ISO 9001 CE IPA RoHS

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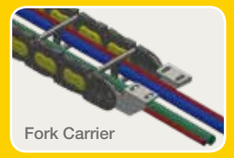
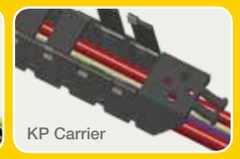

Fork Carrier


Smart Carrier


KP Carrier


Hybrid Carrier

(주)코닥트


ECO-E Carrier


Steel Carrier


Dresspack System


Tube & Accessory

KODUCT

2021 GENERAL CATALOG

(주)코닥트
KODUCT
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Challenging the World

A company creating values win-win global partnership

CABLE CARRIER SYSTEM

Challenging the World

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CABLE CARRIER SYSTEM

KODUCT

Contents
차례

Greeting
인사말

대표이사 심술진
CEO **SIM SOOLJIN**

(주)코닥트는 전선보호 장치인 케이블 캐리어를 제조 판매하는 업체로서 고객에게 보다 나은 품질과 서비스를 제공하기 위해 끊임없는 노력을 해오고 있습니다.
또한 지속적인 연구개발과 투자를 통해 다양한 제품군을 개발하고 적용분야를 다각화하여 고객에게 사용의 편리성과 선택의 다양성을 제공하고 있습니다.
당사는 고객의 니즈에 대한 정확한 예측으로 인한 제품의 비용절감을 통해 고객의 이익을 극대화 하여 고객만족을 이룸으로써 산업발전에 이바지 하는 것을 최고의 목표로 하고 있습니다.
자동차, 조선, 철강, 반도체 산업 등 다양한 산업분야에 적용 가능한 제품을 지속적으로 개발하고 고객과 함께 동반성장을 이룩하여 명실공히 세계산업발전에 최고의 브랜드가 될 것을 약속드립니다.

KODUCT CO.,LTD. is a manufacturer of the cable carrier, and has been making constant efforts to provide better quality and service to customers.
Through continuous R&D and investment, we develop diverse product lines and diversify our application industry to provide convenience to use and wide selection for customers.
We aim to contribute to the development of the industry by achieving customer satisfaction as being maximizing the customer's profits through reducing the cost of products due to accurate prediction of the customer's needs.
We promise that we will continue to develop products applicable to various industrials such as automobile, shipbuilding, steel and semiconductor industries and achieve mutual growth with our customers to become the best brand in global industrial development.

Road Map
로드맵

KODUCT

MISSION
- 무결점 품질 제품 개발 : 케이블 캐리어, 튜브류
- 신소재적용, 금형기술, 생산공정 기술개발로 인한 생산시스템 최적화
- 디자인 경쟁력 강화
- Development of PERFECT QUALITY products
- Development of preper APPLICATIONS : MOLD / MATERIAL / PROCESS
- Design Competent : CABLE CARRIER / HOSE / CONNECTOR / BRACKET

VISION
- R&D 역량강화
- 신제품 및 제품 생산공정기술 개발 및 핵심요소 기술 축적으로 경쟁력 강화
- 전자 및 로봇 자동화 산업분야 진출
- R&D Center
- Accumulation of CORE TECHNOLOGIES for NEW PRODUCTS / PROCESSES
- Innovation in Electronics, Robotize

PLAN
- 조직개혁 ➡ 기술연구개발, 생산기술 개발의 핵심인력 보강
- 생산원가 절감을 위한 개선 활동 경영 중점 제시 ➡ 생산 및 선행기술 핵심요소 기술 강화
- 지속적인 회사의 성장과 가치 부여를 위한 신 성장 동력 발굴
- Reorganization R&D, Product Team Reinforce
- IMPROVEMENT ACTIVITY (Cost Reduction) Enhanced Core Technology in Product Process
- Review APPLICATIONS FOR New Paradigm Business Models

Domestic
국내

본사 Head Office

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ITALY _ PST SRL
Tel : +39.011.4080533 **E-mail :** simone.immordino@pstsrl.eu

History
연혁

2020 행정안전부장관 표창
Official commendation from "Ministry of the Interior safety"

2019 ECO-E Carrier 개발 (저분진, 저소음) TUV, IPA 인증
New development ECO-E Carrier (low dust / noise), TUV IPA certificate.

2018 중소벤처기업부장관 표창상
Official Commendation from "The Ministry of SMEs and Startups"

2017 케이블 보호 장치 (특허 출원 제10-1777266호)
Cable Protect System (Patent No. 10-1777266)

2014 특허혁신기업협회 최우수 표창상
Win the grand prize for patent Innovation Bussines Association

2013 콘넥터 ROHS테스트 - 유해물질비검출
ROHS test for Connector (Non detection of harmful substance)

2012 우수특허기술상 수상
Official Commendation from "Patent Technology"

2011 부산혁신기업인상 수상
Official Commendation from "Innovation enterpriser prize"

2010 실시간 SPOT 용접상태 모니터링 제품개발
Developed the real-time monitoring system for Spot welding condition

2009 Dresspack(레오니사-독일) Asia-Pacific 판매권 획득
Acquired panchise of DRESSPACK ASIA-PACIFIC (LEONI Company/Germany)

2008 사옥확장이전 / 벤처기업인상 수상 / 발명특허대상 수상 / 백만불 수출탑 수상
The company moved
Expanded Official Commendation from "Venture business"
Official Commendation from "Invention, Konzession"
Official Commendation from "Exprot of million dollar"

2007 UL MARK 획득 - 후렉시블 튜브 / 미국, 알라바마주 법인사무소 설립
궤도곡률이 조절되는 케이블 캐리어 (특허 출원 제 10-0727361호)
소음과 분진을 저감시킨 케이블 캐리어 (특허 출원 제10-0727362호)
후렉시블 튜브용 콘넥터 (특허 출원 제10-0727359호)
KD type IPA테스트 (class 1) / 국무총리 표창
UL MARK obtained for Flexible Tube Established the branch corporation in AL, U.S.A
A Cable Carrier system about control Radius (Patent No. 10-0727361)
The low dust / noise Cable Carrier (Patent No. 10-0727362)
A Connector for a Flexible Tube (Patent No. 10-0727359)
Taking IPA test for KD type - low dust and noise (class 1)
Official commendation from "The Prime Minister"

2006 기업부설연구소 설립
포스코 업체등록
국제자동화 품질인증 ISO / TS16949 획득
산업자원부 장관 표창
Established our own R&D Center
Vendor registered for POSCO
Automative quality system ISO / TS16949 registered
Official Commendation from "The Ministry of Commerce, Industry and Energy"







2005 클린사업장 지정 / 상하이 법인사무소 설립
부산 자동차 부품 공업협동조합 회원가입
유망 중소기업 등록 / 혁신경영 INNO-BIZ 등록
경영시스템 인증 / 스틸 케이블 캐리어 실용신안등록 제0400822호
Clean workplace registered
Established a branch corporation in Shanghai, China
Membership of Motor parts constitution in Busan / Promising small medium
Business registered / innovation management (INNO-BIZ) registered
Management system (ISO) registered
Steel Cable Carrier utility panted No. 0400822

2004 한국무역협회 가입
Joined the member of Korea Trade Association

2002 삼성전자 업체등록 / 현대미포조선 업체등록
대우조선 업체등록 / SFA 업체등록
케이블 캐리어 조립구조 실용신안등록 제0038590호
CE마크 획득
Vendor registered for Samsung Electronics Co.,Ltd.
Vendor registered for Hyundai Mipo Shipyared Co.,Ltd.
Vendor registered for Daewoo Shipbuilding Co.,Ltd.
Vendor registered for SFA Co.,Ltd.
Assembly structure of Cable Carrier Utility model Pated No. 0038590
CE certificate obtained

2000 현대자동차 업체등록 / CDM 밀폐형 타입 개발 / 저분진 타입 개발
Vendor registered for Hyundai Motors Co.,Ltd.
CDM type(Enclosed type) developed
Low dust type developed

1999 (주)LG전자 업체등록
벤처기업
Vendor registered for LG Electronics Co.,Ltd.
Venture business registered

1998 (주)풍산 온산공장 업체등록
Vendor registered for Poongsan Co.,Ltd. Onsan factory

1997 대만 해외사무소 설립 / (주)코닥트 법인 전환
Taiwan Overseas office set up
Converted into KODUCT CO.,LTD

1995 대우중공업 업체 등록
Vendor registered for Daewoo Heavy Industry

1994 삼성중공업 거제조선 업체등록
Vendor registered for Samsung Heavy Industry Geoje Shipyard

1992 케이블 캐리어 국산화 개발 성공
Successful development of Cable Carrier Localization

1986 우진인터내셔날 설립
Established under the company name of Woojin International

Certificate of Patent
특허등록

Certificate of Company
기업인증서

Certificate of Validating
유효인증서

Test Report
시험성적서

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What's The Cable Carrier?

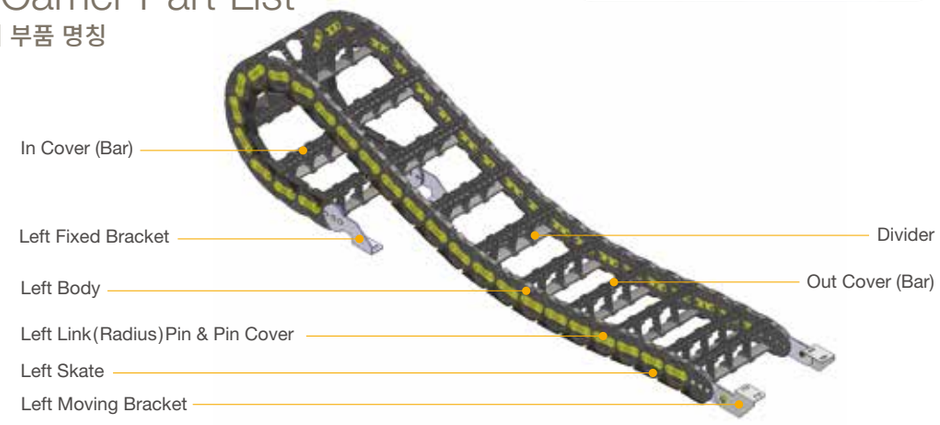
케이블 캐리어란?

케이블 캐리어는 케이블 및 호스 등을 보호하기 위해 각종 기계 장치의 움직이는 부위에 부착되어 사용되며 빠른 속도나 움직임에 따라 일어나는 케이블 및 호스의 뒤틀림, 꼬임으로 인한 단선을 방지하기 위해 사용 되어지는 제품이다.
케이블 캐리어는 사용환경 및 용도에 따라 그 재질을 플라스틱 또는 철을 사용하고 있다.

Cable Carrier installed in moving machine and equipment is used to protect cables and hoses. It prevents cables and hoses from being tangled, disconnected caused by rapid movements. Cable Carrier is made of plastic or metal in accordance of environment and applications.

Cable Carrier Part List

케이블 캐리어 부품 명칭



How to Choose Suitable Cable Carrier

케이블 캐리어의 선정에 필요한 기준

- 장비의 이동거리 : 케이블 캐리어의 길이 계산
- 케이블 및 호스의 외경과 수량 : 케이블 캐리어의 내폭 결정
- 제일 굵은 케이블 또는 호스의 외경 : 케이블 캐리어 곡률반경 결정
- 케이블 및 호스의 합계 중량 : 케이블 캐리어 Span 결정
- 장비의 작동횟수 및 속도
- 주위환경(예:기름, 스페터, 칩, 온도)

- Travel of machinery : To calculate lengths
- Outer diameters and quantity of cables and hoses
  : To select an inner width of the Cable Carrier
- Outer diameters of the thickest cables or hoses
  : To select a radius of the Cable Carrier
- Total weight of cable and hoses
  : To select a span of the Cable Carrier
- The working period and speed of machines
- Ambient Environment (i.e. oil, spatter, ship and temperature)

How to Decide the Curvature of Cable Carrier

케이블 캐리어 곡률반경 선정방법

케이블 및 호스의 경우 제품 카탈로그 상에 곡률반경 R이 표기되어 있으나 정확한 값을 알 수 없는 경우,
입선될 케이블이나 호스의 직경이 가장 큰 것을 기준으로 다음과 같이 정한다.

