- Hs:** Safe Space

nsb 045N Type

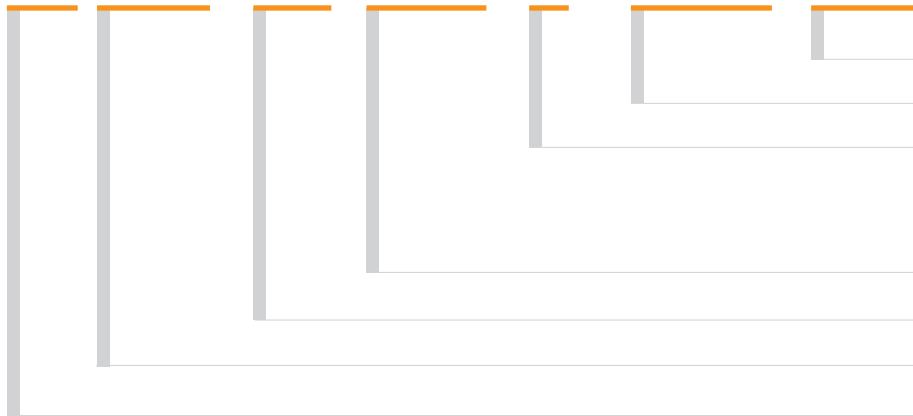
- Pitch P:** 45mm
- Height B:** 66mm
- Height H:** 2R+86mm
- Hs ≥ H+40mm**
- B1:** 23mm **B2:** 43mm

(Dimensions in mm)

Bending radius R	90	110	135	165	185	235	285
Lp	633	695	774	868	931	1,088	1,245
Lf	291	311	336	366	386	436	486
H	266	306	356	416	456	556	656

ORDERING (주문방법)

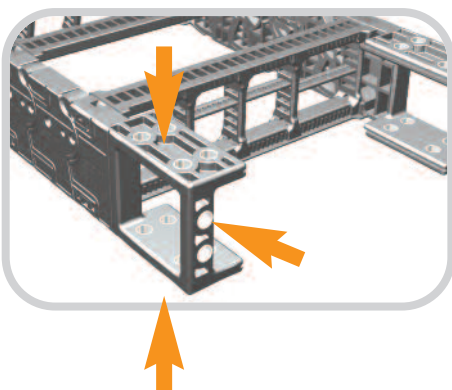
nsb 045N. 125. R165 / F- 2000L : 10ST



- 주문수량 Q'ty(set)
- 체인길이 Length(mm)
- 브라켓 F : Free End Bracket
G : Guide Channel Type
V : Vertical Guide Type
- 곡률반경 Bending Radius
- 내폭 Inside Width
- 표준형타입 Normal Type

New Sabin Chain

BRACKET TYPE (브라켓타입)



FEB (Free End Bracket)

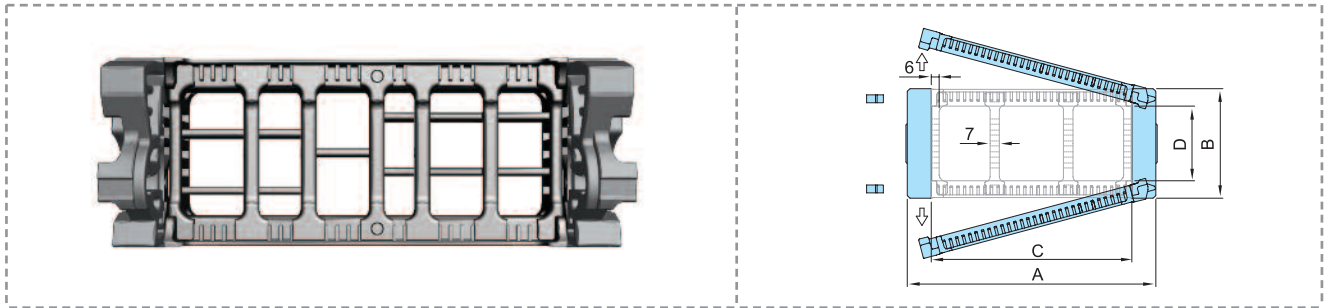
Fixes the cable chain to the machinery or moving application. CPS has improved mounting efficiency by unifying the existing Easy End Bracket and Normal End Bracket. For added strength, steel washers are inserted into the fixing holes of each Free End Bracket.

체인을 고정하는 끝부분으로 기존 Easy Eend Bbracket 과 Normal End Bracket을 하나로 통합한 방식으로 취부의 효율성을 높임. 또한 스틸와셔를 결합하여 더욱 견고한 취부가 가능.

▶ Above products are patent registered item which can be protected by industrial property right. (상기제품은 특허등록 제품으로 산업재산권의 보호를 받는 제품입니다.)

Normal Type **nsb 045N**

CHAIN CROSS SECTION

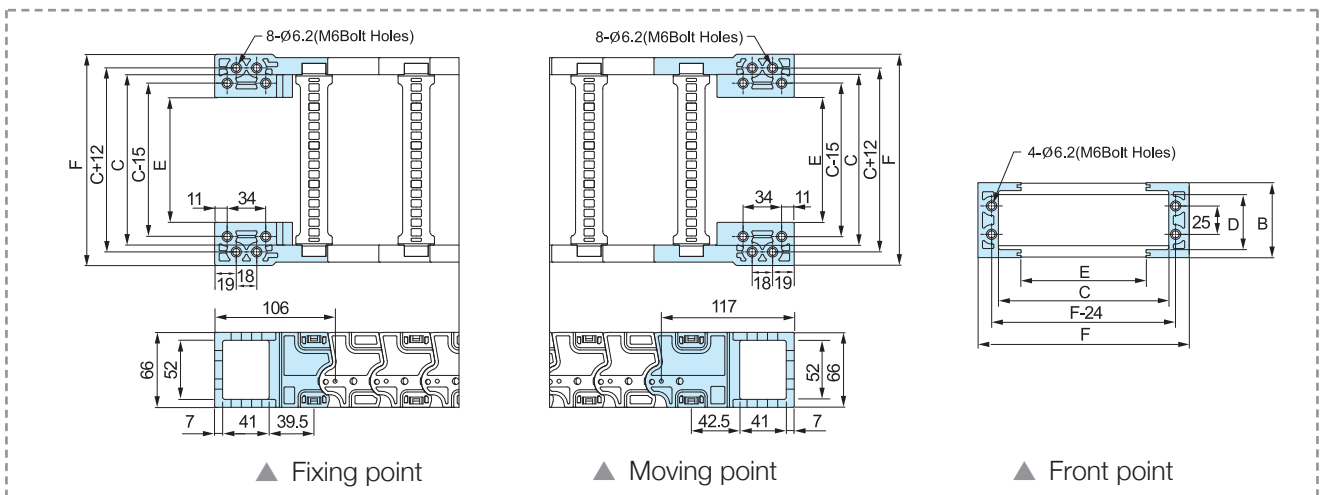


Chain Type	A	B	C	D	Bending Radius(R)	Weight in kg/m
nsb 045N.050	80		50			2.06
nsb 045N.075	105		75			2.14
nsb 045N.100	130		100			2.22
nsb 045N.125	155		125			2.32
nsb 045N.150	180	66	150	45	90, 110, 135, 165, 185, 235, 285	2.42
nsb 045N.175	205		175			2.51
nsb 045N.200	230		200			2.86
nsb 045N.250	280		250			3.15
nsb 045N.300	330		300			3.43

▲ 특수 프레임 적용 가능. (C:140,165,190,240)

▲ Application of special frame. (C:140,165,190,240)

FREE END BRACKET



▲ Fixing point

▲ Moving point

▲ Front point

Chain Type	F	B	C	D	E	Hole Type
nsb 045N.050	86		50		10	
nsb 045N.075	111		75		35	
nsb 045N.100	136		100		60	
nsb 045N.125	161		125		85	
nsb 045N.150	186	66	150	45	110	M6 Bolt Holes
nsb 045N.175	211		175		135	
nsb 045N.200	236		200		160	
nsb 045N.250	286		250		210	
nsb 045N.300	336		300		260	

▲ 특수 프레임 적용 가능. (C:140,165,190,240)

▲ Application of special frame. (C:140,165,190,240)

2014 NEW PRODUCT

Unity Systems®

Normal Type nsb 045N

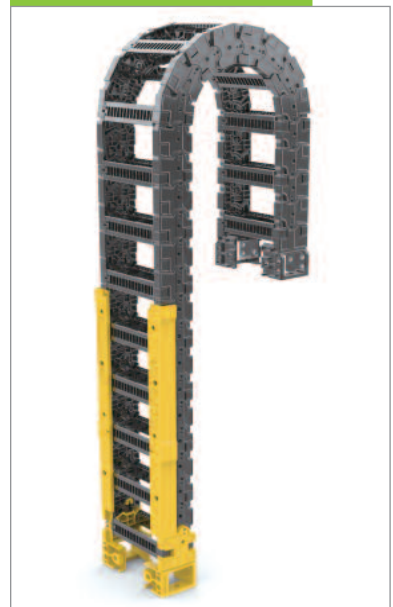
This type of bracket is to protect deflection of chain which will support the weight of certain section start from bracket, also will protect the damage of chain.

