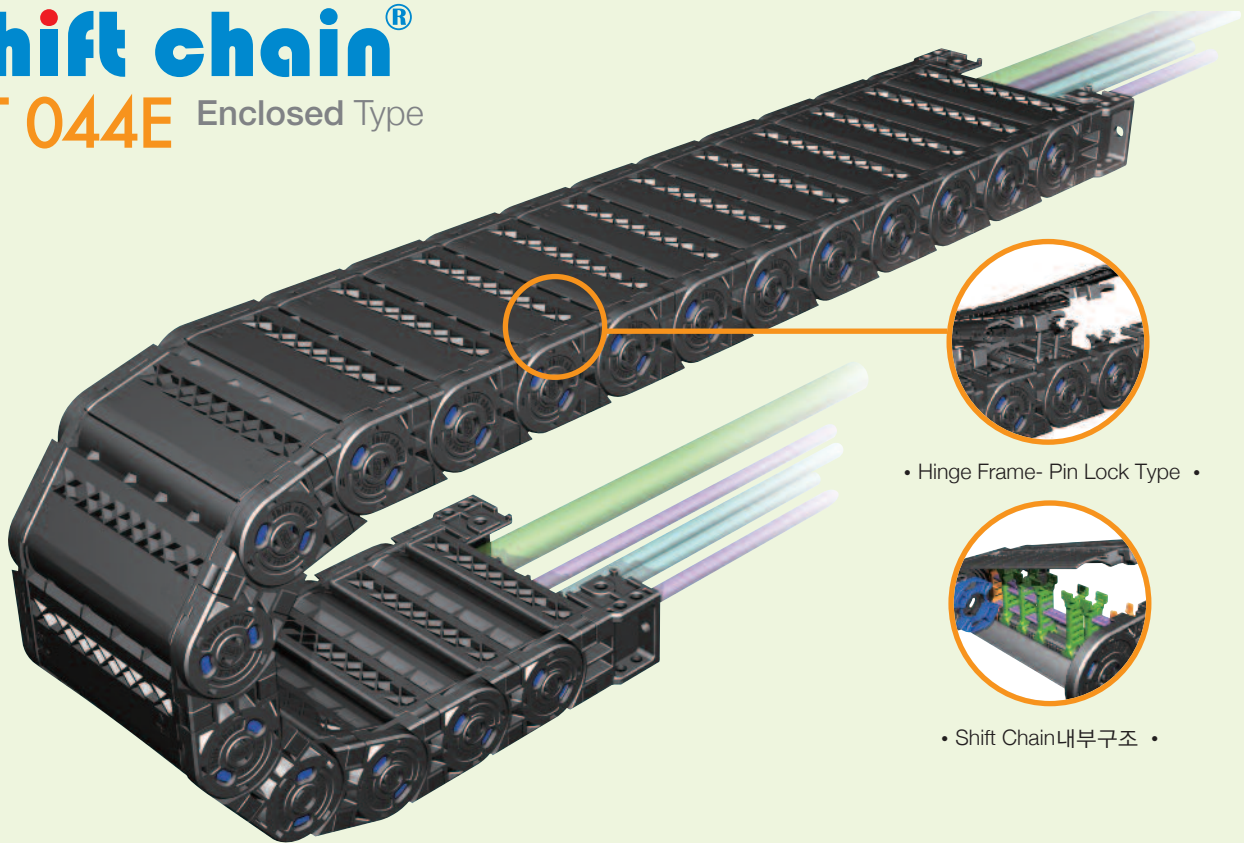




Min ●●●●●● Max

## Shift chain<sup>®</sup> ST 044E Enclosed Type



• Hinge Frame- Pin Lock Type •

• Shift Chain 내부구조 •

### MATERIAL

- **Chain material:**  
CPS-polyamide with glass fiber reinforced UL94-HB
- **Low Noise & Low Mote**
- **Speed :** 10m / sec
- **Temperature :** -30°C ~ +130°C
- **Other installation Length**  
Vertical curve above= max 2.0m  
Vertical curve below= max 40m  
Side Mounted, Unsupported= max 1.0m