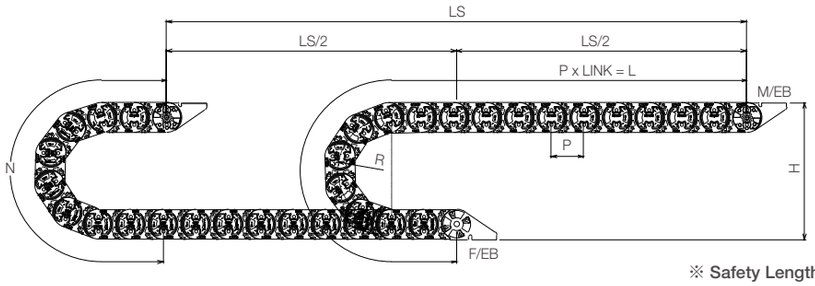
- 전선 : R min > 6~8 x Φ (가장 큰 전선의 외경)
- 에어호스 : R min > 8~10 x Φ (가장 큰 에어호스의 외경)
- 유압호스 : R min > 12~15 x Φ (가장 큰 유압호스의 외경)

For cables and hoses, if the product catalog shows a radius of curvature, but Incase of not knowing cable radius, you can select following details

- Electronic Wire : R min > 6~8 x Φ (Outer diameter of the thickest cable)
- Pneumatic Hoses : R min > 8~10 x Φ (Outer diameter of the thickest hose)
- Hydraulic Hoses : R min > 12~15 x Φ (Outer diameter of the thickest hose)

How to Calculate Length

케이블 캐리어 길이 산정 방법



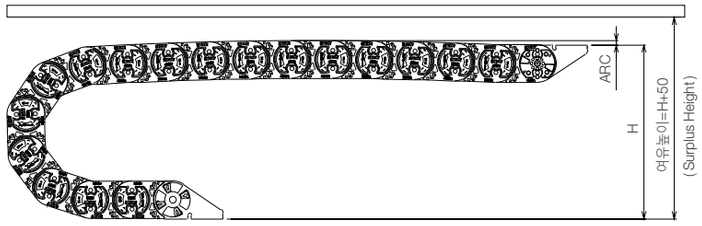
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length + πr
- **P :** Pitch
- **R :** Radius
- **H :** Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

※ **Safety Length :** 케이블 캐리어 구동시 필요한 여유길이.
Required Safety Length to operate cable carrier.

How to Decide the Clearance Height of Cable Carrier

케이블 캐리어 여유높이



케이블 캐리어 Long Distance Type 외의 전체 Type은 케이블캐리어 설치시 여유높이를 감안하여 선정해야 제품이 보다 안전하게 작동되어 수명을 연장시켜 준다. 단, 업체의 장비 특성에 따라 여유높이 없이 설치 가능하다.

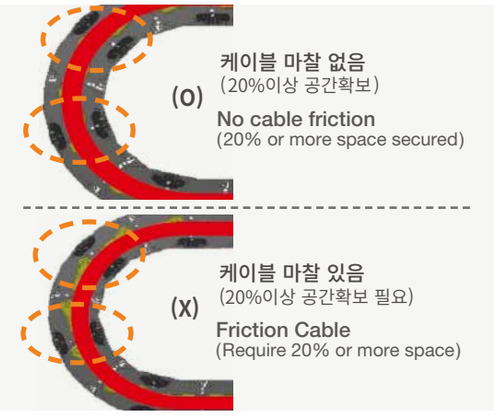
The clearance height enables safe operation and a long-term performance. Additionally for particular machinery, the products can be supplied without clearance heights.
(No surplus height for slide types such as long distance type) (Ref. page 15~22)

How to Install Cables & Hoses

케이블 및 호스 설치방법

케이블캐리어 내에서 케이블과 호스간 20%이상 여유 공간을 확보하고 외측커버에 케이블의 마찰이 없어야 작동시 케이블마모 혹은 단선이 발생하지 않는다. 또한 케이블 캐리어의 고정단과 이동단의 브라켓 앞쪽에 케이블 및 호스를 Cable Binder로 고정시켜야 한다.

Cables and hoses should make free space more than 20% in the cable carrier. Cable wear or disconnect does not occur during operation when there is no friction between cover and cable. Cables and hoses must fixed by Cable Binder in front of cable carrier's moving and fixed bracket.



- 좌/우 균형 있게 분배한다.
- 내부의 케이블 및 호스는 케이블 캐리어의 반복 움직임에 따라 자유롭게 움직일 수 있도록 여유공간을 확보해야 한다.
- 케이블 및 호스가 일렬로 배열되어야 하며 꼬임이 없어야 한다.

- Classify cables and hoses in proportion.
- For smooth and repeat movement of cables and hoses in cable carrier, they should be placed spaciously.
- Cables and hoses should be brought into a line to prevent them from being tangled.

Roller Support

How to Prevent the Defletion of Cable Carrier
케이블 캐리어의 처짐 방지

각 Type별 FreeSpan 길이가 선정되어 있으나 장비의 특성에 따라 길이를 연장 해야 할 경우 제품의 처짐 방지를 위해 롤러를 설치하여 처짐 없이 사용이 가능하다.

When extended lengths are needed even if there are already freeSpan length per each type, the Fixed Roller Support should be installed as the left picture to prevent them from deflection.

처짐방지롤러
Fixed Roller Support

Guide Channel

How to Install Cable Carrier for Medium and Long Distances
중·장거리용 케이블 캐리어의 설치 방법

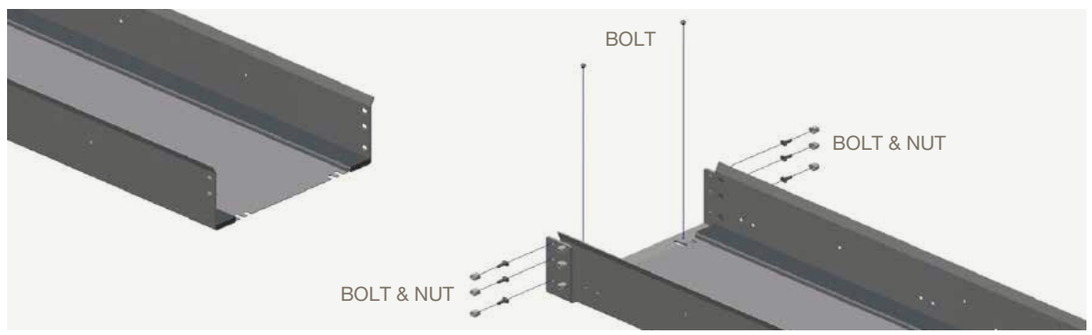
중·장거리용 케이블 캐리어는 타입 선정과 함께 가이드 잔넬이 중요하다. 일반적으로 케이블 캐리어와 가이드 잔넬을 함께 구매할 경우에는 이상이 없으나, 규격에 맞지 않는 가이드 잔넬을 자체 제작 할 경우 문제가 발생할 수 있다.
가이드잔넬은 규격품을 사용하거나 규격에 맞춰 제작하여야 한다.

Installing proper guide channel is also important as much as finding correct cable carrier.
It does not cause defects to supply cable carrier with guide channel from KODUCT.
Problems can occur if you make your own Guide Channel that doesn't meet specifications.
Guide Channel should be using standard parts or in accordance with specifications.

Cautions During Installation
가이드 잔넬 설치 시 유의사항

- 잔넬 연결부가 뒤틀림 없이 일직선이 될 수 있도록 한다.
- 장비 작동 시 진동이나 흔들림이 없도록 고정한다.

- Guide channel should be linked straightly without being twisted.
- Fixing parts tightly not to cause vibrations.



Guideline for fast product selection

Cable Carrier

Series	Type	P Pitch	H_1 Inside Height	H_1 Cable & Hose	W Width (mm)	H Radius (mm) [Height (mm)]	Material / Common Part: Body	Cover	End Bracket	Distance (m): Short&Long	Distance (m): Free Span	Moving Speed (m/sec)	Page
KP Carrier	KP16	15.6	10	8	10 15 25 40 -	- [-] - [-] 50 [113] 38 [89] 28 [69] 18 [49]	ENG. Plastic	-	-	Short Distance	0.7	3	A 07
	KP20	20	15	12	15 25 30 40 -	- [-] - [-] 50 [120] 37 [94] 28 [76] 18 [56]	"	-	"		1	3	A 09
	KP32	32	20	16	15 25 35 50 -	- [-] 100 [226] 75 [176] 50 [126] 38 [102] 28 [82]	"	-	-		1.5	3	A 11
	KP40	40	25	22	40 57 80 100 -	200 [439] 150 [339] 125 [289] 100 [239] 75 [189] 50 [139]	"	-	Steel & Plastic	Short Distance	1.6	3	A 13
	KP454	45.4	28	23	40 57 80 100 -	195 [432] 145 [332] 120 [282] 90 [222] 70 [182] 48 [138]	"	KP454 -CVR	ENG. Plastic		1.8	3	A 15
	KP50	55.5	32.1	28	40 50 65 75 80 100 120 150 160 175 187 200 -	200 [455] 150 [355] 125 [305] 100 [255] 75 [205] 60 [175] -	"	PSC -CVR	Steel & Plastic		2	3	A 17
	KM50	55.5	MAX.32 MAX.24	MAX.28 MAX.12	40 65 80 - -	200 [455] 150 [355] 125 [305] 100 [255] 75 [205] -	"	-	KP50 -EBSET		2	3	A 19
Smart Carrier	KSC588 /10(25)	58.8	36.1	31	- 120 50 150 65 160 80 - 100 87 200 - -	200 [456] 150 [356] 125 [306] 100 [256] 80 [216] 68 [192]	ENG. Plastic	PSC -CVR	Steel	Short Distance	2.3	3	B 09
	KSC715 /10(25)	71.5	47.9	43	65 80 225 250 100 150 200 175 - -	250 [570] 200 [470] 150 [370] 125 [320] 100 [270] 80 [230]	"	KSC67 -CVR	KSC715 -EBSET		3	3	B 11
	KS091	91	54.2	45	100 150 200 250 300 350 -	300 [684] - 125 [306] 250 [584] 200 [484] 150 [384]	"	KSC -CVR	-		3.8	3	B 13
	KSC588/S	58.8	36.1	31	- 120 50 150 65 160 80 - 100 87 200 - -	200 [456] 150 [356] 100 [256] 80 [216] 68 [192]	"	PSC -CVR	-	Long Distance	-	3	B 15
	KSC715/S	71.5	47.9	43	65 80 225 250 100 150 200 175 - -	250 [570] 200 [470] 150 [370] 125 [320] 100 [270] 80 [230]	"	KSC67 -CVR	-		-	3	B 17
	KM715 /10(25)	71.5	MAX.45 MAX.37	MAX.41 MAX.16	75 120 - - -	250 [570] 200 [470] 150 [370] 125 [320] 100 [270] -	"	-	KSC715 -EBSET	Short Distance	3	3	B 19

Guideline for fast product selection

Cable Carrier

Series	Type	Pitch	Inside Height	Cable & Hose	Width (mm)	Radius (mm) [Height (mm)]	Material / Common Part: Body	Cover	End Bracket			Distance (m): Short& Long	Distance (m): Free Span	Moving Speed (m/sec)	Page
Fork Carrier	CDS070	70	40	36	80~400	75 [215] / 100 [265] / 130 [325] / 180 [425] / 230 [525] / -	ENG. Plastic	Aluminum	S080 -BAR	Steel	CDS070 -EBSET	Short Distance	2.5	5	C 11
	CDS080	80	49	43	80~400	150 [380] / 200 [480] / 250 [580] / 280 [680] / 400 [880] / -	"	"	S080 -BAR	"	CDS080 -EBSET		3.2	5	C 13
	CDS100	100	70.5	62	100~600	200 [504] / 250 [604] / 300 [704] / 350 [804] / 400 [904] / 500 [1104]	"	"	S100 -BAR	"	CDS100 -EBSET		3.8	5	C 15
	CDS150	150	111	100	200~800	200 [560] / 300 [760] / 400 [960] / 500 [1160] / 600 [1360] / -	"	"	S150 -BAR	"	-		6	5	C 17
	SRS070	70	40	36	80~400	75 [215] / 100 [265] / 130 [325] / 180 [425] / 230 [525] / -	"	"	S080 -BAR	"	SRS070 -EBSET	Long Distance	-	5	C 19
	SRS080	80	49	43	80~400	150 [380] / 200 [480] / 250 [580] / 280 [680] / 400 [880] / -	"	"	S080 -BAR	"	SRS080 -EBSET		-	5	C 21
	SRS100	100	70.5	62	100~600	200 [504] / 250 [604] / 300 [704] / 350 [804] / 400 [904] / 500 [1104]	"	"	S100 -BAR	"	SRS100 -EBSET		-	5	C 23
	SRS150	150	111	100	200~800	200 [560] / 300 [760] / 400 [960] / 500 [1160] / 600 [1360] / -	"	"	S150 -BAR	"	-		-	5	C 25
	KDP070	70	40	36	- - 65 75 80 87 100 / 120 150 160 175 187 200 -	75 [215] / 100 [265] / 130 [325] / 180 [425] / 230 [525] / -	"	ENG. Plastic	PSC -CVR	"	CDS070 -EBSET	Short Distance	2.5	5	C 27
	CDP080	80	49	45	100 150 200 250 300 350 400	150 [376] / 200 [476] / 250 [576] / 280 [636] / 400 [876] / -	"	"	CDP091 -CVR	"	CDS080 -EBSET		3.2	5	C 29
	CDP100	100	69.3	60	100 150 200 250 300 350 -	200 [504] / 250 [604] / 300 [704] / 350 [804] / 400 [904] / 500 [1104]	"	"	KSC -CVR	"	CDS100 -EBSET		3.8	5	C 31
	KDPS070	70	40	36	- - 65 75 80 87 100 / 120 150 160 175 187 200 -	75 [215] / 100 [265] / 130 [325] / 180 [425] / 230 [525] / -	"	"	PSC -CVR	"	SRS070 -EBSET	Long Distance	-	5	C 33
	CDPS080	80	49	45	100 150 200 250 300 350 400	150 [376] / 200 [476] / 250 [576] / 280 [636] / 400 [876] / -	"	"	CDP091 -CVR	"	SRS080 -EBSET		-	5	C 35
	CDPS100	100	69.3	60	100 150 200 250 300 350 -	200 [504] / 250 [604] / 300 [704] / 350 [804] / 400 [904] / 500 [1104]	"	"	KSC -CVR	"	SRS100 -EBSET		-	5	C 37
	CDM080	80	MAX.49 MAX.41	MAX.45 MAX.25	150 200 300 - - - -	150 [380] / 200 [480] / 250 [580] / 280 [680] / 400 [880] / -	"	"	-	"	CDS080 -EBSET	Short Distance	3.2	5	C 39
	CDM100	100	MAX.68 MAX.63	MAX.64 MAX.33	150 200 300 - - - -	200 [506] / 250 [606] / 300 [706] / 350 [806] / 400 [906] / 500 [1106]	"	"	-	"	CDP100 -EBSET		3.8	5	C 41