케이블 보호 장치에 전해지는 하중을 지지하여 케이블 체인의 처짐이 없이 일정구간을 끈게 유지 하므로, 케이블 체인의 파손을 방지하는 Guide Channel 일체형 브라켓입니다.

▼ Horizon Type 수평형

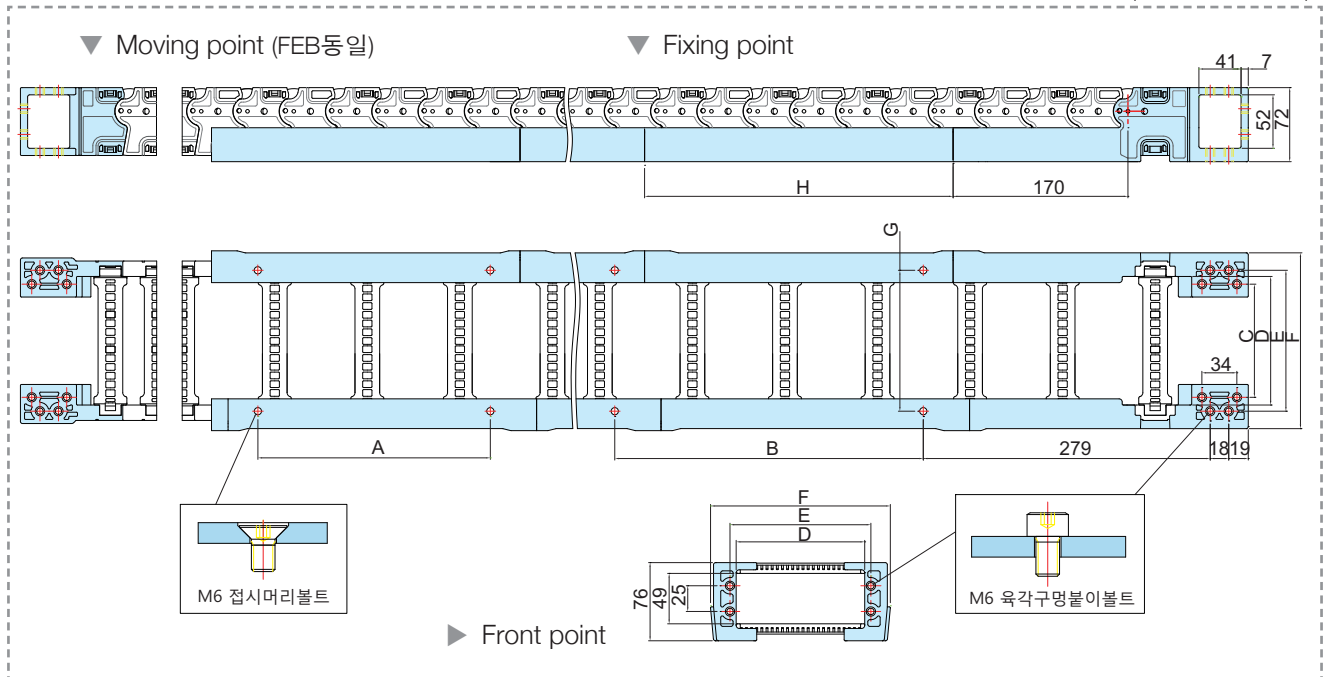


▼ Vertical Type 수직형



GUIDE CHANNEL TYPE END BRACKET

(Dimensions in mm)

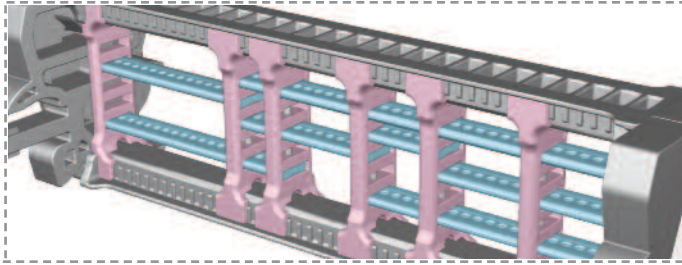


Chain Type	C FEB fix hole(inner)	D Frame length dimension	E FEB width	F FEB width	G GC hole width	GC TYPE	H GC length	B GC fixing hole	A GC hole dimension
nsb 045N.050	35	50	62	100	62	GC300	300	301	226
nsb 045N.075	60	75	87	125	87				
nsb 045N.100	85	100	112	150	112				
nsb 045N.125	110	125	137	175	137				
nsb 045N.150	135	150	162	200	162				
nsb 045N.175	160	175	187	225	187				
nsb 045N.200	185	200	212	250	212	GC500	500	501	426
nsb 045N.250	235	250	262	300	262				
nsb 045N.300	285	300	312	350	312				



Normal Type **nsb 045N**

DIVIDERS



Dividers (Vertical) and Separators (Horizontal) divide the inner chamber of the cable chain to give each cable diameter its own center and keep the cables separated from each other. The use of a separator in some cases, can also reduce the width requirements as two or more levels can be made within the same chamber. To prevent twisting or damage to the cables, as a rule, there needs to be at least 10% space between the inserted cable and its enclosure

디바이더(세로분리대)와 세퍼레이터(가로분리대)는 체인내에 많은 케이블들이 입선될 시 케이블들을 서로 분리하여 케이블상호간의 마찰로 인한 **피복손상 및 단선**을 방지하는 역할을 하며 케이블과 10%이상의 여유공간을 확보해야 합니다.

또한 케이블을 체인내 2단이상 입선시 반드시 세퍼레이터를 디바이더에 결합하여 사용해야 케이블의 꼬임방지와 피복손상을 방지할 수 있습니다.

nsb045N DV-M

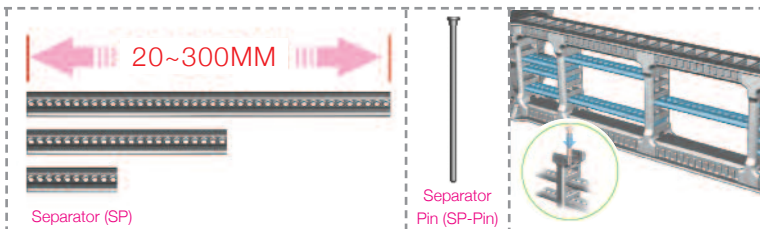
nsb045N DV-S

nsb045N DV-T

▶ Assemble divider every Four links. / 4링크마다 결합

▶ DV-T : Frame 300~600적용(상하 프레임을 연결)

SEPARATORS

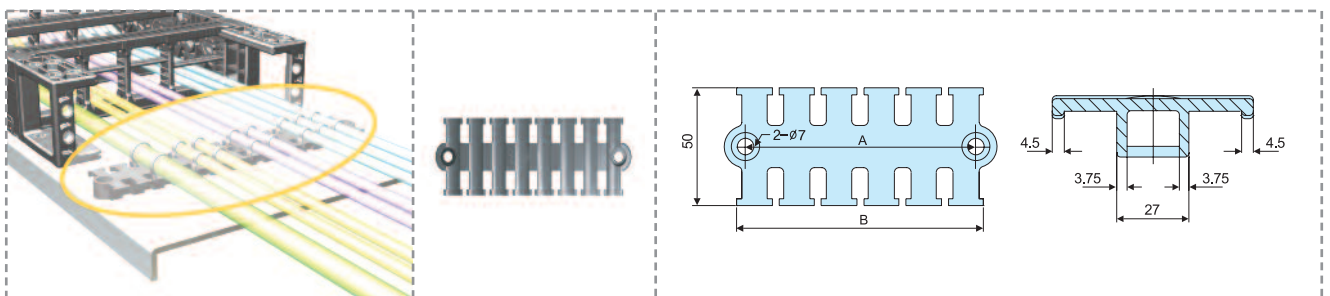


Separator is available in length from 20mm to 300mm and can be cut every 5mm for use.

The combined use of divider and separator with the pin creates the most effective cable pattern and keep insertion space for cables safely, so it protects the inserted cables

세퍼레이터의 사용길이는 최소20mm부터 최대300mm까지 사용가능하며 **5mm간격으로 절단**하여 원하는 길이로 사용가능합니다. 크기가 각각 다른 케이블을 크기에 맞게끔 공간분할이 용이하고 **세퍼레이터 핀**으로 결합하여 어떠한 경우에도 안전하게 케이블의 입선공간을 유지하여 안전하게 케이블을 보호할 수 있습니다.

TIE WRAP



(Dimensions in mm)

The tie wrap separated from the Sabin Chain bracket, when installed properly, protects the inserted cables from becoming entangled and twisted during operation.