### Applications

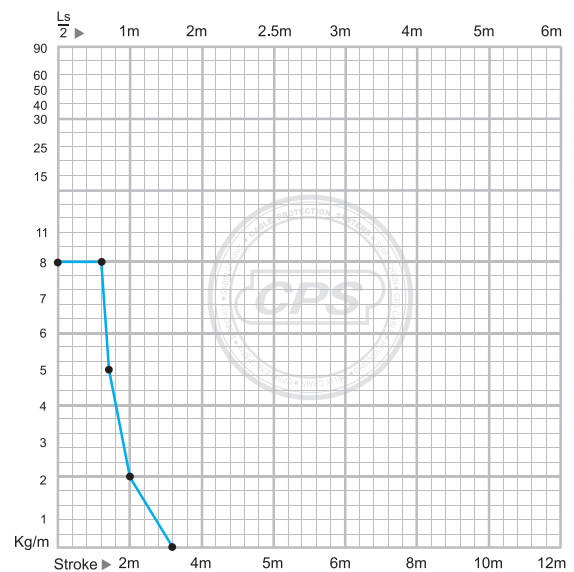
Shift Chain E-Type can be found on car manufacturer's welding line, robot carriages and press lines and on any machine where excess material can damage your inserted cables.

산업현장, 외부위험 요소로부터 케이블의 보호가 필요한 용접라인, 도장라인등에 적용. 겐츨리로봇, 공작기계, 용접기계, 로봇케리지 등의 외부 위험 요소로부터 케이블의 보호가 요구되는 케이블 체인의 적용 사업장에 사용 가능.

### Calculation of the chain length

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

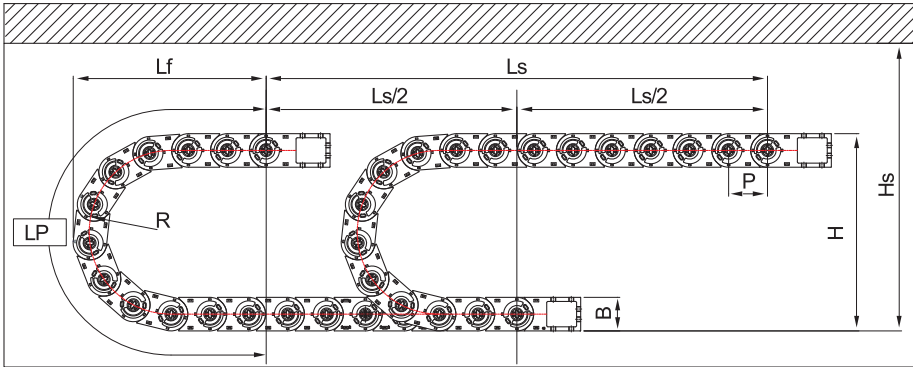
### Load diagrams self-supporting length





## Enclosed Type **ST 044E**

### LAYOUT OF THE CHAIN



(Dimensions in mm)

Bending radius R	70	90	120	150
Lp	396	459	553	648
Lf	177	197	227	257
H	178	218	278	338