Cable Carrier

Series	Type	Pitch	Inside Height	Cable & Hose	Width (mm)	Radius (mm) [Height (mm)]	Material / Common Part: Body	Cover	End Bracket			Distance (m): Short& Long	Distance (m): Free Span	Moving Speed (m/sec)	Page
Hybrid Carrier	KH526/S	52.6	47.9	43	65 80 100 125 150 175 200 / 225 250 - - - - -	125 [337] / 175 [437] / 225 [537] / 275 [637] / - / -	ENG. Plastic	ENG. Plastic	KSC67 -CVR	Steel	KH526/ S-EBSET	Long Distance	-	5	D 09
	KHA526/S	52.6	49	43	80~400	125 [337] / 175 [437] / 225 [537] / 275 [637] / - / -	"	Aluminum	S080 -BAR	"	KH526/ S-EBSET		-	5	D 11
	KHA91/S	91	70.5	65	100~600	200 [489] / 250 [589] / 300 [689] / 350 [789] / 400 [889] / 500 [1089]	"	"	S100 -BAR	"	-		-	5	D 13
	KHA92/S	91	80	73	100~600	200 [489] / 250 [589] / 300 [689] / 350 [789] / 400 [889] / 500 [1089]	"	"	S100 -BAR	"	-		-	5	D 15
ECO-Σ Carrier	KE30	30	28	25	40 57 80 100 - - -	50 [151] / 70 [191] / 90 [231] / 110 [271] / - / -	ENG. Plastic	ENG. Plastic	KP454 -CVR	ENG Plastic	-	Short Distance	1.5	3	E 09
	KE35	35	39	30	40 57 80 100 - - -	75 [217.5] / 100 [267.5] / 125 [317.5] / 150 [367.5] / - / -	"	"	KP454 -CVR	"	-		1.8	3	E 11
	KE45	45	50	45	40 50 65 75 80 87 100 / 120 150 160 175 187 200 -	75 [246] / 100 [296] / 125 [346] / 150 [396] / - / -	"	"	PSC -CVR	"	-		2.4	3	E 13
Steel Carrier	CDKS070	70	31	25	60~300	75 [200] / 90 [230] / 125 [300] / 145 [340] / 200 [450] / -	Steel	Aluminum	-	Steel	CDK070 -EBSET	Short Distance	3.5	2	F 09
	CDKS095	95	48	42	100~400	125 [320] / 145 [360] / 200 [470] / 250 [570] / 300 [670] / 400 [870]	"	"	S30 -BAR	"	CDK095 -EBSET		5	2	F 11
	CDKS125	125	70	48	100~400	200 [496] / 250 [596] / 300 [696] / 400 [896] / - / -	"	"	S40 -BAR	"	CDK130 -EBSET		6.2	2	F13
	CDKS130	130	70	48	100~400	200 [496] / 250 [596] / 300 [696] / 400 [896] / 500 [1096] / -	"	"	S40 -BAR	"	CDK130 -EBSET		6.2	2	F 15
	CDKS180	180	113	86	300~700	250 [640] / 300 [740] / 400 [940] / 500 [1140] / 600 [1340] / 700 [1540]	"	"	S40 -BAR	"	CDK180 -EBSET		8	2	F 17
	CDKS250	250	-	-	300~700	350 [920] / 450 [1120] / 600 [1420] / 750 [1720] / 1000 [2220] / 1250 [2720]	"	"	S40 -BAR	"	CDK250 -EBSET		10	2	F 19
	CDKH070	70	-	-	60~300	75 [200] / 90 [230] / 125 [300] / 145 [340] / 200 [450] / -	"	"	-	"	CDK070 -EBSET	Short Distance	3.5	2	F 21
	CDKH095	95	-	-	100~400	125 [320] / 145 [360] / 200 [470] / 250 [570] / 300 [670] / 400 [870]	"	"	-	"	CDK095 -EBSET		5	2	F 23
	CDKH125	125	-	-	100~400	200 [496] / 250 [596] / 300 [696] / 400 [896] / - / -	"	"	-	"	CDK130 -EBSET		6.2	2	F 25
	CDKH130	130	-	-	100~400	200 [496] / 250 [596] / 300 [696] / 400 [896] / 500 [1096] / -	"	"	-	"	CDK130 -EBSET		6.2	2	F 27
	CDKH180	180	-	-	300~700	250 [640] / 300 [740] / 400 [940] / 500 [1140] / 600 [1340] / 700 [1540]	"	"	-	"	CDK180 -EBSET		8	2	F 29
	CDKH250	250	-	-	300~700	350 [920] / 450 [1120] / 600 [1420] / 750 [1720] / 1000 [2220] / 1250 [2720]	"	"	-	"	CDK250 -EBSET		10	2	F 31
	CDKSL095	95	48	42	100~400	125 [320] / 145 [360] / 200 [470] / 250 [570] / 300 [670] / 400 [870]	"	"	S30 -BAR	"	-	Long Distance	-	2	F 33
	CDKHL095	95	-	-	100~400	125 [320] / 145 [360] / 200 [470] / 250 [570] / 300 [670] / 400 [870]	"	"	S30 -BAR	"	-		-	2	F 33
	CDKSL130	130	70	48	100~400	200 [496] / 250 [596] / 300 [696] / 400 [896] / 500 [1096] / -	"	"	S40 -BAR	"	-		-	2	F 35
	CDKHL130	130	-	-	100~400	200 [496] / 250 [596] / 300 [696] / 400 [896] / - / -	"	"	S40 -BAR	"	-		-	2	F 35

Guideline for fast product selection

Cable Carrier

Series	Type	Pitch	Inside Height	Cable & Hose	Width (mm)							Radius (mm) [Height (mm)]						Material / Common Part					Distance (m)		Moving Speed (m/sec)	Page
																		Body	Cover		End Bracket		Short& Long	Free Span		
Cable Track System	SRST080	80	47	43	80~400							150 [506]	200 [606]	250 [706]	280 [766]	400 [1006]	-	ENG. Plastic	Aluminum	S080 -BAR	Steel	CDS080 -EBSET	Long Distance	-	5	G 09
	SRST100	100	70.5	62	100~600							200 [679]	250 [779]	300 [879]	350 [979]	400 [1079]	500 [1279]	"	"	S100 -BAR	"	CDS100 -EBSET		-	5	G 11
	CDKST095	95	48	42	100~400							125 [513]	145 [553]	200 [663]	250 [763]	300 [863]	400 [1063]	Steel	"	S30 -BAR	"	CDK095 -EBSET		-	2	G 13
	CDKST130	130	70	48	100~400							200 [690]	250 [790]	300 [890]	400 [1090]	500 [1290]	-	"	"	S40 -BAR	"	CDK130 -EBSET		-	2	G 15
Calmly Flex	KCF115	25	52	45	101							100 [273]	140 [353]	225 [523]	300 [673]	-	-	ENG. Plastic	Stainless steel	KCF115 -CVR	Aluminum	KCF115 -EBSET	Short Distance	2.4	3	H 05
	KCF120	25	71	65	101							150 [392]	200 [492]	225 [542]	300 [692]	-	-	"	"	KCF120 -CVR	"	KCF120 -EBSET		2.8	3	H 07
	KCFM115	25	52	45	101							100 [273]	140 [353]	225 [523]	300 [673]	-	-	"	"	KCF115 -CVR	"	KCF115 -EBSET		2.4	3	H 09
	KCFM120	25	71	65	101							150 [392]	200 [492]	225 [542]	300 [692]	-	-	"	"	KCF120 -CVR	"	KCF120 -EBSET		2.8	3	H 11
Additional Carrier	KP357	35.7	36.9	32	52	-	-	-	-	-	-	75 [196.9]	87 [221.7]	100 [248.9]	125 [298.8]	150 [348.7]	200 [448.2]	ENG. Plastic	ENG. Plastic	-	ENG. Plastic	-	Short Distance	1.8	3	I 03
	CDP091	91	55	53	100	150	200	250	300	350	400	150 [384]	200 [484]	250 [584]	300 [684]	-	-	"	"	CDP091 -CVR	"	CDP091 -EBSET		3.2	5	I 05
	CDM091	91	20	16	150	200	250	300	-	-	-	150 [384]	200 [484]	250 [584]	300 [684]	-	-	"	"	-	Steel	CDP091 -EBSET		3.2	5	I 07
	KDP100	100	85	78	150	200	250	300	350	400	-	150 [418]	250 [618]	300 [718]	350 [818]	400 [918]	-	"	"	-	Steel	KDP100 -EBSET		4.2	3	I 09
	KDM100	100	55	53	150	200	300	-	-	-	-	200 [518]	250 [618]	300 [718]	350 [818]	400 [918]	-	"	"	-	Steel	KDP100 -EBSET		4.2	3	I 11

Cable Carrier

Series	Type	Pitch	Inside Height	Cable & Hose	Width (mm)							Radius (mm) [Height (mm)]						Replacement Product (대체제품)			Discontinue Year	Page
																		Type	Pitch	Inside Height		
Discontinued Product 양산 중단 제품	CDP015	15	10	8	10	25	-	-	-	-	-	-	28 [71]	37 [89]	50 [115]	-	-	KP16	15.6	10	2011	A07
	CDP018	18	15	12	40	-	-	-	-	-	-	-	28 [76]	37 [94]	50 [120]	-	-	KP20	20	15	2011	A09
	CDP025	25	13	10	14	-	-	-	-	-	-	27 [72]	-	-	-	-	-	KP20	20	15	2011	A09
	CDP028	28	19	16	23	50	-	-	-	-	-	28 [82.3]	38 [102.3]	50 [126.3]	75 [176.3]	-	-	KP32	32	20	2011	A11
	CDP050	50	24	22	40	56	80	-	-	-	-	50 [142]	75 [192]	100 [242]	125 [292]	150 [342]	-	KP454	45.4	28	2013	A15
	CDP053	53	29	27	65	80	100	120	160	200	-	75 [195]	100 [245]	125 [295]	150 [345]	200 [445]	-	KP454 / KP50	45.4 / 55.5	28 / 32	2013	A15 / A17
	CDP055	55	38	35	65	80	100	120	160	200	-	100 [259]	125 [309]	150 [359]	200 [459]	-	-	KSC588	58.8	36.1	2013	B09
	KP60	62.5	40.7	35	65	80	100	120	160	200	-	80 [220]	100 [260]	125 [310]	150 [360]	200 [460]	-	KDP070	70	40	2015	C27
	KP70	71.5	50	45	65	80	100	120	160	200	-	75 [220]	100 [270]	125 [320]	150 [370]	200 [470]	250 [570]	KSC715	71.5	47.9	2015	B11
	KP90	91	54.5	50	150	200	250	300	350	400	-	150 [384]	200 [484]	250 [584]	300 [684]	-	-	KSC91	91	54.2	2015	B13
	CDP070	71.5	49	45	65	80	100	120	160	200	250	75 [224]	100 [274]	125 [324]	150 [374]	200 [474]	250 [574]	KSC715	71.5	47.9	2009	B11
	K60	62.5	39	35	80~250							80 [220]	100 [260]	125 [310]	150 [360]	200 [460]	-	CDS070	70	40	2015	C11
	K70	71.5	49	45	80~300							75 [220]	100 [270]	125 [320]	150 [370]	200 [470]	250 [570]	CDS080	80	47	2015	C13
	K90	91	57	50	100~400							150 [384]	200 [484]	250 [584]	300 [684]	-	-	X	X	X	2015	-
	CDM070	70	MAX.39 MAX.48	MAX.16 MAX.42	75	100	-	-	-	-	-	100 [272]	125 [322]	150 [372]	200 [472]	250 [572]	-	KM715	71.5	MAX.37 MAX.45	2015	B19
	KM70	71.5	MAX.37 MAX.46	MAX.16 MAX.41	75	100	120	-	-	-	-	100 [270]	125 [320]	150 [370]	200 [470]	250 [570]	-	KM715	71.5	MAX.37 MAX.45	2015	B19
	KM90	91	MAX.47 MAX.54	MAX.25 MAX.50	150	200	-	-	-	-	-	150 [384]	200 [484]	250 [584]	300 [684]	-	-	X	X	X	2015	-
	CDPS070	70	49	45	65	80	100	120	160	200	250	75 [224]	100 [274]	125 [324]	150 [374]	200 [474]	250 [574]	KSC715/S	71.5	47.9	2009	B17
	KDPS100	100	85	78	100	150	200	250	300	350	400	200 [518]	250 [618]	300 [718]	350 [818]	400 [918]	-	X	X	X	2015	-
	WS080	80	47	44	80~400							150 [380]	200 [480]	250 [580]	280 [680]	400 [880]	-	X	X	X	2019	-
	WS100	100	70.5	65	100~600							200 [504]	250 [604]	300 [704]	350 [804]	400 [904]	500 [1104]	X	X	X	2019	-
	WS150	111	85	100	100~800							200 [560]	300 [760]	400 [960]	500 [1160]	600 [1360]	-	X	X	X	2019	-
	KD20A	20	15	8	20	40	60	-	-	-	-	28 [83]	38 [103]	48 [123]	-	-	-	X	X	X	2019	-
	KD20B	20	20	10	20	40	60	-	-	-	-	28 [83]	38 [103]	48 [123]	-	-	-	X	X	X	2019	-
	KD30A	30	25	21	40	56	80	100	125	150	-	45 [135]	55 [155]	75 [195]	100 [245]	125 [295]	150 [345]	KE30	30	28	2020	E09
	KD30B	30	36	24	40	56	80	100	125	150	-	45 [135]	55 [155]	75 [195]	100 [245]	125 [295]	150 [345]	KE35	35	39	2019	E11
	KD40	40	57	41	36	52	76	96	121	146	-	75 [241]	100 [291]	125 [341]	150 [391]	200 [491]	250 [591]	KE45	45	50	2020	E13
	KA33	33.5	36	32	36	52	76	96	121	146	-	55 [168]	75 [208]	100 [258]	125 [308]	150 [358]	200 [458]	KE35	35	39	2019	E11

* 당사는 제품의 양산중단 이후 5년간 금형을 보유하고 있습니다.