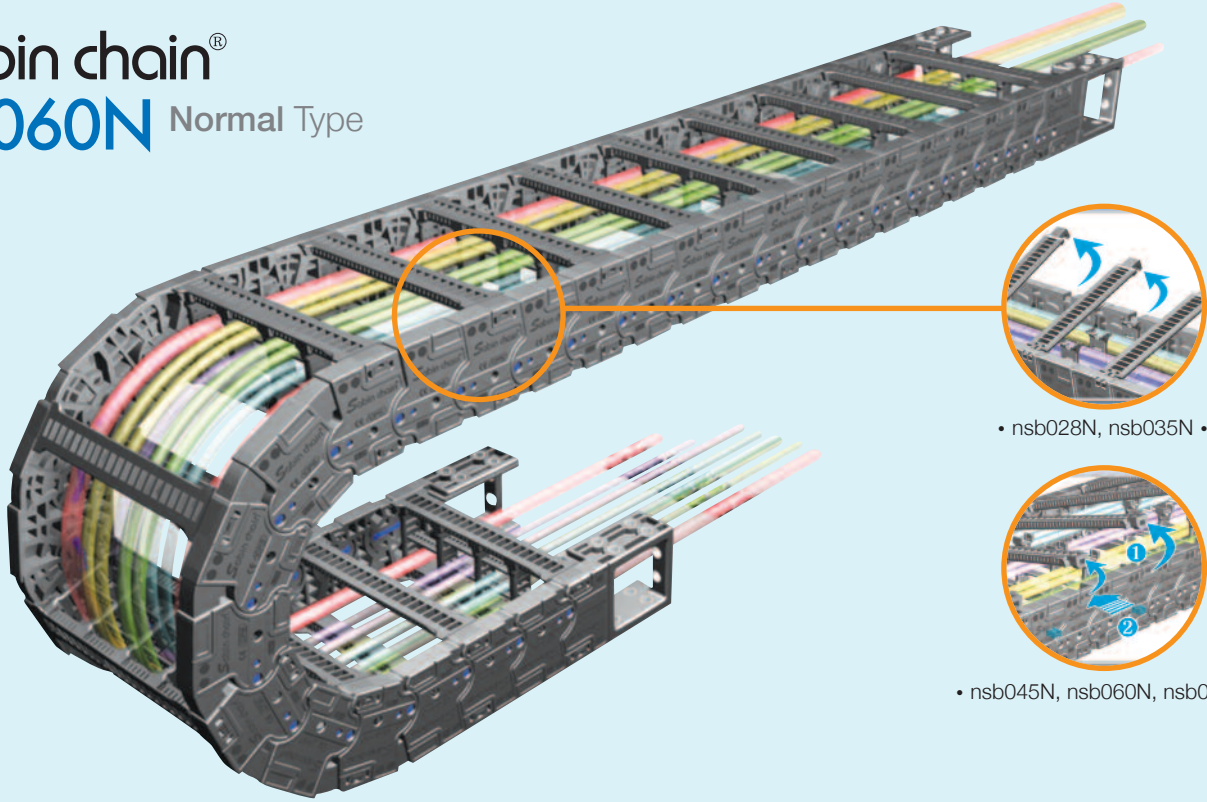
Tie wrap은 Sabin Chain의 브라켓을 기준으로 바깥쪽으로 설치함으로써 체인의 움직임으로 인해 **케이블의 유동**을 방지하고자 **고정**하는 시스템으로 케이블의 피복손상 및 단선을 방지하는 역할을 합니다.

Tie Wrap	050	075	100	125	150
A	58	75	98	122	141
B	65	82	105	129	148

Min ●●●●●●●● Max

Sabin chain®

nsb 060N Normal Type



• nsb028N, nsb035N •

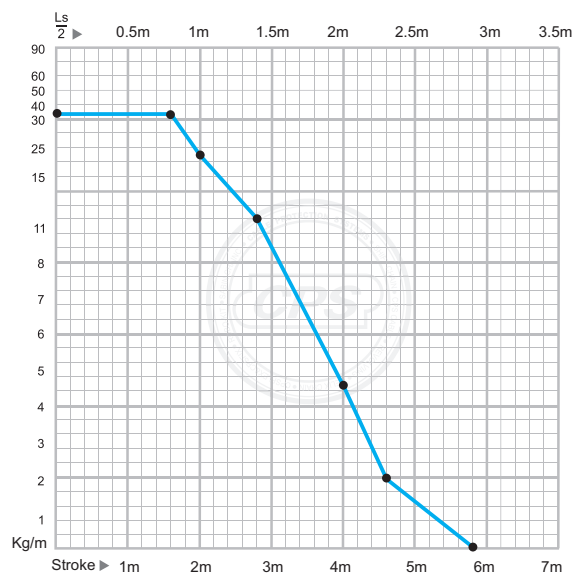
• nsb045N, nsb060N, nsb075N •

• Frames are assembled at every other link. (2링크마다 프레임 결합방식)

MATERIAL

- **Chain material:**
CPS-amide UL94-HB
- **Low Noise**
- **Low Mote**
- **Speed :** 15m / sec
- **Temperature :** -30°C ~ +130°C
- **Other installation Length:**
Vertical curve above, Unsupported= max 6.0m
Vertical curve below, Unsupported= max 100m
Side Mounted, Unsupported= max 3.0m
- **Applications**
Gantry robot, Machining center, Textile machine, Welding machine, Feeder unit, Assembly Loader, Wood work machine, Fabric machine.
저분진, 저소음을 요구하는 사업장 및 컨츄리러더, 로봇캐리지, 공작기계, 절단/용접기계, 인쇄기계등에 적용.

Load diagrams self-supporting length



Calculation of the chain length

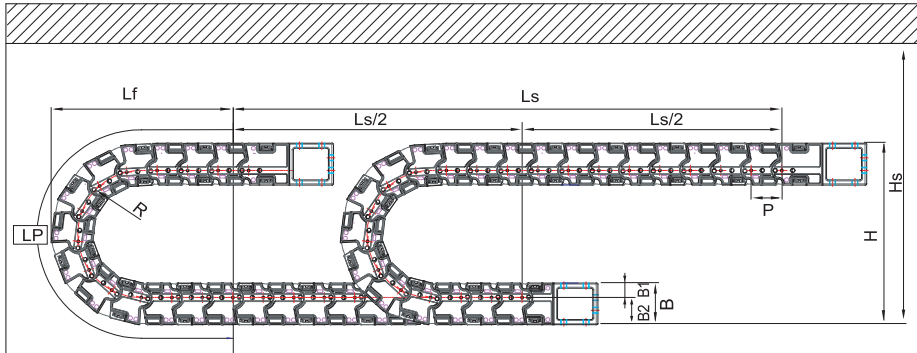
$$[L = \frac{Ls}{2} + Lp]$$

CPS CABLE CHAIN
SHIFT CHAIN
SABIN CHAIN
REVOLVING CHAIN
HELIX CHAIN
ROBO-KIT
CPSFLEX
CPSFIX



Normal Type **nsb 060N**

LAYOUT OF THE CHAIN



- Ls:** Stroke
- Lp:** Loop Length
- Lf:** Loop Projection
- Hs:** Safe Space

nsb 060N Type

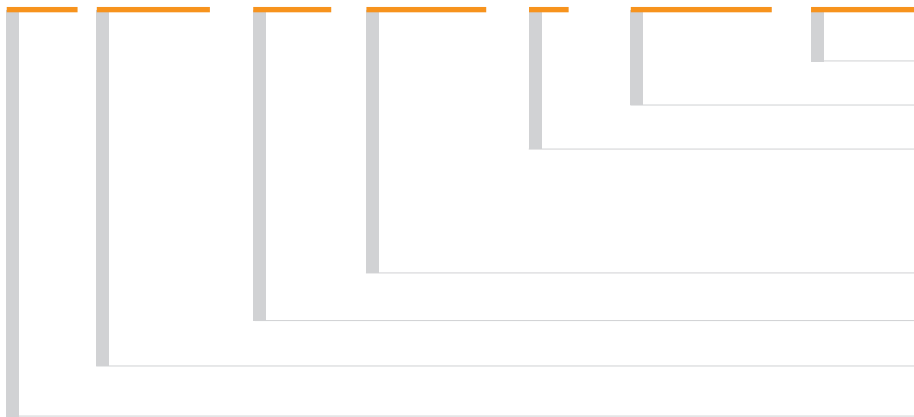
- Pitch P:** 60mm
- Height B:** 82mm
- Height H:** 2R+107mm
- Hs** ≥ H+50mm
- B1:** 28.5mm **B2:** 53.5mm

(Dimensions in mm)

Bending radius R	125	135	150	180	230	270	340
Lp	854	885	932	1,026	1,183	1,309	1,529
Lf	389	399	414	444	494	534	604
H	357	377	407	467	567	647	787

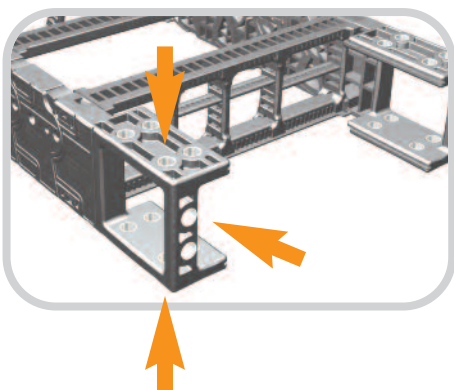
ORDERING (주문방법)

nsb 060N. 150. R180 / F- 2500L : 10ST



- 주문수량 Q'ty(set)
- 체인길이 Length(mm)
- 브라켓 F : Free End Bracket
G : Guide Channel Type
V : Vertical Guide Type
- 곡률반경 Bending Radius
- 내폭 Inside Width
- 표준형타입 Normal Type
- New Sabin Chain**

BRACKET TYPE (브라켓타입)



FEB (Free End Bracket)

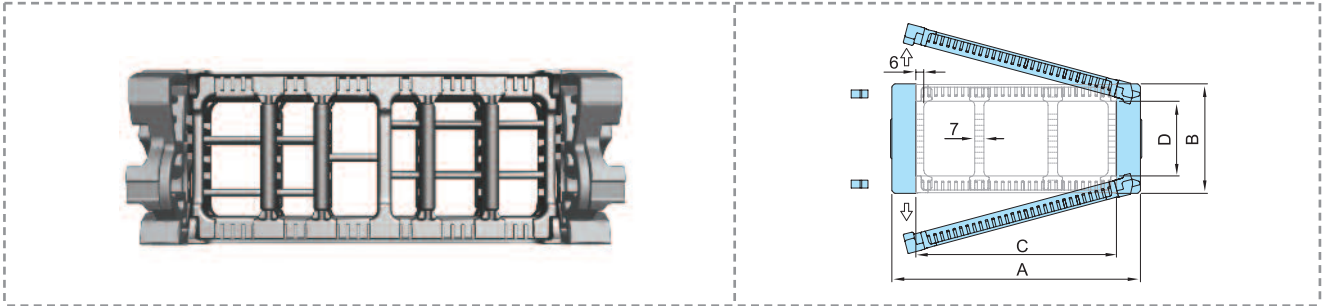
Fixes the cable chain to the machinery or moving application. CPS has improved mounting efficiency by unifying the existing Easy End Bracket and Normal End Bracket. For added strength, steel washers are inserted into the fixing holes of each Free End Bracket.