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

### ST 044E Type

**Pitch P:** 44mm

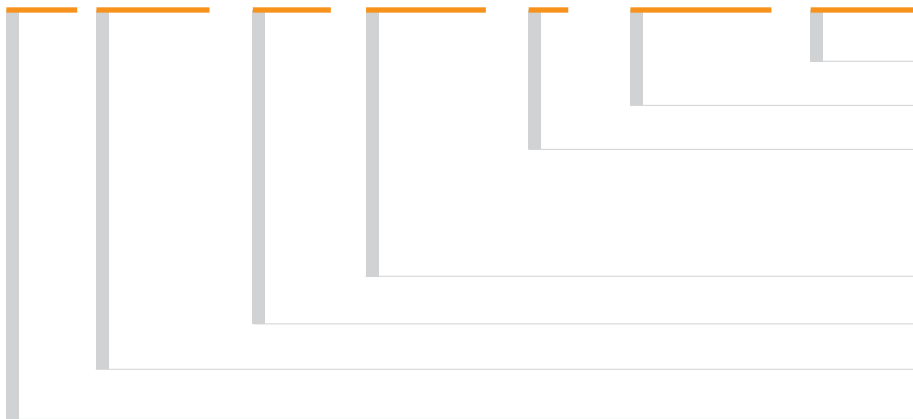
**Height B:** 38mm

**Height H:** 2R+38mm

**Hs** ≥ H+30mm

### ORDERING (주문방법)

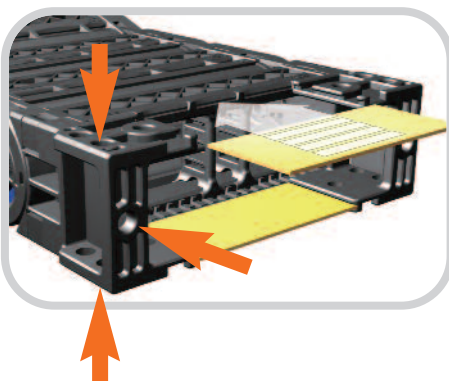
## ST 044E. 100. R120 / F - 1500L : 10ST



- 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
- 밀폐형타입 Enclosed Type

### Shift Chain

### BRACKET TYPE (브라켓타입)



#### FEB (Free End Bracket)

FEB 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. Also, inseting plastic sheets creates enclosed structure in the bracket.

(The order for subsidiary materials is extra.)

체인을 고정하는 끝부분으로 기존 Easy End Bracket과 Normal End Bracket을 하나로 통합한 방식으로 취부의 효율성을 높임.

또한 부자재를 삽입하여 브라켓부분이 완전밀폐가 될 수 있는 구조. (부자재는 별도 주문)

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



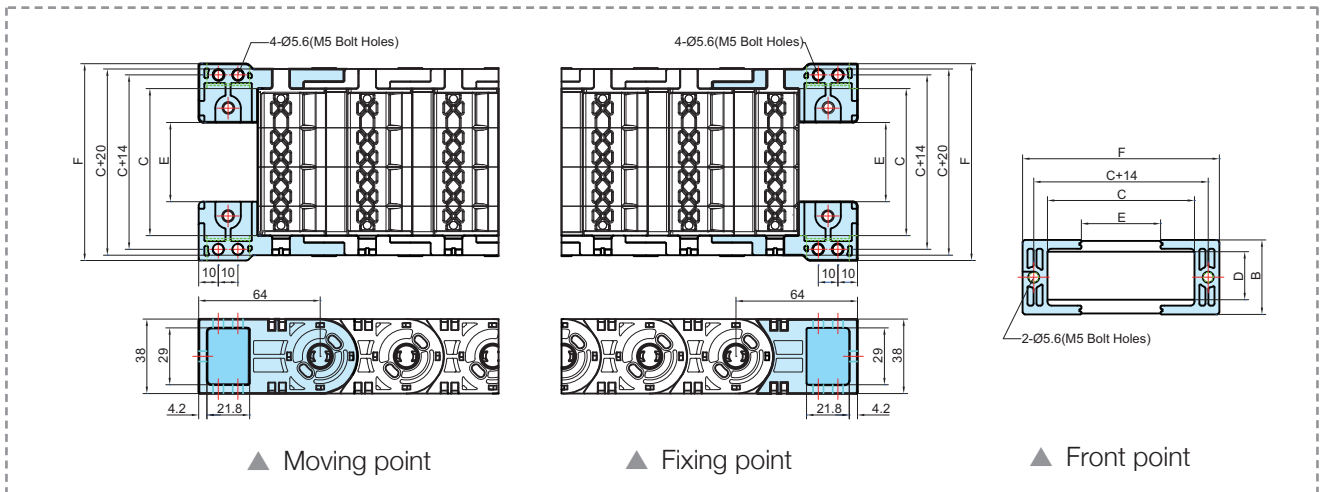
Enclosed Type **ST 044E**

**CHAIN CROSS SECTION**



Chain Type	A	B	C	D	Bending Radius(R)	Weight in kg/m
ST 044E.035	56		35			1.03
ST 044E.055	76	38	55	24.5	70, 90, 120, 150	1.21
ST 044E.075	96		75			1.37
ST 044E.100	121		100			1.58