KP Carrier

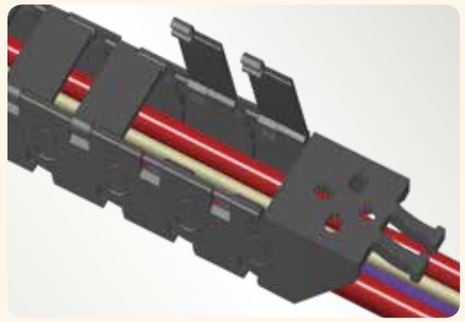
KP16 | KP20 | KP32 | KP40 | KP454 | KP50 | KM50

KP Carrier

엔지니어링 플라스틱을 사용해 가볍고 내구성이 우수하며 바디 일체형과 분리형으로 나뉘어 조립 및 해체가 용이해 보수가 편리하다.

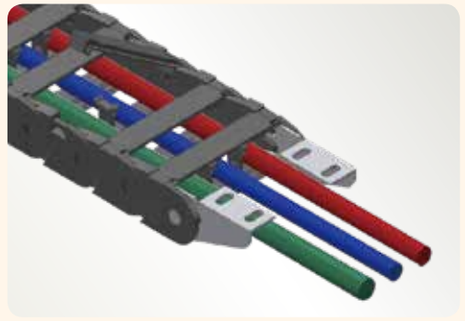
Using engineering plastic, it is light and durable, divided into all-in-one and detachable body, and easy to assemble and disassemble, making it easy to repair.

- **주요 사용장비 :** 겐트리로봇 주변장비, 검사장비 등
- **Applications :** Gantry robot equipment, Inspection equipment etc.



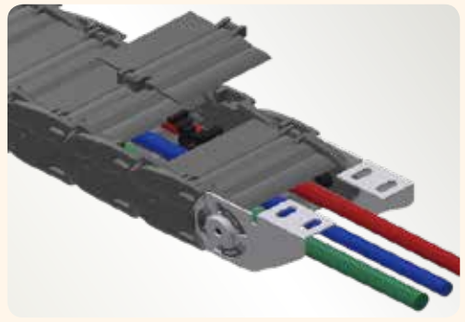
Standard Type

KP Carrier (Small)



Standard Type

KP Carrier (Middle)



Enclosed Type

KP Carrier (Middle)

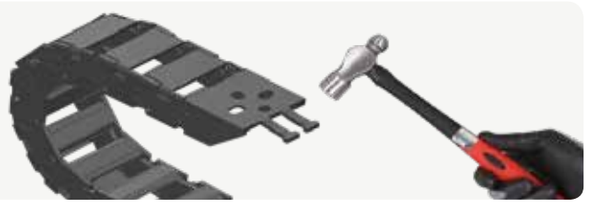
KP Carrier Small Features

KP Carrier Small 특징

Excellent Durability 우수한 내구성

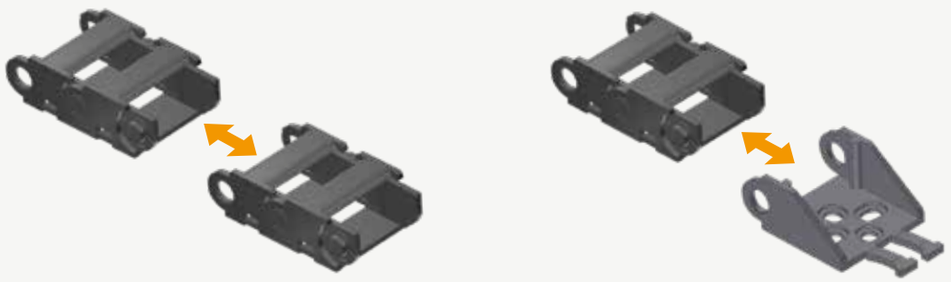
KP Carrier Small Type은 충격강도가 우수한 엔지니어링 플라스틱을 사용하여 가볍고 내구성이 뛰어나다.

Light and durable, using engineering plastics with excellent impact strength.



Easy to Assembly of the Bodylink 쉬운 바디링크 체결

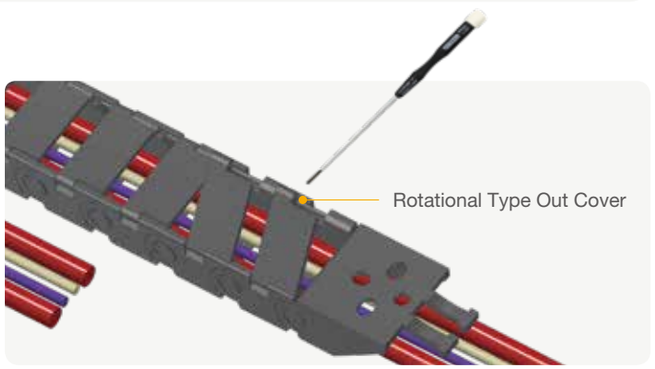
KP Carrier Small Type은 바디의 좌우가 일체형이며 피치가 작은 Small형으로 바디링크의 조립 및 해체가 용이하다.
The body is all-in-one part. It is shot-pitch small type and easy to assembly and disassembly of the body link.



Ease of Repair 보수의 용이성

KP Carrier Small Type은 외측 커버가 오픈힌지 Type으로 "—" 드라이버로 해체를 할 수 있어 전선 및 호스의 포설과 보수가 용이하다.

The KP Carrier Small Type is open hinge types that can be disassemble with a flat-head screwdriver, making it easy to install and repair cables and hoses.



Reduce Sagging Due to Self-Load and Load 자중 및 하중에 의한 처짐 완화

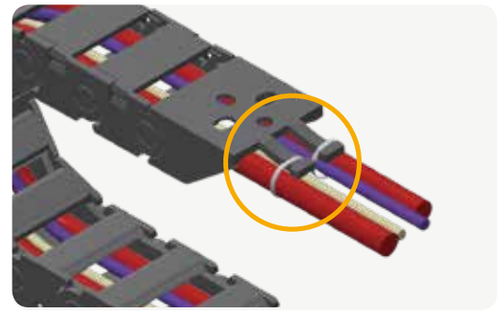
KP Carrier Small Type은 처짐을 보완한 바디링크 구조로 동일 피치대비 FreeSpan이 20%이상 향상되었으며, 바디 중간지점이 아닌 바디 내·외측 지점에서 링크를 지지하는 구조로 되어있어 지지력이 향상되었다.

KP Carrier Small Type is body link structures that reduce sagging, and FreeSpan is improved by more than 20% compared to the same pitch and supports the link at the body inside and outside maximum points rather than the body middle point, thus improving the support force.

Prevent Cable and Hose Movements 케이블 및 호스 유동방지

KP Carrier Small Type은 무빙, 고정브라켓이 Tie를 묶을 수 있는 구조로 되어있어 캐리어의 움직임에 의한 케이블 및 호스의 유동을 방지할 수 있다.

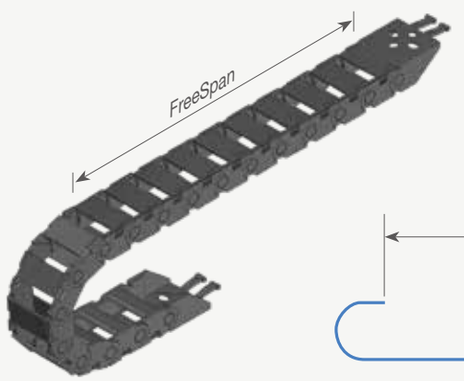
The moving and Fixed-bracket is designed to tie up with a cable tie, which prevents the twist of cables and hoses by the movements of the carrier.



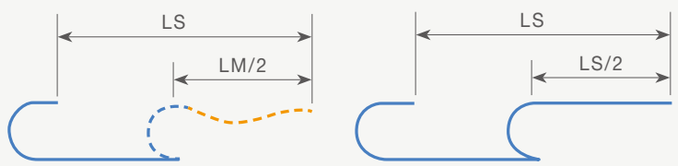
FreeSpan

케이블 캐리어의 **Self-Load**에 의한 처짐이 없는 길이를 **FreeSpan** 이라 하고, 케이블 하중에 따라 지지 하중의 길이가 달라진다. 케이블 캐리어는 처짐이 있으나 허용 가능한 길이(LM/2)와 처짐이 없이 허용가능한 길이(LS/2)가 있다.

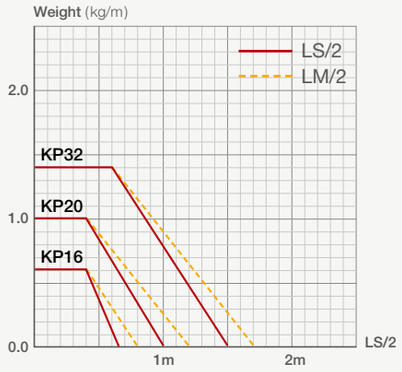
The length of the carrier without sagging by **Self-Load** is called **FreeSpan**, and the self-supporting length is depends on the value of cable load. There are two kinds of length.



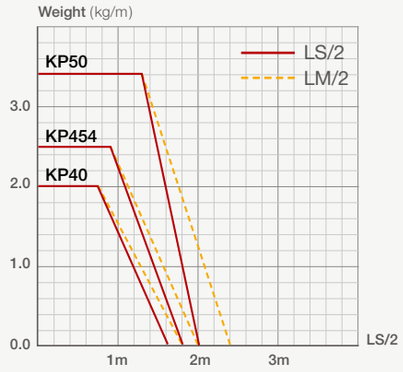
- **LS :** Travel length
- **LS /2 :** 처짐이 없으며 허용 가능한 케이블 캐리어 길이
  No Sagging and acceptable length
- **LM /2 :** 처짐이 있으나 허용 가능한 케이블 캐리어 길이
  Sagging but acceptable length



Load Diagrams Self-Supporting Length

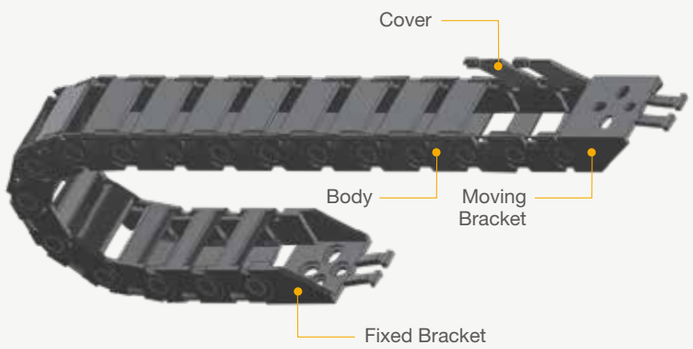


KP Small



KP Middle

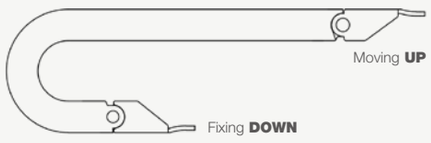
Structure



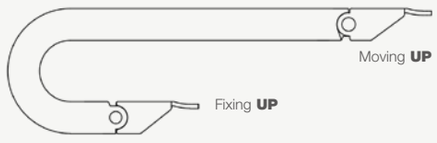
- **Material**
  : Engineering Plastic with Glass Fiber+@(UL94 HD)
- **Speed**
  : 3m/sec
- **Acceleration**
  : 10m/s^2
- **Temperature**
  : -25~125°C
- **Applications**
  : 공작기계, 자동화기계, 의료기계, 겐트리로봇, 일반산업기계 적용
  Machine tools, Automations machines, Medical equipment, Gantry robot equipment

End Bracket Setting Example

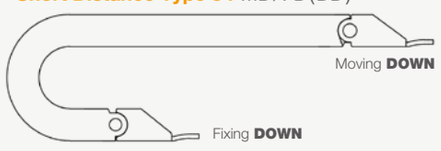
- **Short Distance Type 1 :** MU/FD(UD)



- **Short Distance Type 2 :** MU/FU(UU)



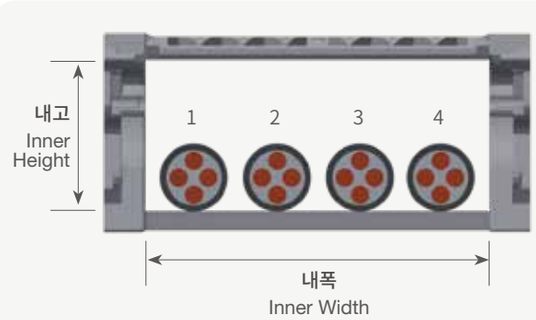
- **Short Distance Type 3 :** MD/FD(DD)



- **Short Distance Type 4 :** MD/FU(DU)

Cable Carrier Specification Selection

케이블 캐리어 사양 선정



① 케이블 캐리어 내고 설정
Cable Carrier Inner Height Setting

전선, 혹은 호스의 가장 큰 외경을 기준으로 하며 약 20% UP하여 사양에 맞는 내고를 선정한다.