체인을 고정하는 끝부분으로 기존 Easy Eend Bbracket 과 Normal End Bracket을 하나로 통합한 방식으로 취부의 효율성을 높임. 또한 스틸와셔를 결합하여 더욱 견고한 취부가 가능.

▶ Above products are patent registered item which can be protected by industrial property right. (상기제품은 특허등록 제품으로 산업재산권의 보호를 받는 제품입니다.)

Normal Type nsb 060N

CHAIN CROSS SECTION

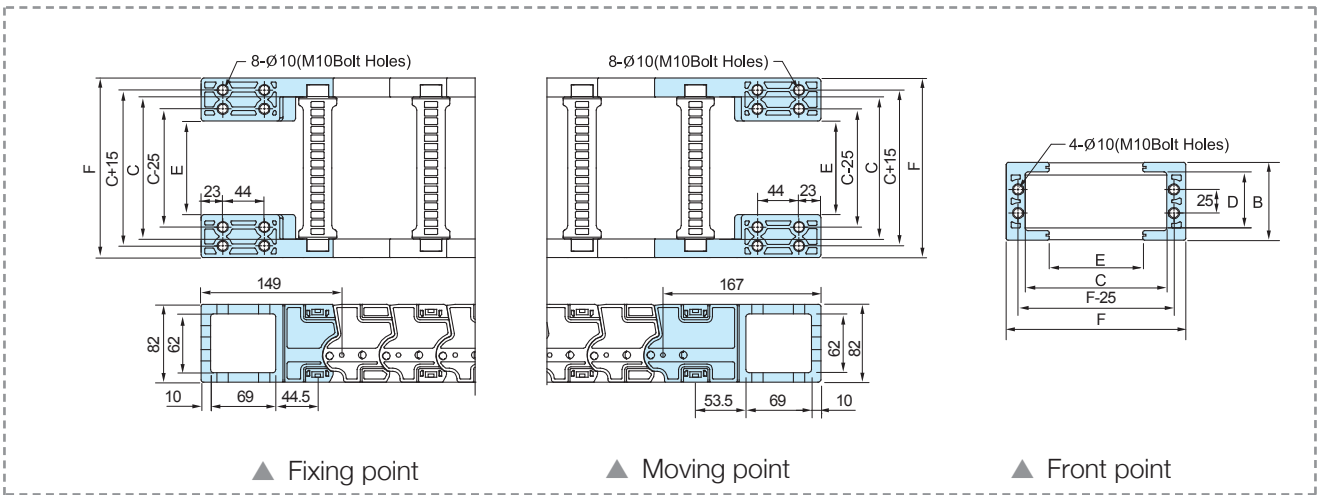


Chain Type	A	B	C	D	Bending Radius(R)	Weight in kg/m
nsb 060N.075	115		75			3.30
nsb 060N.100	140		100			3.35
nsb 060N.125	165		125			3.51
nsb 060N.150	190		150			3.60
nsb 060N.175	215	82	175	56	125, 135, 150, 180, 230, 270, 340	3.69
nsb 060N.200	240		200			3.84
nsb 060N.250	290		250			4.05
nsb 060N.300	340		300			4.26
nsb 060N.350	390		350			4.57
nsb 060N.400	440		400			4.86

▲ 특수 프레임 적용 가능. (C:190,240)

▲ Application of special frame. (C:190,240)

FREE END BRACKET



▲ Fixing point

▲ Moving point

▲ Front point

Chain Type	F	B	C	D	E	Hole Type
nsb 060N.075	115		75		24	M10 Bolt Holes
nsb 060N.100	140		100		49	
nsb 060N.125	165		125		74	
nsb 060N.150	190		150		99	
nsb 060N.175	215	82	175	56	124	
nsb 060N.200	240		200		149	
nsb 060N.250	290		250		199	
nsb 060N.300	340		300		249	
nsb 060N.350	390		350		299	
nsb 060N.400	440		400		349	

▲ 특수 프레임 적용 가능. (C:190,240)

▲ Application of special frame. (C:190,240)



2014 NEW PRODUCT

Unity Systems®

Normal Type **nsb 060N**

This type of bracket is to protect deflection of chain which will support the weight of certain section start from bracket, also will protect the damage of chain.

케이블 보호 장치에 전해지는 하중을 지지하여 케이블 체인의 처짐이 없이 일정구간을 곧게 유지하므로, 케이블 체인의 파손을 방지하는 Guide Channel 일체형 브라켓입니다.

▼ Horizon Type 수평형

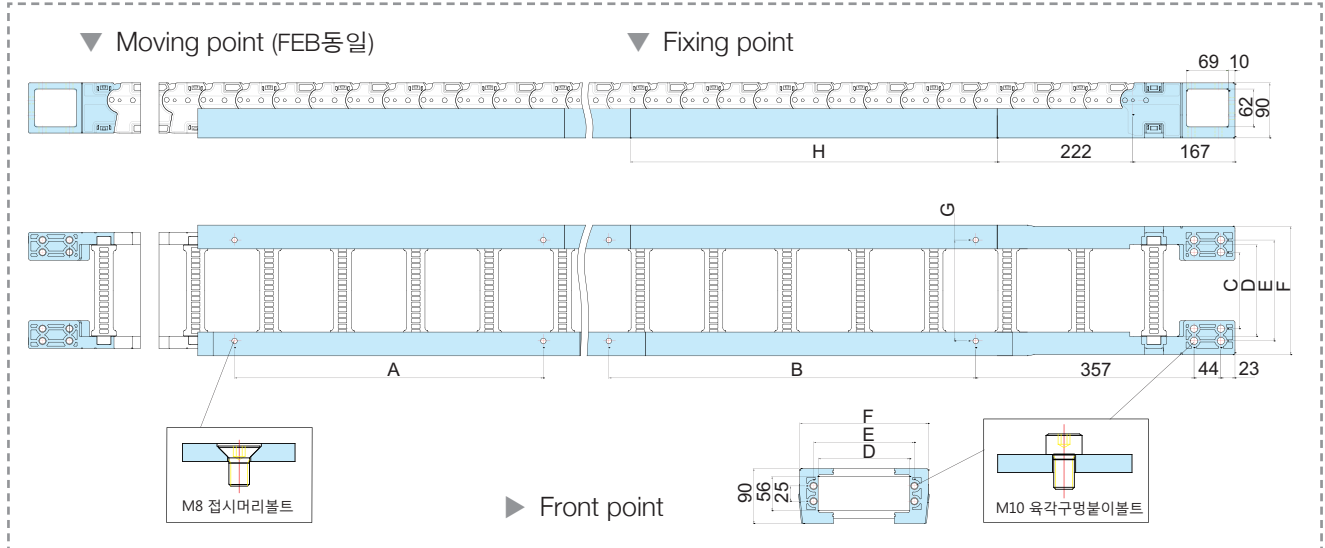


▼ Vertical Type 수직형



GUIDE CHANNEL TYPE END BRACKET

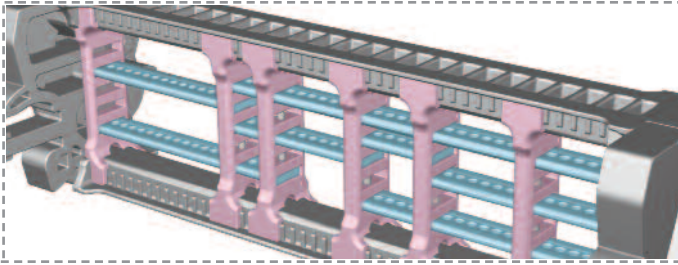
(Dimensions in mm)