**FREE END BRACKET**



Chain Type	F	B	C	D	E	Hole Type
ST 044E.035	60.4	38	35	24.5	0.4	M5 Bolt Holes
ST 044E.055	80.4		55		20.4	
ST 044E.075	100.4		75		40.4	
ST 044E.100	125.4		100		65.4	

2014 NEW PRODUCT

Unity Systems®

Enclosed Type ST 044E

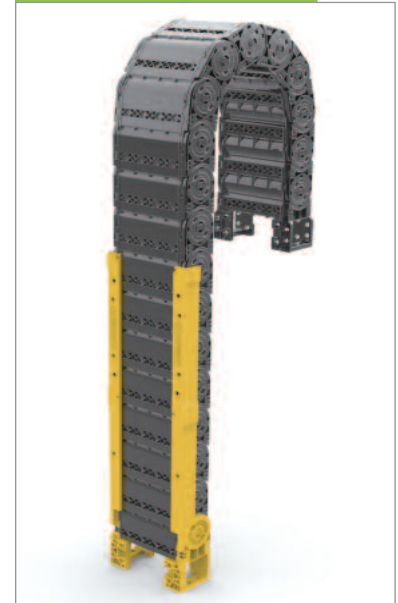
This type of bracket is to protect deflection of chain which will support the weight of certain section start from bracket, also will protect the damage of chain.