Based on the largest external diameter of a cable or hose, approximately 20% up to select the inner height that meets the specifications.

② 케이블 캐리어 내폭 설정
Cable Carrier Inner Width Setting

전선, 혹은 호스의 외경(1+2+3+4)에 약 25% UP하여 사양에 맞는 내폭을 선정한다.

Select inner width according to the specification by increasing about 25% of cable and hose's outer diameter(1+2+3+4).

③ 케이블 캐리어 곡률반경 설정
Cable Carrier Radius Setting

전선, 혹은 호스의 곡률반경에 맞게 선정한다.
케이블 캐리어의 곡률반경이 전선, 혹은 호스의 곡률반경 사양 대비 큰 설정은 문제가 없지만 작은 설정은 쓸림에 의한 마모나 전선 혹은 호스에 대한 케이블 캐리어의 반작용이 발생할 수 있다.

Select for the radius of a cable or hose.
If the cable carrier radius is bigger than cable or hose, it is not a problem. But if it is smaller setting, it may cause wear due to wiping or the reaction of the cable carrier to the cable or hose.

전선 : Electronic Cables	에어호스 : Pneumatic Hoses	유압호스 : Hydraulic Hoses
케이블 외경에 6~8배	에어호스 외경에 8~10배	유압호스 외경에 12~15배
R min > 6~8 x Φ	R min > 8~10 x Φ	R min > 12~15 x Φ

④ 케이블 캐리어 길이 설정
Cable Carrier Length Setting (calculation)

장비의 행정거리 1/2 여유길이 N(Safety Length + πr) 값을 더하면 케이블 캐리어 전체 길이가 된다.
("N"값 : PAGE 10 및 각제품의 Specification 참조)

The cable carrier's total length is half of the equipment's total travel length and adding an extra length of N (Safety Length + πr) value. ("N": See PAGE10 and Specifications for each product)

Order Form

(mm)

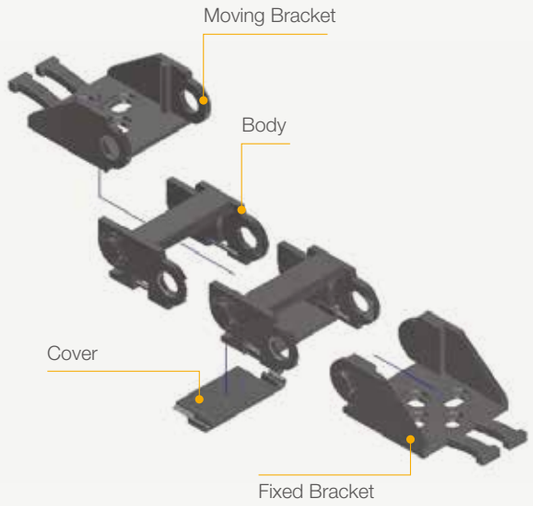
EX) **KP16 - W010 - R018 - 1014L - SETUD**

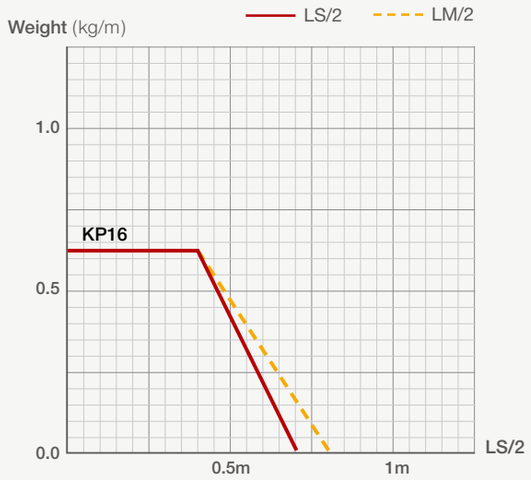
제품타입 Type	내폭 Width	곡률 Radius	길이 Length	브라켓 조립방향 End Bracket Setting

KP Carrier

KP16

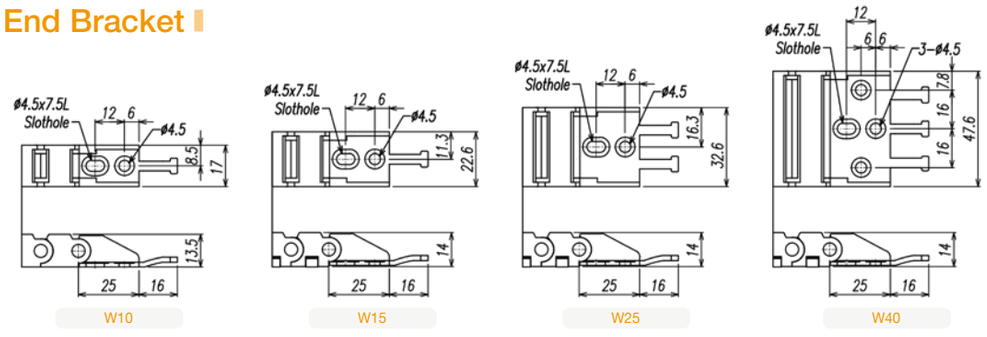
Structure



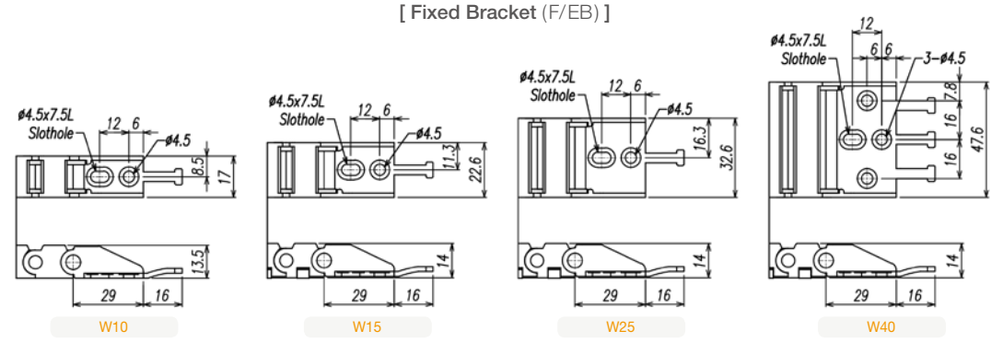


[Load Diagrams Self-Supporting Length]

End Bracket

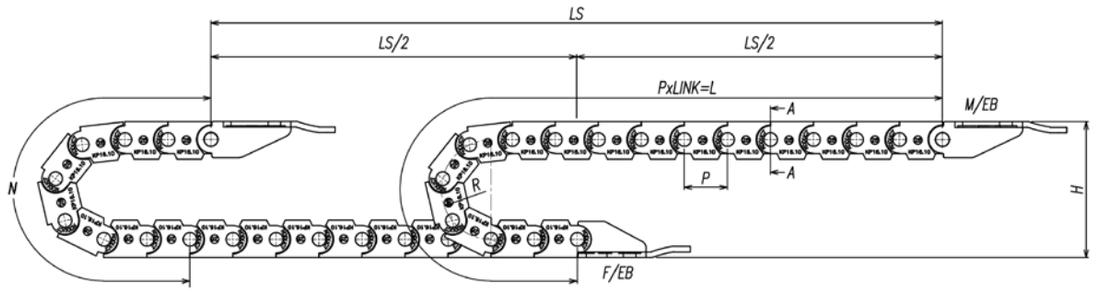


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

Carrier Link

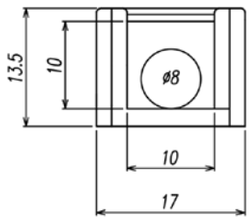


$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

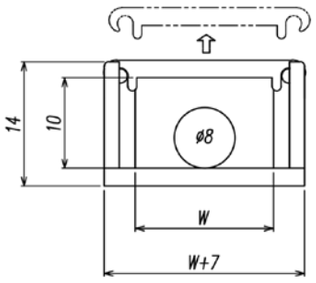
Section A-A

[Cover 일체형]
All-in-cover



W10

[Cover 오픈형]
Open cover



W15, W25, W40

Specification

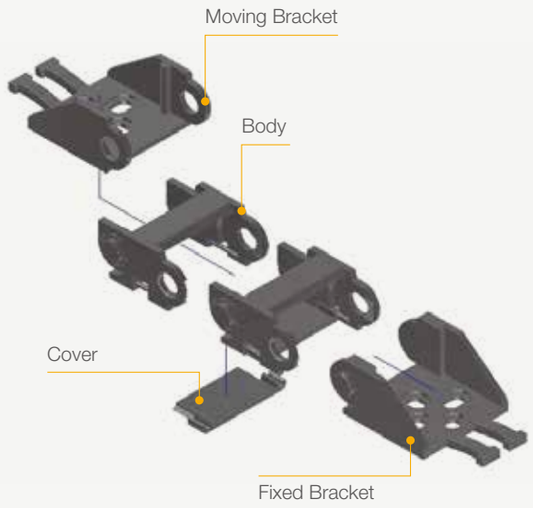
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
KP16	10 (0.393) Cover 일체형 All-in-cover	18 (0.708)	15.6 (0.614)	49 (1.929)	120.5 (4.744)	0.111	0.005
		28 (1.102)		69 (2.716)	151.9 (5.980)		
		38 (1.496)		89 (3.503)	183.3 (7.216)		
		50 (1.968)		113 (4.448)	221 (8.700)		
	15 (0.590)	18 (0.708)		50 (1.969)	120.5 (4.744)	0.168	0.005
		28 (1.102)		70 (2.756)	151.9 (5.980)		
	25 (0.984)	38 (1.496)		90 (3.543)	183.3 (7.216)	0.209	0.007
	40 (1.574)	50 (1.968)		114 (4.488)	221 (8.700)	0.274	0.009

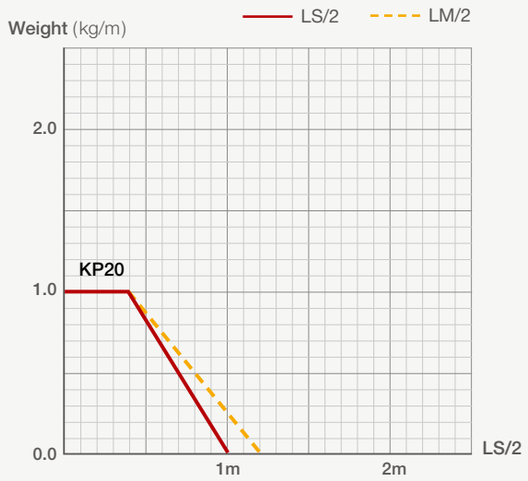
(1inch = 25.4mm)

KP Carrier

KP20

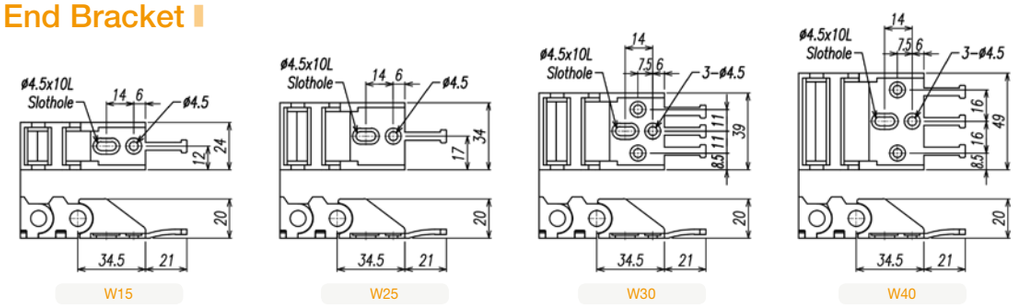
Structure



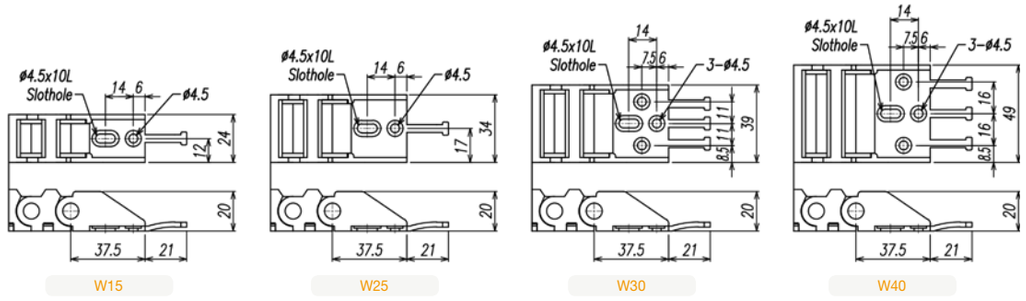


[Load Diagrams Self-Supporting Length]