Chain Type	C FEB fix hole(inner)	D Frame length dimension	E FEB width	F FEB width	G GC hole width	GC TYPE	H GC length	B GC fixing hole	A GC hole dimension
nsb 060N.075	50	75	90	139	94	GC600	600	601	505
nsb 060N.100	75	100	115	164	119				
nsb 060N.125	100	125	140	189	144				
nsb 060N.150	125	150	165	214	169				
nsb 060N.175	150	175	190	239	194				
nsb 060N.200	175	200	215	264	219				
nsb 060N.250	225	250	265	314	269	GC800	800	801	705
nsb 060N.300	275	300	315	364	319				
nsb 060N.350	325	350	365	414	369				
nsb 060N.400	375	400	415	464	419				

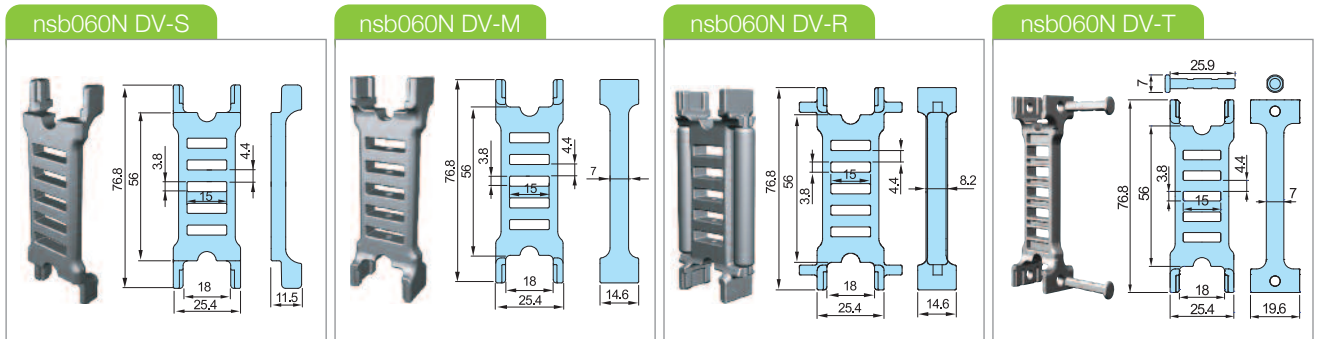
Normal Type nsb 060N

DIVIDERS



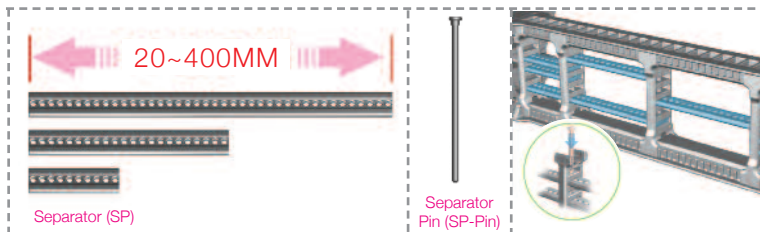
Dividers (Vertical) and Separators (Horizontal) divide the inner chamber of the cable chain to give each cable diameter its own center and keep the cables separated from each other. The use of a separator in some cases, can also reduce the width requirements as two or more levels can be made within the same chamber. To prevent twisting or damage to the cables, as a rule, there needs to be at least 10% space between the inserted cable and its enclosure.

디바이더(세로분리대)와 세퍼레이터(가로분리대)는 체인내에 많은 케이블들이 입선될 시 케이블들을 서로 분리하여 케이블상호간의 마찰로 인한 **피복손상 및 단선**을 방지하는 역할을 하며 케이블과 10%이상의 여유공간을 확보해야 합니다. 또한 케이블을 체인내 2단이상 입선시 반드시 세퍼레이터를 디바이더에 결합하여 사용해야 케이블의 꼬임방지과 피복손상을 방지할 수 있습니다.



▶ Assemble divider every four links.(4링크마다 결합)

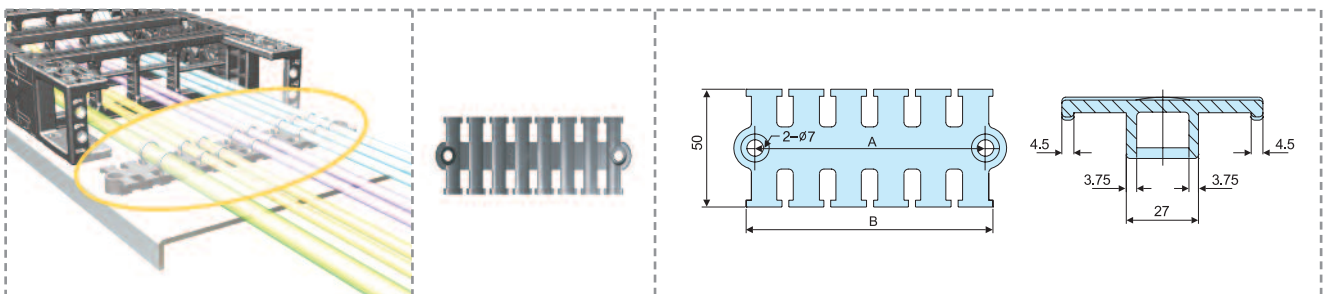
SEPARATORS (SP)



Separator is available in length from 20mm to 400mm and can be cut every 5mm for use. The combined use of divider and separator with the pin creates the most effective cable pattern and keep insertion space for cables safely, so it protects the inserted cables.

세퍼레이터의 사용길이는 최소20mm부터 최대400mm까지 사용가능하며 5mm간격으로 절단하여 원하는 길이로 사용가능합니다. 크기가 각각 다른 케이블을 크기에 맞게끔 공간분할이 용이하고 세퍼레이터 핀으로 결합하여 어떠한 경우에도 안전하게 케이블의 입선공간을 유지하여 안전하게 케이블을 보호할 수 있습니다.

TIE WRAP



(Dimensions in mm)

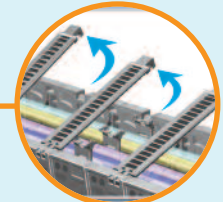
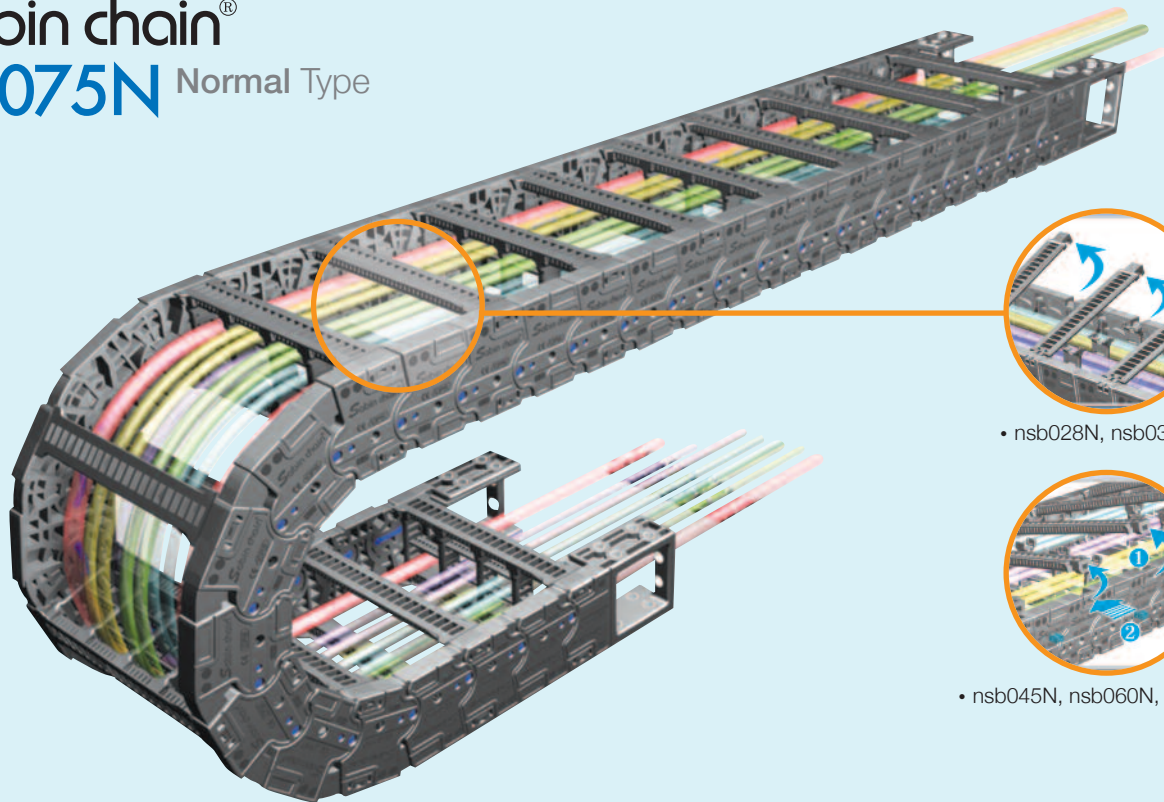
The Tie Wrap separated from the Sabin Chain bracket, when installed properly, protects the inserted cables from becoming entangled and twisted during operation. Tie Wrap은 Sabin Chain의 브라켓을 기준으로 바깥쪽으로 설치함으로써 체인의 움직임으로 인해 **케이블의 유동을 방지하고자 고정하는 시스템**으로 케이블의 피복손상 및 단선을 방지하는 역할을 합니다.