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

▼ Horizon Type 수평형

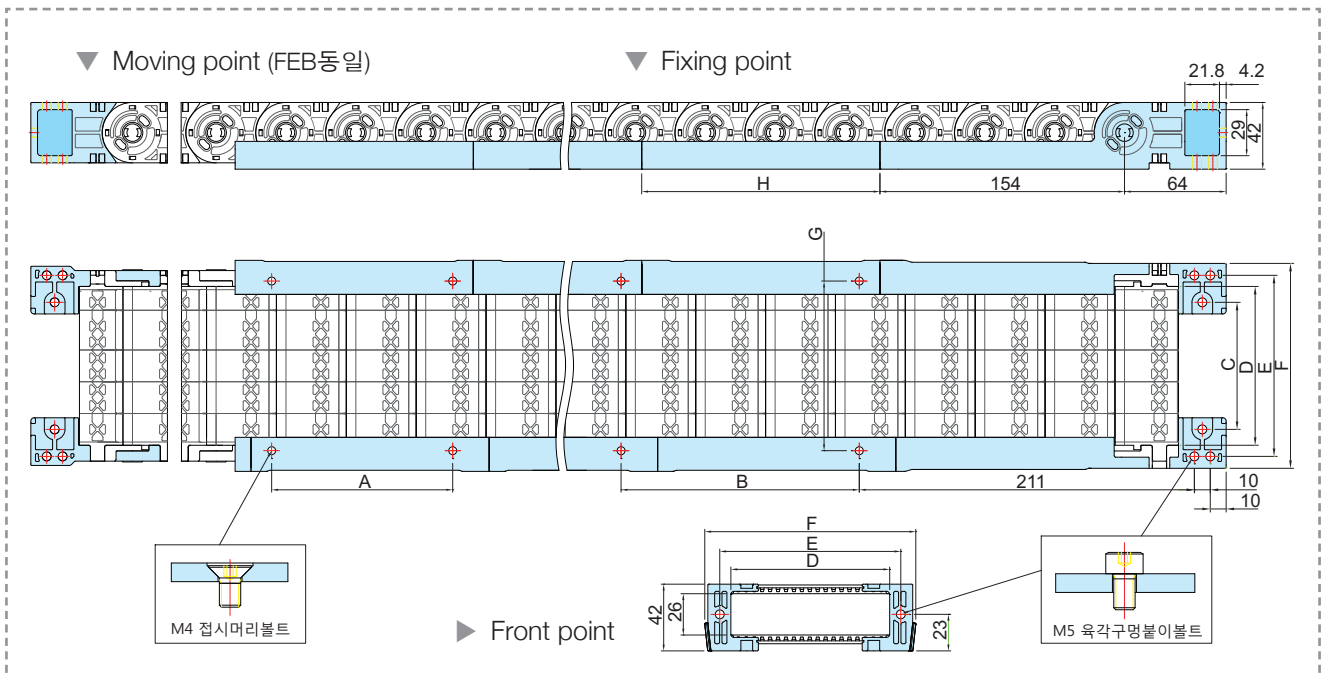


▼ Vertical Type 수직형



GUIDE CHANNEL TYPE END BRACKET

(단위: 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
ST 044E.035	15	35	49	68	41.8	GC150	150	151	114
ST 044E.055	35	55	69	88	61.8				
ST 044E.075	55	75	89	108	81.8	GC250	250	251	214
ST 044E.100	80	100	114	133	106.8				



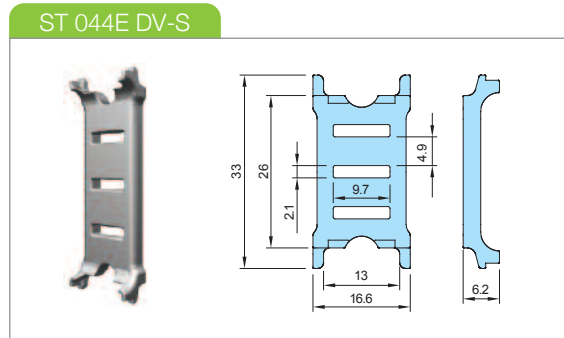
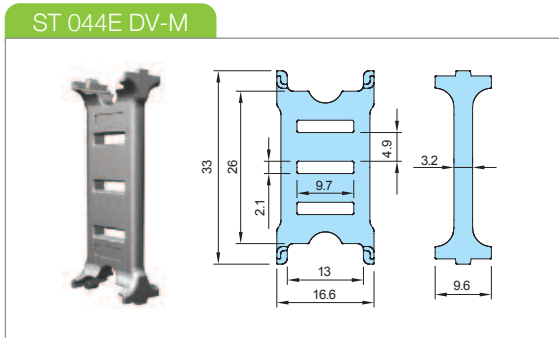
## Enclosed Type **ST 044E**

### DIVIDERS & SEPARATORS

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 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 사용하여 케이블의 꼬임방지와 피복손상을 방지할 수 있습니다.

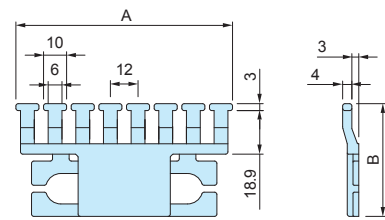
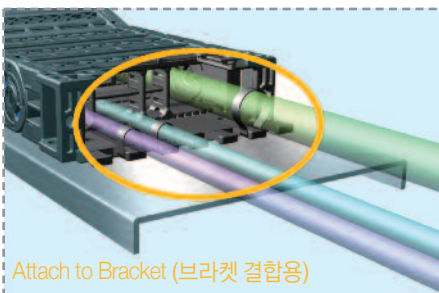


▶ Assemble divider every Two links. / 2링크마다 결합.

### ST 044E Separators (SP) (No. : S-SP/M)

Chain Type \ Separators	SP035	SP050	SP055	SP075	SP100	SP125	SP150	SP175	SP200
ST 044E	○	○	○	○	○	○	○	○	○
ST 055E	○	○	○	○	○	○	○	○	○

### TIE WRAP



(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 Shift 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.

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