End Bracket

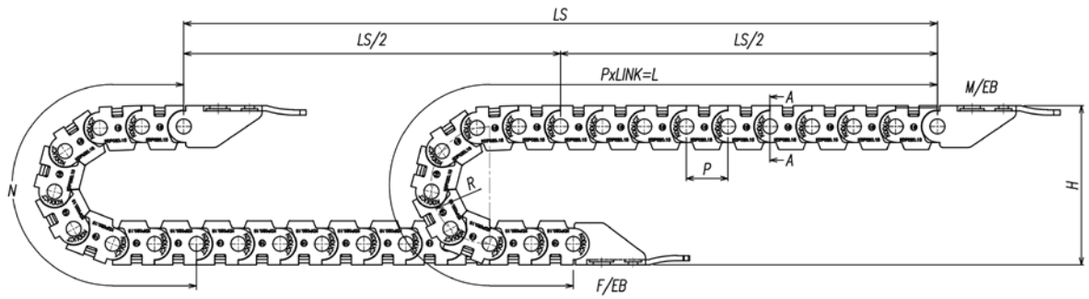


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

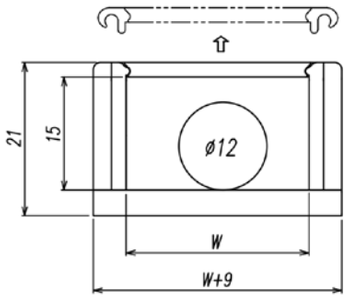
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Specification

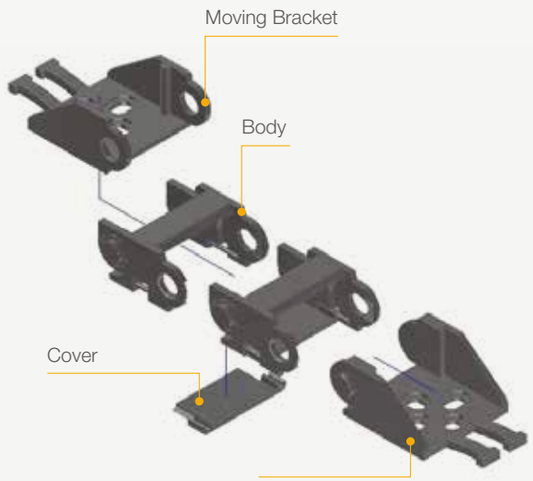
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
KP20	15 (0.590)	18 (0.708)	20 (0.787)	56 (2.204)	136 (5.354)	0.243	0.012
	25 (0.984)	28 (1.102)		76 (2.992)	168 (6.614)	0.284	0.013
	30 (1.181)	37 (1.456)		94 (3.700)	196 (7.716)	0.297	0.016
	40 (1.574)	50 (1.968)		120 (4.724)	237 (9.330)	0.347	0.018

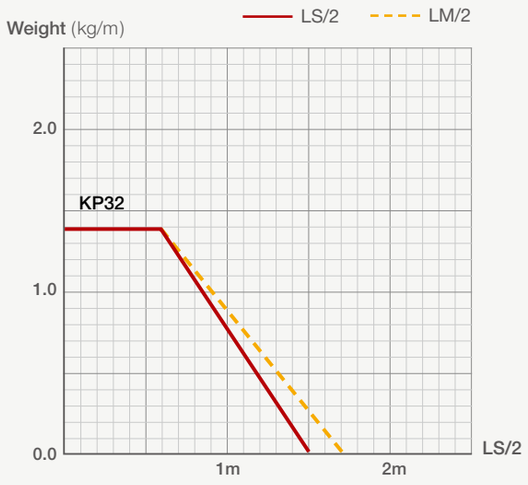
(1inch = 25.4mm)

KP Carrier

KP32

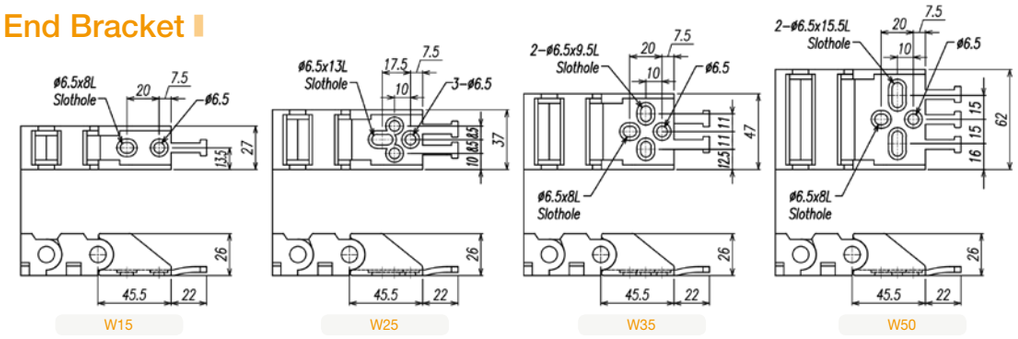
Structure



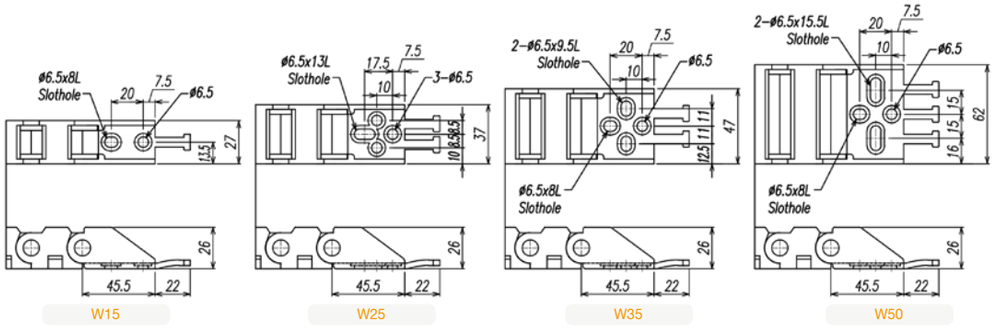


[Load Diagrams Self-Supporting Length]

End Bracket

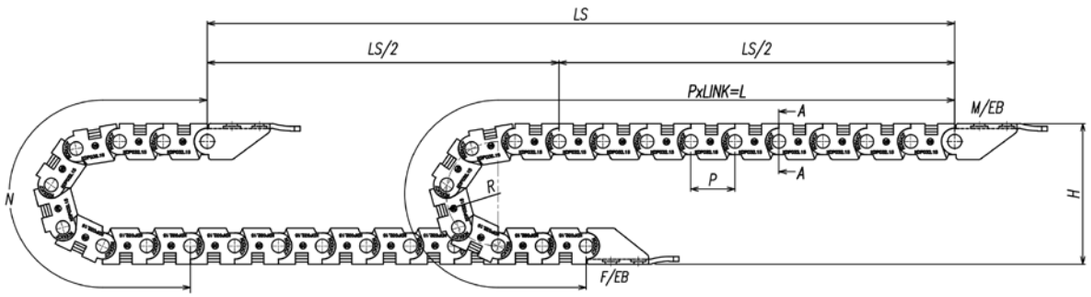


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

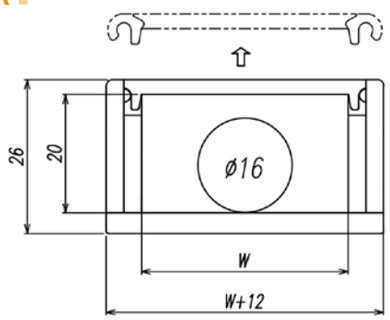
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
KP32	15 (0.590)	28 (1.102)	32 (1.259)	82 (3.228)	215.9 (8.500)	0.351	0.026
	25 (0.984)	38 (1.496)		102 (4.015)	247.3 (9.736)	0.414	0.028
		50 (1.968)		126 (4.960)	285.0 (11.220)		
	35 (1.377)	75 (2.952)		176 (6.929)	363.5 (14.311)	0.457	0.032
	50 (1.968)	100 (3.937)		226 (8.897)	442.0 (17.401)	0.520	0.038

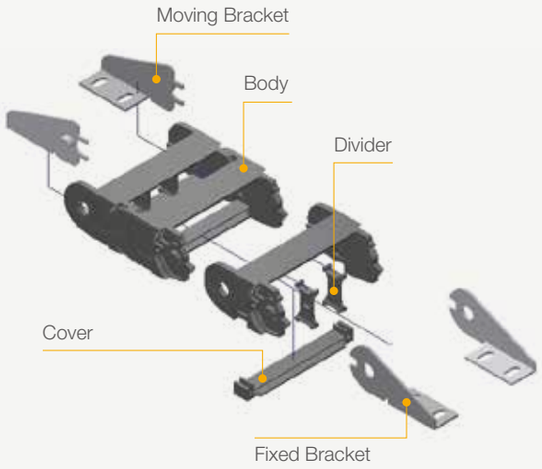
(1inch = 25.4mm)

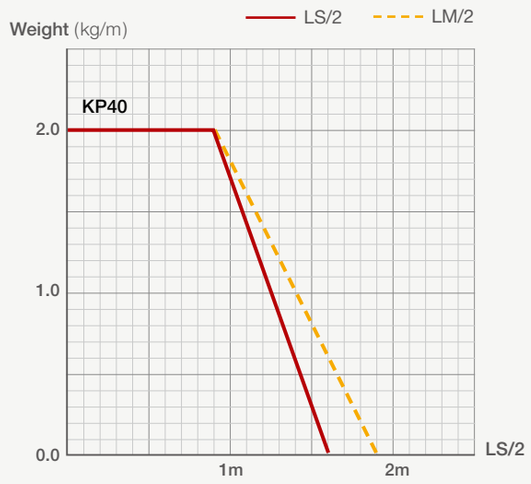
KP32

KP Carrier

KP40

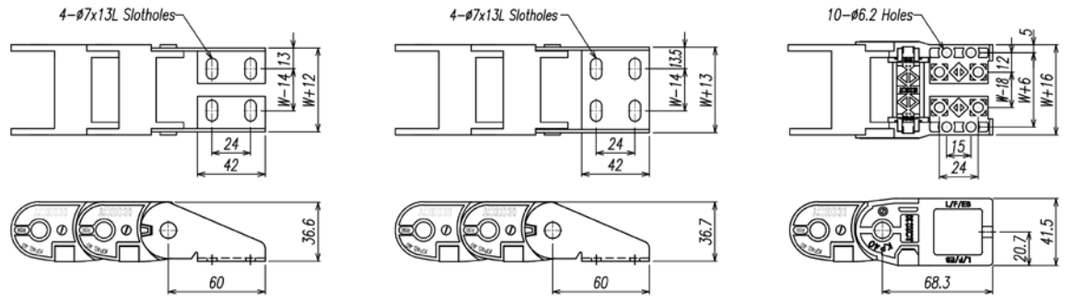
Structure



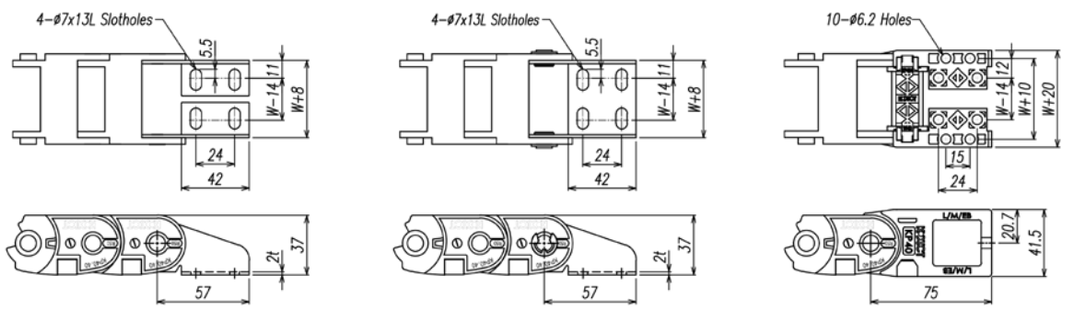


[Load Diagrams Self-Supporting Length]