Tie Wrap	050	075	100	125	150
A	58	75	98	122	141
B	65	82	105	129	148

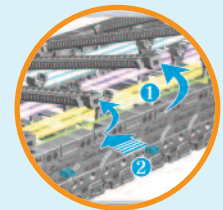


Min ●●●●●●●● Max

Sabin chain[®] nsb 075N Normal Type



• nsb028N, nsb035N •



• nsb045N, nsb060N, nsb075N •

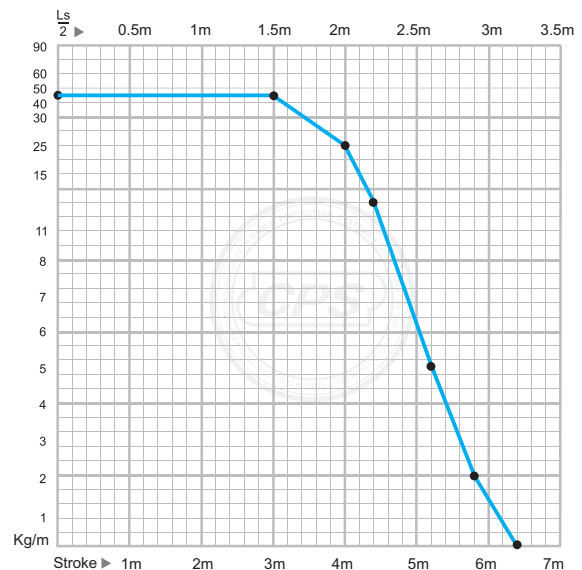
• Frames are assembled at every other link. (2링크마다 프레임 결합방식)

MATERIAL

- **Chain material:**
CPS-amide UL94-HB
- **Low Noise**
- **Low Mote**
- **Speed :** 15m / sec
- **Temperature :** -30°C ~ +130°C
- **Other installation Length:**
Vertical curve above, Unsupported= max 6.0m
Vertical curve below, Unsupported= max 120m
Side Mounted, Unsupported= max 3.0m
- **Applications**
Gantry robot, Machining center, Textile machine, Welding machine, Feeder unit, Assembly Loader, Wood work machine, Fabric machine.
저분진, 저소음을 요구하는 사업장 및 겐츨리로더, 로봇캐리지, 공작기계, 절단/용접기계, 인쇄기계등에 적용.
- **Calculation of the chain length**

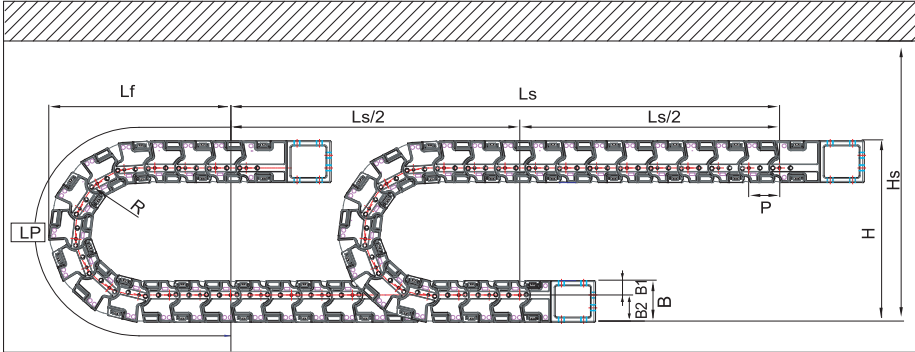
$$\left[L = \frac{Ls}{2} + Lp \right]$$

Load diagrams self-supporting length



Normal Type **nsb 075N**

LAYOUT OF THE CHAIN



- Ls:** Stroke
- Lp:** Loop Length
- Lf:** Loop Projection
- Hs:** Safe Space

nsb 075N Type

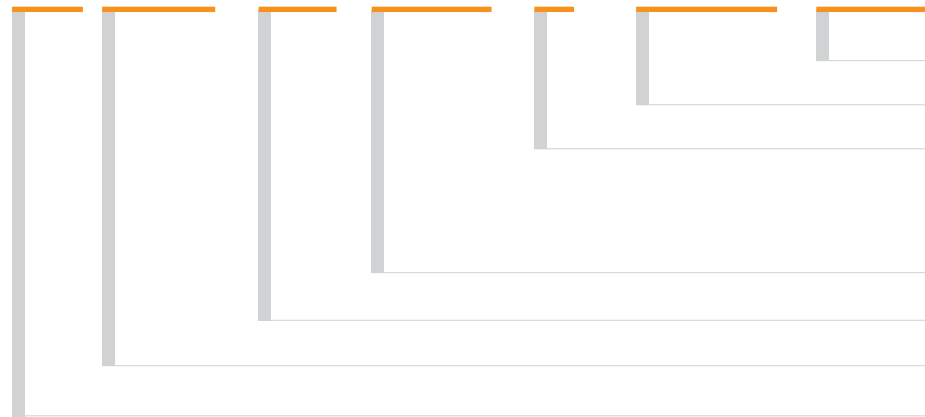
- Pitch P:** 75mm
- Height B:** 108mm
- Height H:** 2R+144mm
- Hs ≥ H+60mm**
- B1:** 36mm **B2:** 72mm

(Dimensions in mm)

Bending radius R	160	180	230	280	330	380	480
Lp	1,084	1,147	1,304	1,461	1,618	1,775	2,089
Lf	495	515	565	615	665	715	815
H	464	504	604	704	804	904	1,104

ORDERING (주문방법)

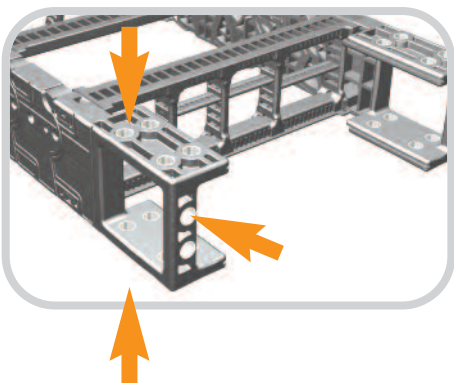
nsb 075N. 200. R380 / F- 3000L : 10ST



- 주문수량 Q'ty(set)
- 체인길이 Length(mm)
- 브라켓 F : Free End Bracket
G : Guide Channel Type
V : Vertical Guide Type
- 곡률반경 Bending Radius
- 내폭 Inside Width
- 표준형타입 Normal Type

New Sabin Chain

BRACKET TYPE (브라켓타입)



FEB (Free End Bracket)

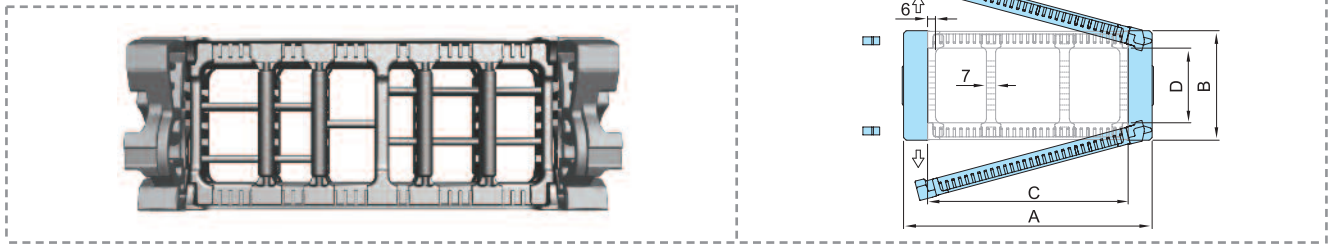
Fixes the cable chain to the machinery or moving application. CPS has improved mounting efficiency by unifying the existing Easy End Bracket and Normal End Bracket. For added strength, steel washers are inserted into the fixing holes of each Free End Bracket.

체인을 고정하는 끝부분으로 기존 Easy Eend Bbracket 과 Normal End Bracket을 하나로 통합한 방식으로 취부의 효율성을 높임. 또한 스틸와셔를 결합하여 더욱 견고한 취부가 가능.

▶ Above products are patent registered item which can be protected by industrial property right. (상기제품은 특허등록 제품으로 산업재산권의 보호를 받는 제품입니다.)