End Bracket

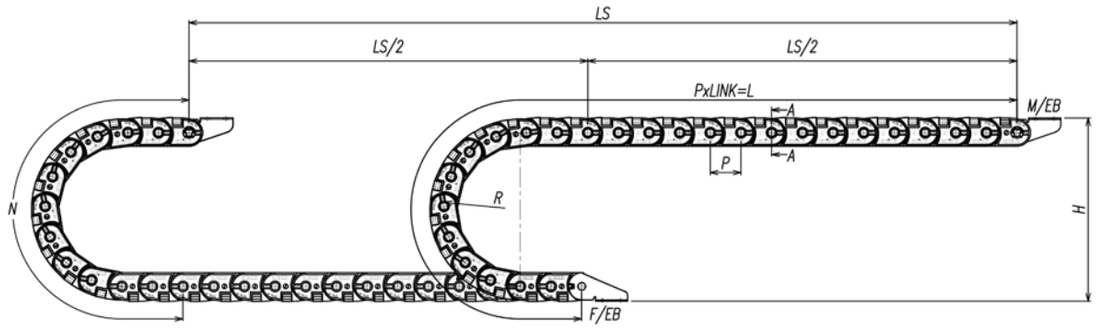


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

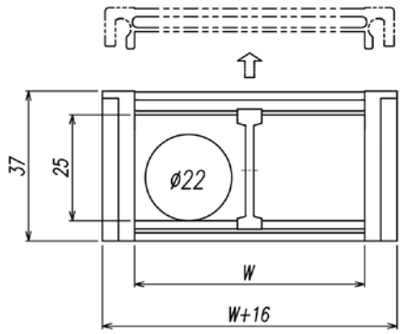
Carrier Link



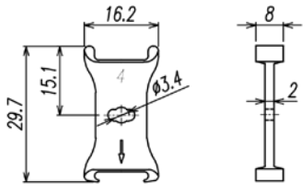
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KP40	40 (1.575)	50 (1.969)	40 (1.575)	139 (5.472)	317 (12.4800)	0	0.735	0.155 (Type1)
		75 (2.953)		189 (7.441)	396 (15.591)			
	57 (2.244)	100 (3.937)		239 (9.409)	474 (18.661)	0	0.795	0.170 (Type2)
	80 (3.150)	125 (4.921)		289 (11.376)	553 (21.772)	1	0.930	0.190 (Type2)
		150 (5.906)		339 (13.346)	631 (24.842)			
	100 (3.937)	200 (7.874)		439 (17.283)	788 (31.024)	1	0.985	0.098 (Type3)

※ **Type2 :** W40, W57만 가능 (only for W40, W57)

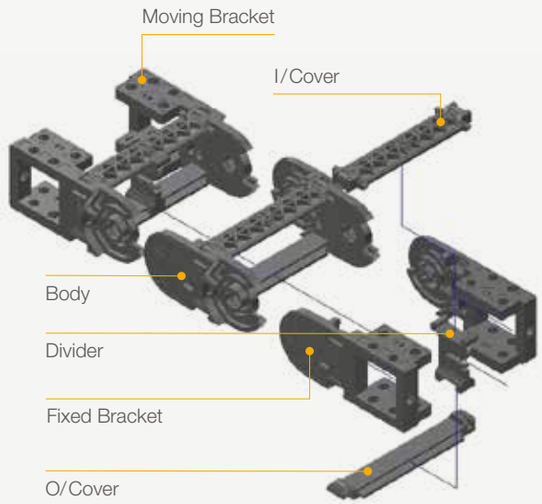
(1inch = 25.4mm)

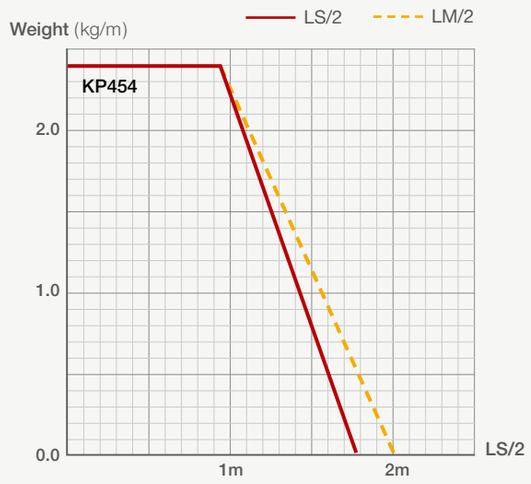
KP40

KP Carrier

KP454

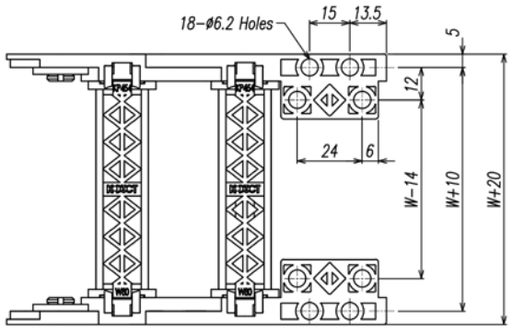
Structure

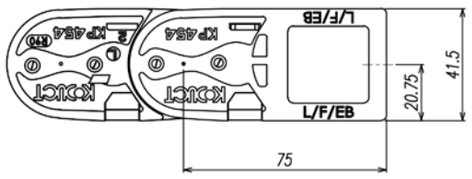




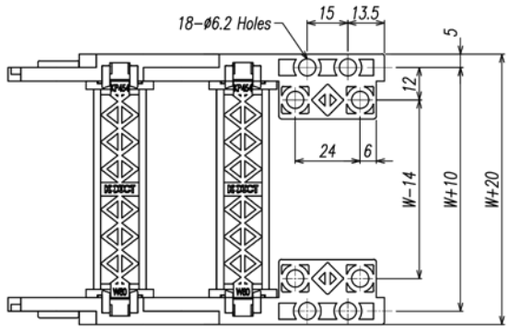
[Load Diagrams Self-Supporting Length]

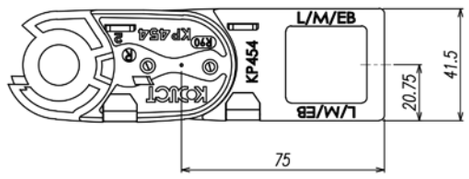
End Bracket





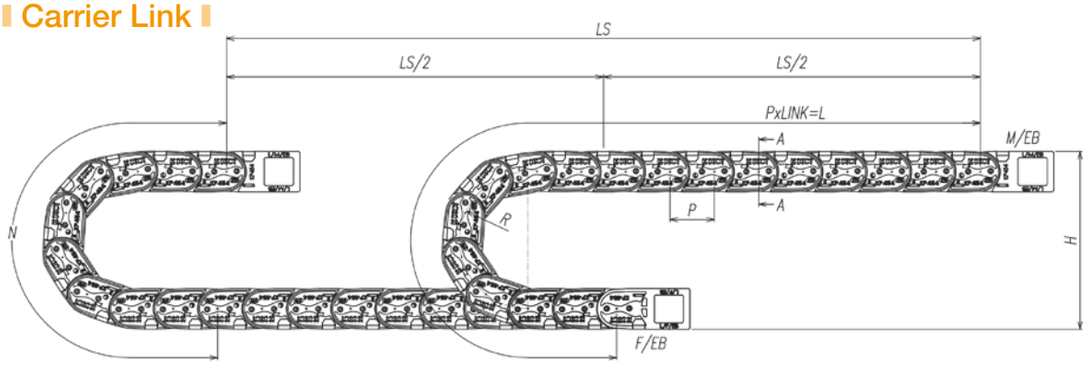
[Fixed Bracket (F/EB)]





[Moving Bracket (M/EB)]

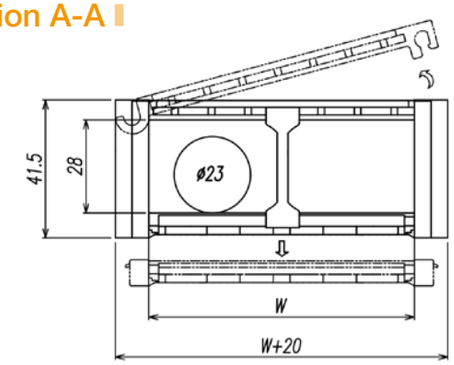
Carrier Link



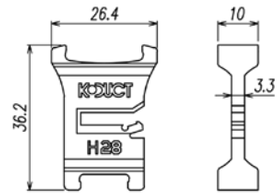
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KP454	40 (1.575)	48 (1.889)	45.4 (1.787)	137.5 (5.413)	332 (13.070)	0	0.893	0.114
	57 (2.244)	70 (2.755)		181.5 (7.145)	401 (15.787)	0	0.955	0.116
		90 (3.453)		221.5 (8.720)	464 (18.267)			
	80 (3.150)	120 (4.724)		281.5 (11.082)	558 (21.698)	1	1.071	0.121
	100 (3.937)	145 (5.708)		331.5 (13.251)	637 (21.141)	1	1.142	0.124
		195 (7.677)		431.5 (16.988)	794 (31.259)			

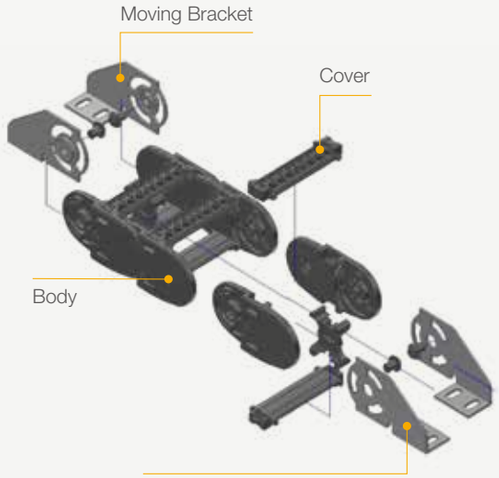
(1inch = 25.4mm)

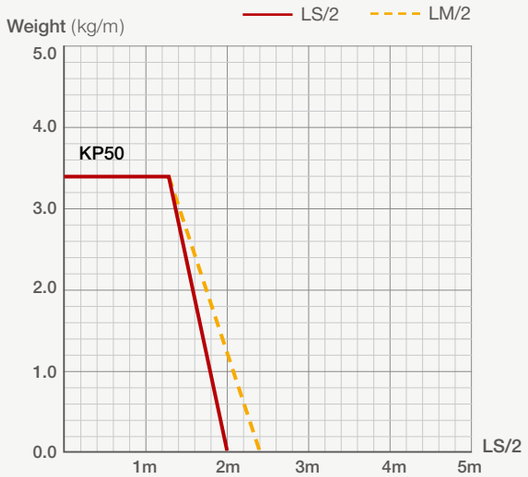
KP454

KP Carrier

KP50

Structure

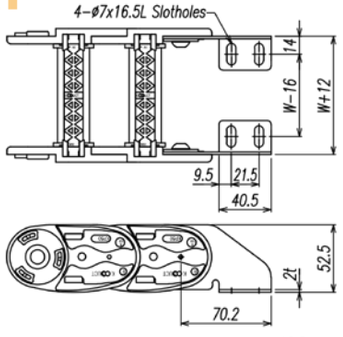




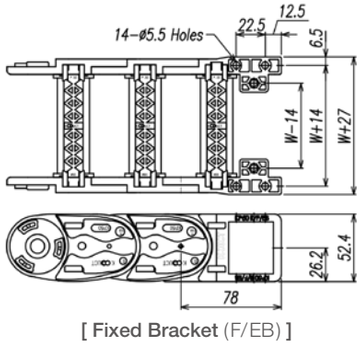
[Load Diagrams Self-Supporting Length]

End Bracket

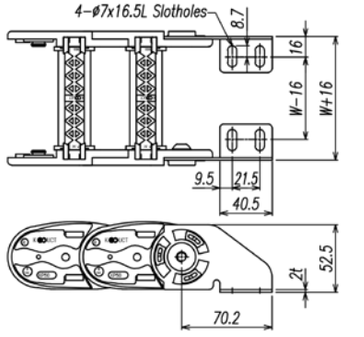
Type 1

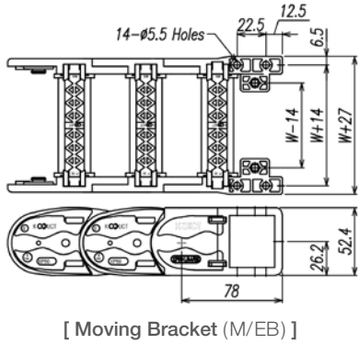


Type 3



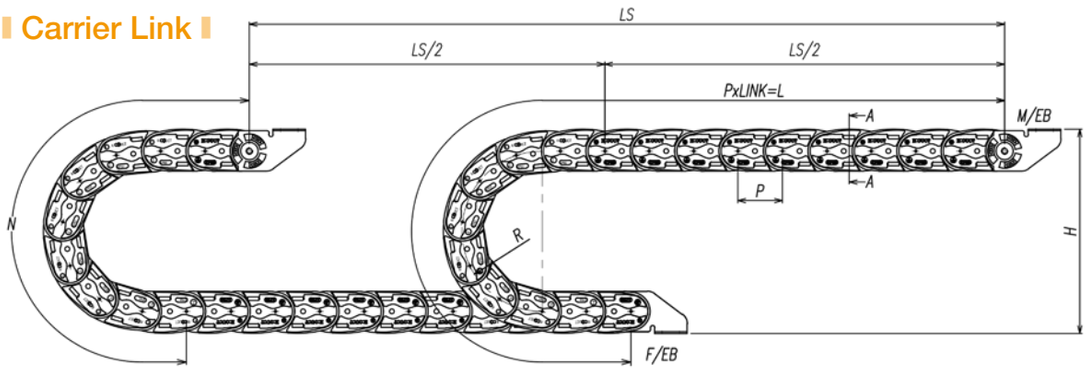
[Fixed Bracket (F/EB)]





[Moving Bracket (M/EB)]