Normal Type **nsb 075N**

CHAIN CROSS SECTION

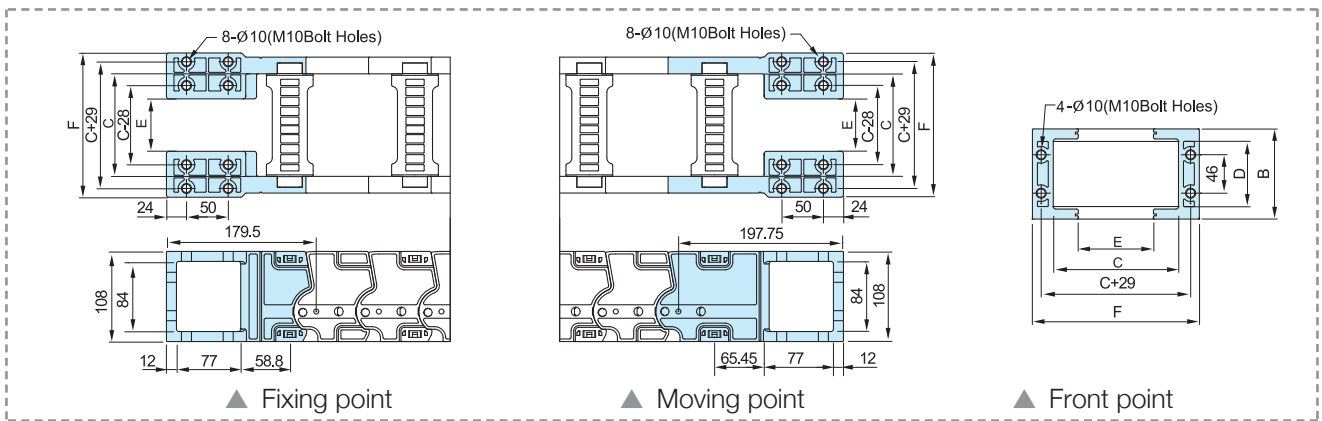


Chain Type	A	B	C	D	Bending Radius(R)	Weight in kg/m
nsb 075N.075	115	108	75	78	160, 180, 230, 280, 330 380, 480	4.80
nsb 075N.100	140		4.90			
nsb 075N.125	165		5.02			
nsb 075N.150	190		5.12			
nsb 075N.175	215		5.25			
nsb 075N.200	240		5.46			
nsb 075N.250	290		5.72			
nsb 075N.300	340		6.09			
nsb 075N.350	390		6.45			
nsb 075N.400	440		6.83			
nsb 075N.450	490		7.12			
nsb 075N.500	540		7.32			
nsb 075N.550	590		8.06			
nsb 075N.600	640		8.20			

▲ 특수 프레임 적용 가능. (C:115,240,290)

▲ Application of special frame. (C:115,240,290)

FREE END BRACKET



Chain Type	F	B	C	D	E	Hole Type
nsb 075N.075	125	108	75	78	15	M10 Bolt Holes
nsb 075N.100	150		40			
nsb 075N.125	175		65			
nsb 075N.150	200		90			
nsb 075N.175	225		115			
nsb 075N.200	250		140			
nsb 075N.250	300		190			
nsb 075N.300	350		240			
nsb 075N.350	400		290			
nsb 075N.400	450		340			
nsb 075N.450	500		390			
nsb 075N.500	550		440			
nsb 075N.550	600		490			
nsb 075N.600	650		540			

▲ 특수 프레임 적용 가능. (C:115,240,290)

▲ Application of special frame. (C:115,240,290)

2014 NEW PRODUCT
Unity Systems®

Normal Type **nsb 075N**

This type of bracket is to protect deflection of chain which will support the weight of certain section start from bracket, also will protect the damage of chain.

케이블 보호 장치에 전해지는 하중을 지지하여 케이블 체인의 처짐이 없이 일정구간을 곧게 유지하므로, 케이블 체인의 파손을 방지하는 Guide Channel 일체형 브라켓입니다.

▼ Horizon Type 수평형

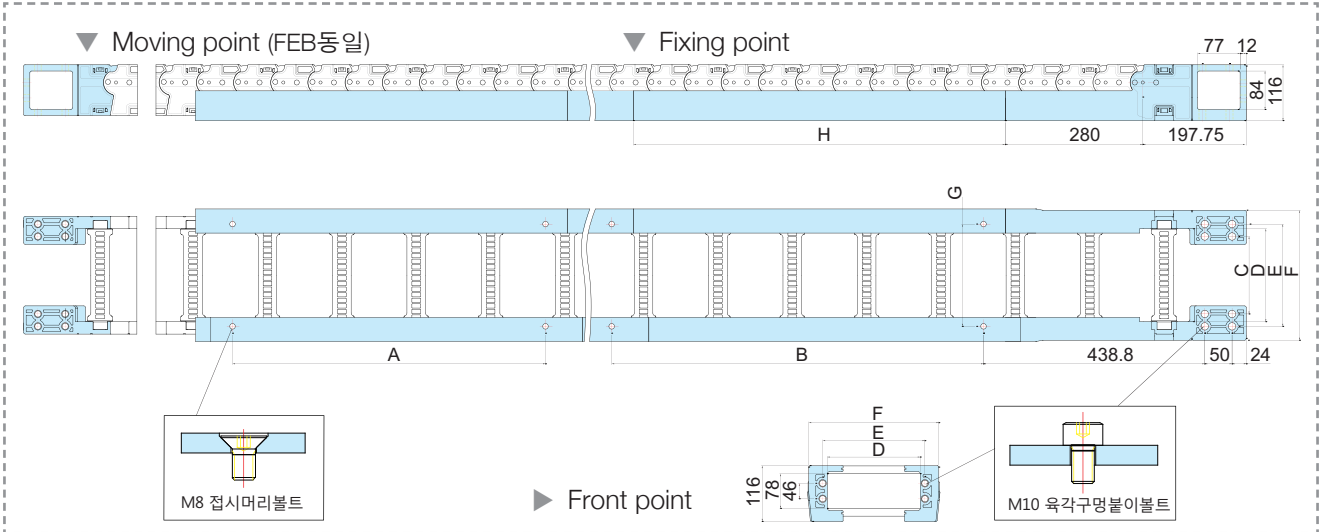


▼ Vertical Type 수직형



GUIDE CHANNEL TYPE END BRACKET

(Dimensions in mm)



Chain Type	C FEB fix hole(inner)	D Frame length dimension	E FEB width	F FEB width	G GC hole width	GC TYPE	H GC length	B GC fixing hole	A GC hole dimension
nsb 075N.075	47	75	104	139	94	GC600	600	601	505
nsb 075N.100	72	100	129	164	119				
nsb 075N.125	97	125	154	189	144				
nsb 075N.150	122	150	179	214	169				
nsb 075N.175	147	175	204	239	194				
nsb 075N.200	172	200	229	264	219				
nsb 075N.250	222	250	279	314	269				
nsb 075N.300	272	300	329	364	319				
nsb 075N.350	322	350	379	414	369				
nsb 075N.400	372	400	429	464	419				
nsb 075N.450	422	450	479	514	469	GC800	800	801	705
nsb 075N.500	472	500	529	564	519				
nsb 075N.550	522	550	579	614	569				
nsb 075N.600	572	600	629	664	619				

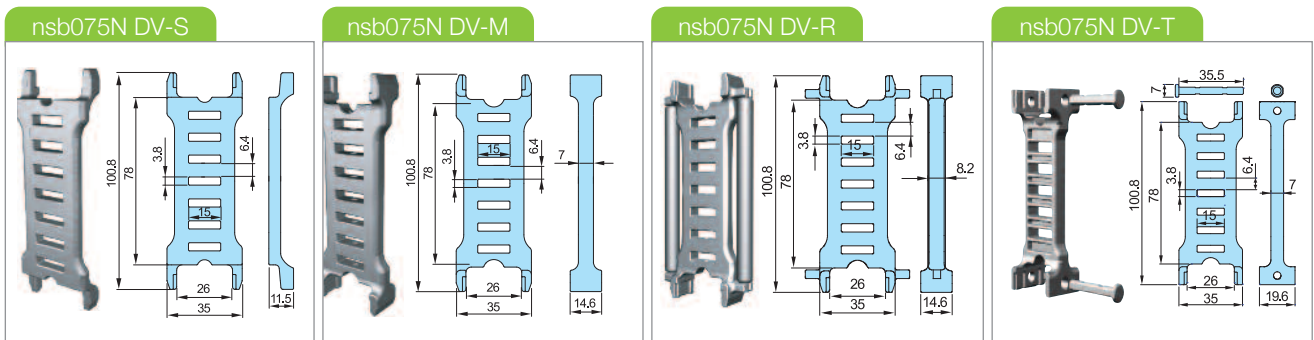
Normal Type **nsb 075N**

DIVIDERS

Dividers (Vertical) and Separators (Horizontal) divide the inner chamber of the cable chain to give each cable diameter its own center and keep the cables separated from each other. The use of a separator in some cases, can also reduce the width requirements as two or more levels can be made within the same chamber. To prevent twisting or damage to the cables, as a rule, there needs to be at least 10% space between the inserted cable and its enclosure.

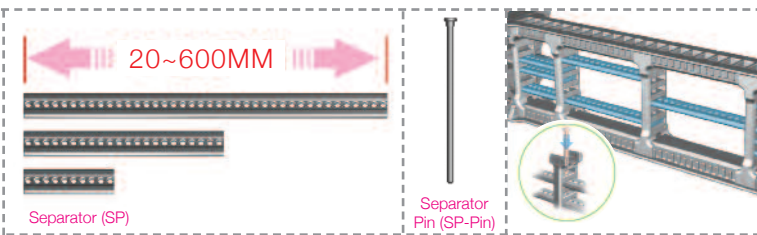
디바이더(세로분리대)와 세퍼레이터(가로분리대)는 체인내에 많은 케이블들이 입선될 시 케이블들을 서로 분리하여 케이블상호간의 마찰로 인한 **피복손상 및 단선**을 방지하는 역할을 하며 케이블과 10%이상의 여유공간을 확보해야 합니다.

또한 케이블을 체인내 2단이상 입선시 반드시 세퍼레이터를 디바이더에 결합하여 사용해야 케이블의 꼬임방지와 피복손상을 방지할 수 있습니다.



▶ Assemble divider every four links.(4링크마다 결합.)

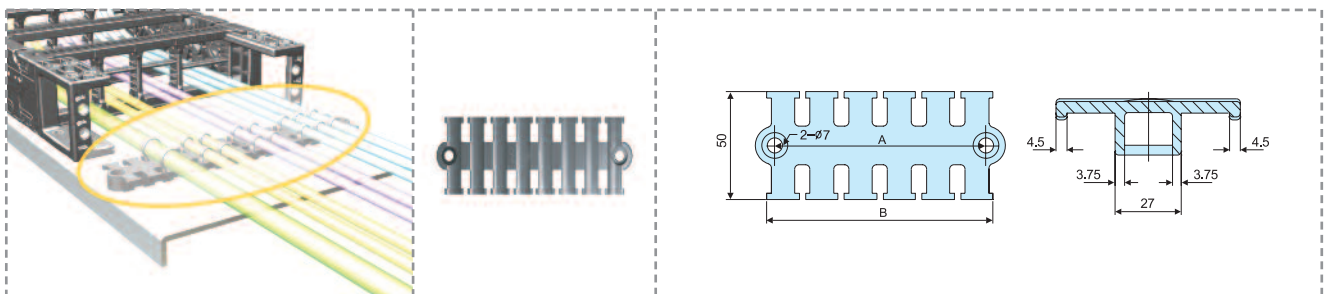
SEPARATORS (SP)



Separator is available in length from 20mm to 600mm and can be cut every 5mm for use. The combined use of divider and separator with the pin creates the most effective cable pattern and keep insertion space for cables safely, so it protects the inserted cables.

세퍼레이터의 사용길이는 최소20mm부터 최대600mm까지 사용가능하며 5mm간격으로 절단하여 원하는 길이로 사용가능합니다. 크기가 각각 다른 케이블을 크기에 맞게끔 공간분할이 용이하고 세퍼레이터 핀으로 결합하여 어떠한 경우에도 안전하게 케이블의 입선공간을 유지하여 안전하게 케이블을 보호할 수 있습니다.

TIE WRAP



(Dimensions in mm)

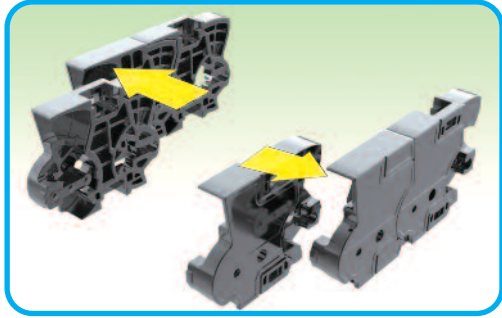
The tie wrap separated from the Sabin Chain bracket, when installed properly, protects the inserted cables from becoming entangled and twisted during operation.

Tie wrap은 Sabin Chain의 브라켓을 기준으로 바깥쪽으로 설치함으로써 체인의 움직임으로 인해 **케이블의 유동을 방지하고자 고정하는 시스템**으로 케이블의 피복손상 및 단선을 방지하는 역할을 합니다.

Tie Wrap	050	075	100	125	150
A	58	75	98	122	141
B	65	82	105	129	148

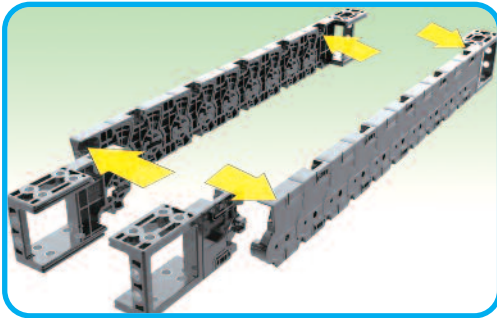
ASSEMBLY PROCEDURE / NORMAL Type

The assembly process of N-Type of New Sabin Chain is like below and you must use rubber hammer with careful combination of Divider and Separator.
New Sabin Chain의 N-Type의 조립순서는 아래와 같이 진행하며 케이블의 입선수량에 따라 디바이더와 세퍼레이터의 조합을 유의하면서 반드시 고무망치를 사용하여 조립합니다.



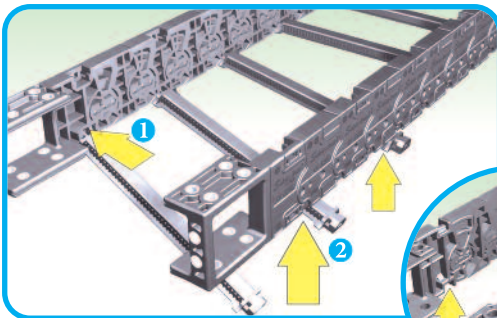
1.

Connect each side band as many as you need.
사이드밴드를 원하는 길이만큼 연결하여 고정.



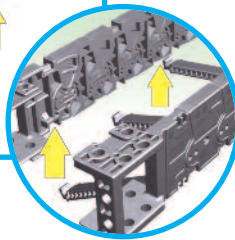
2.

Assemble the end brackets on both ends.
사이드밴드 양쪽 끝부분에 브라켓을 연결하여 고정.

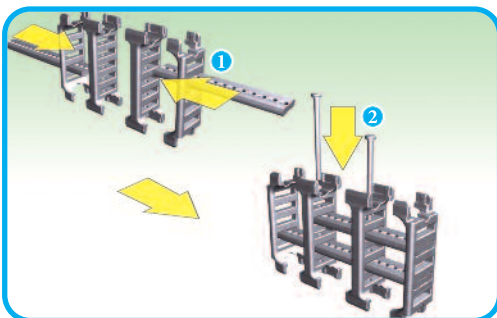


3.

Attach frames to one side groove on the frames, then the other side.
프레임을 사이드밴드 측면 홈에 끼우고(1) 다른측면의 사이드밴드홈에 결합(2).



nsb028,035 N Frame Type

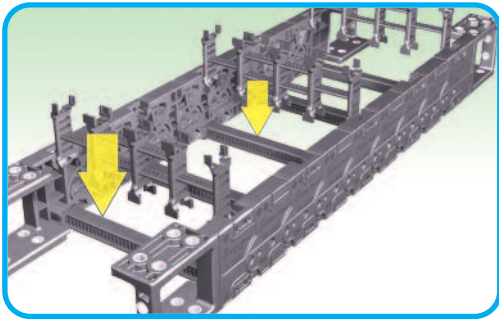


4.

For nsb045, 060 and 075, connect the pin of separator in hole of divider after inserting separator in hole of divider.
For nsb028 and nsb035, separator fixing pins are not used.

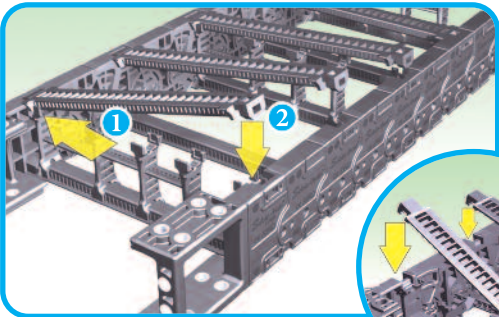
디바이더를 종류별로 구분하여 미리 절단된 세퍼레이터를 디바이더 홈에 결합시킨 후 세퍼레이터 고정핀을 디바이더 홈에 결합(nsب045,060,075).
028,035 Type은 세퍼레이터 고정핀 사용안함.

ASSEMBLY PROCEDURE / NORMAL Type



5.

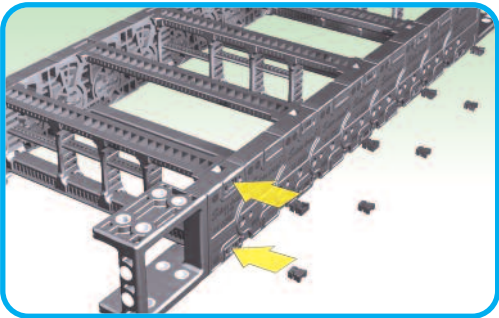
Fix the separator and divider patterns to the bottom-side frames as needed.
세퍼레이터가 결합된 디바이더를 하측프레임에 결합.



6.

Attach frames to one side groove on the frames, then the other side.
프레임을 사이드밴드 측면 홈에 끼우고(1) 다른측면의 사이드밴드홈에 결합(2).

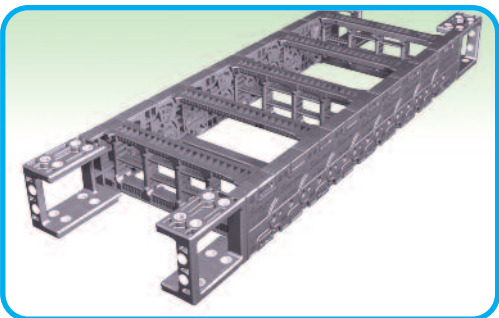
nsb028,035 N Frame Type



7.

Insert frame pins to secure the frames and complete carrier.
(nsb045, 060, 075 are applied with frame pin, and nsb028, 035 are Hinge Type or Hook Type without frame pin.)

결합된 프레임과 사이드밴드의 측면의 홈에 프레임 고정핀으로 결합.
(프레임 고정핀은 nsb045,060,075 Type에 적용되며 028, 035Type의 경우 Hinge Type이나 프레임 고정핀 없이 Hook 고정방식.)



8.

Complete to assemble New Sabin N-Type, Sabin Chain.
New Sabin Chain N-Type조립완료.