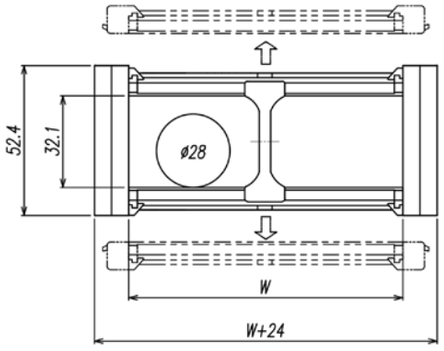
Carrier Link



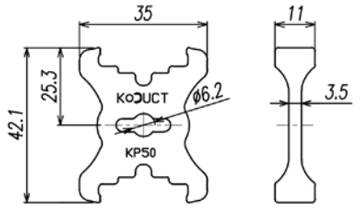
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KP50	40 (1.575)	60 (2.362)	55.5 (2.185)	175 (6.889)	410.4 (16.157)	0	1.456	0.254 (Type 1)
	50 (1.969)					0	1.571	
	65 (2.559)	75 (2.952)		205 (8.070)	457.5 (18.012)	0	1.747	
	*75 (2.952)					0	1.863	
	80 (3.149)	100 (3.937)		255 (10.039)	536 (21.102)	1	1.921	
	*87 (3.425)					1	1.935	
	100 (3.937)					1	2.151	
	120 (4.724)	125 (4.921)		305 (12.007)	614.5 (24.193)	2	2.389	
	*150 (5.905)					2	2.734	
	160 (6.299)	150 (5.905)		355 (13.976)	693 (27.283)	2	2.853	
	*175 (6.889)					2	3.026	
	*187 (7.362)	200 (7.874)		455 (17.913)	850 (33.465)	2	3.166	
	200 (7.874)					2	3.317	

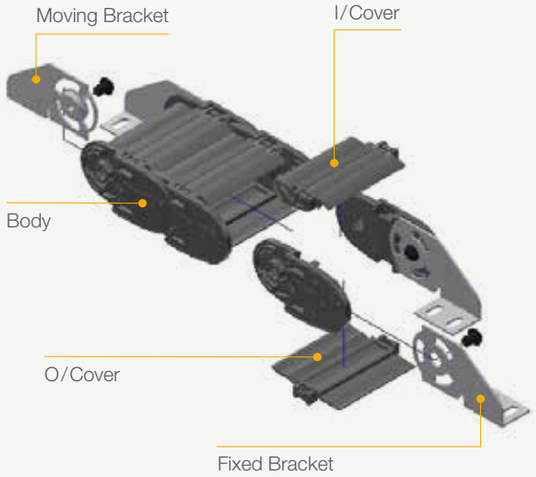
* 주문 제작 가능 / Can make to order

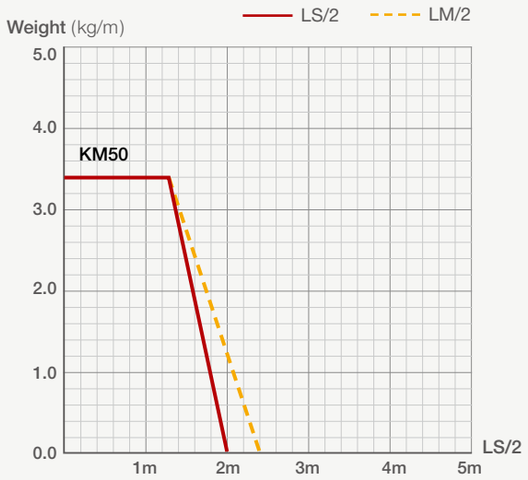
(1inch = 25.4mm)

KP Carrier

KM50

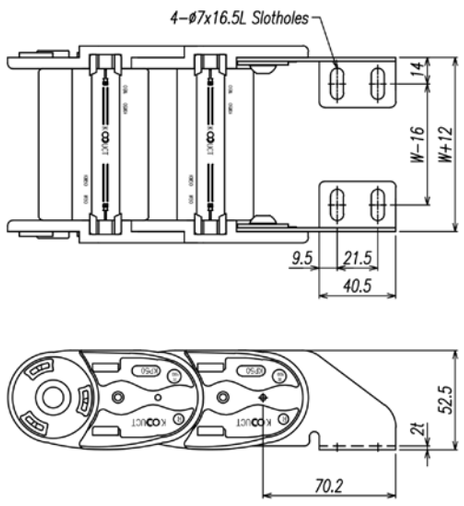
Structure



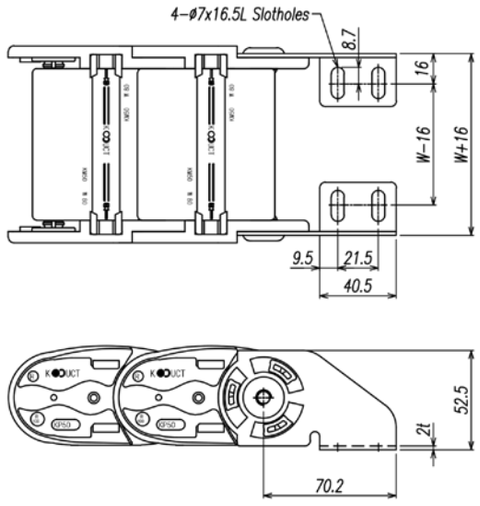


[Load Diagrams Self-Supporting Length]

End Bracket

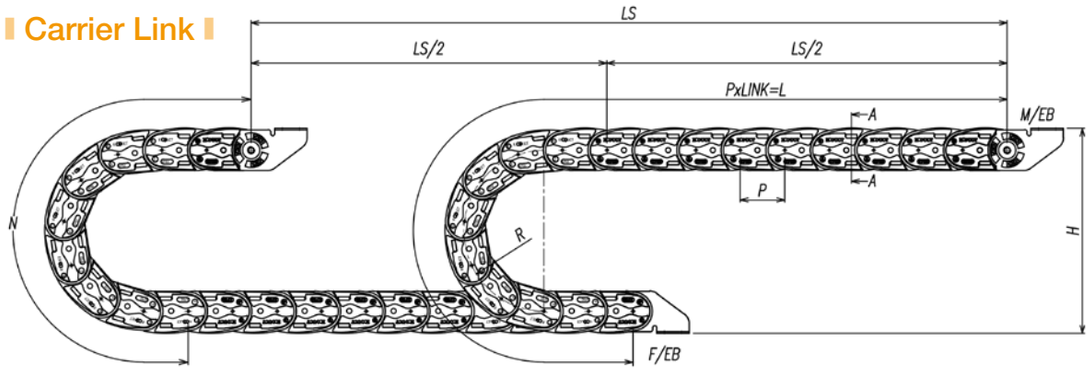


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

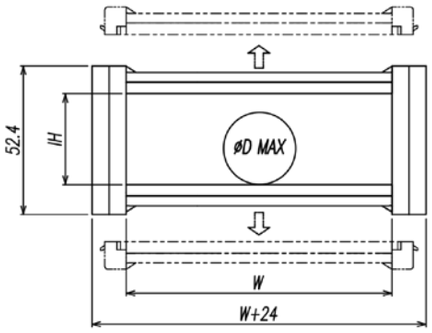
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	IH mm (inch)	ØD max	1m (kg)	EB Set (kg)
KM50	40 (1.574)	75 (2.952)	55.5 (2.185)	205 (8.070)	457.5 (18.012)	24 (0.945)	Ø12	2.862	0.254
		100 (3.937)		255 (10.039)	536 (21.102)	28 (1.102)	Ø16		
	65 (2.559)	125 (4.921)		305 (12.007)	614.5 (24.193)	29 (1.142)	Ø20	3.323	
		150 (5.906)		355 (13.976)	693 (27.283)	30 (1.181)	Ø25		
	80 (3.149)	200 (7.874)		455 (17.913)	850 (33.465)	32 (1.260)	Ø28	3.550	

(1inch = 25.4mm)

KP Carrier - KP Small

Assembly and Disassembly 조립·해체 방법

❶ 일체형 바디링크를 준비한다.
Prepare an all-in-one body-link.

❷ 바디링크 좌, 우 한곳을 20° 비틀어서 조립한다.
Twist one body link left and right by 20° to assemble.

❸ 커버 날개 홈과 바디 돌출부를 확인한다.
Check the cover wing groove and body protrusion.

❹ 바디링크 힌지부와, 커버조립 돌출부를 확인 후 조립한다.
Check and assemble the body link hinge and cover assembly protrusion.

❺ 바디링크와 고정 혹은 무빙브라켓을 준비한다.
Prepare body links and fixed or moving brackets.

❻ 고정 혹은 무빙브라켓의 좌, 우 한곳을 20° 비틀어서 조립한다.
Assemble one of the left and right sides of a fixed or moving bracket by twisting it by 20°.

❼ 조립완료.
Complete assembly.

❶ 커버 해체시 바디 힌지부에 " — " 드라이버를 이용해 외측커버를 빼낸다.
Use a flat-head screwdriver to remove the outer cover from the body hinge when removing the cover.

❷ 링크 해체시 " — " 드라이버를 링크연결부 사이에 넣어 바깥쪽으로 틀어서 해체한다.
When disassembly a link, put a flat-head screwdriver between the link connections and turn it outward to disassemble it.

KP Carrier - KP40

Assembly and Disassembly 조립·해체 방법

❶ 일체형 바디링크를 준비한다.
Prepare an all-in-one body-link.

❷ 바디링크 좌, 우 한곳을 20° 비틀어서 조립한다.
Twist one body link left and right by 20° to assemble.

❸ 일체형 내측커버에 디바이더를 체결한다.
Assemble the divider to the all-in-one inner cover.

❹ 디바이더를 체결 후 외측커버를 조립한다.
After assembling the divider, assemble the outer cover.

❺ 고정브라켓을 바디 돌출부에 고정브라켓 홀과 결합한다.
Assemble the fixed bracket with the fixed bracket hole on the body protrusion.

❻ 무빙브라켓을 바디 홀부에 무빙브라켓 돌출부와 결합한다.
Assemble the moving bracket with the moving bracket on the body hole.

❶ 커버 해체시 바디 힌지부에 " — " 드라이버를 이용해 외측커버를 빼낸다.
Use a flat-head screwdriver to remove the outer cover from the body hinge when removing the cover.

❷ 링크 해체시 " — " 드라이버를 링크연결부 사이에 넣어 바깥쪽으로 틀어서 해체한다.
When disassembly a link, put a flat-head screwdriver between the link connections and turn it outward to disassemble it.

[Assembly Method of all-in-one End Bracket] 일체형 엔드브라켓 조립방법

❶ 고정브라켓을 바디 돌출부에 고정브라켓 홀과 결합한다.
Assemble the fixed bracket with the fixed bracket hole on the body protrusion.

❷ 무빙브라켓을 바디 홀부에 무빙브라켓과 체결한다.
Assemble the moving bracket with the moving bracket on the body hole.

❸ 바디무빙단에 롱로우즈를 사용해 E링을 체결한다.
Assemble the E-ring using long nose plier on the body moving side.

KP Carrier - KP454

Assembly and Disassembly 조립·해체 방법

❶ 바디링크 연결시 바디를 45° 꺾어서 링크를 연결한다.

When connecting the body link, bend the body 45° to connect the link.

❷ 바디링크를 연결한다.

Connect the body link.

❸ 고정브라켓을 바디홀에 끼워 조립한다.

Insert the fixed bracket to the body hole and assemble it.

❹ 무빙브라켓을 바디 돌출부에 조립한다.

Assemble the moving bracket on the body protrusion.

❺ 바디링크 무빙, 고정 조립완료.

Moving and fixed body link assembly complete.

❻ 좌, 우 바디열을 내측커버로 바디 내측부를 우선 조립한다.

First assemble the inner part of the body with the inner cover of the left and right body.

❼ 좌, 우 바디열 내측커버에 디바이더를 체결한다.

Assemble the divider to the inner cover of the left and right body links.

❽ 외측커버를 좌측 바디힌지부에 체결 후 우측바디에 조립한다.

Attach the outer cover to the left body hinge and assemble it on the right side.

❾ 조립완료.

Assembly complete.

❶ 내측커버 해체시 커버 고리부에 "—"드라이버를 이용해 커버를 해체한다.

When disassembling the inner cover, remove the cover using a flat-head screwdriver on the cover loop.

❷ 외측커버 해체시 우측바디에 "—"드라이버를 이용해 커버를 해체한다.

When disassembling the outer cover, use a flat-head screwdriver on the right side of the body to remove the cover.

❸ 바디 해체시 내·외측커버 해체 후 "—" 링크연결부에 넣어 45° 곡률방향으로 꺾어 해체한다.

After disassembling the inner and outer covers, insert a flat-head screwdriver in the link connection point and push 45° to radius direction.

KP Carrier - KP50

Assembly and Disassembly 조립·해체 방법

❶ 바디링크 연결시 바디를 5° 꺾어서 링크를 연결한다.

When connecting the body link, bend the body 5° to connect the link.

❷ 바디링크를 연결한다.

Connect the body link.

❸ 좌, 우 바디열을 연결커버로 바디 내측부를 우선 조립한다.

First assemble the inner part of the body with the left and right body as the connecting cover.

❹ 좌, 우 바디열 내측에 커버를 조립 후 디바이더를 체결한다.

Attach the cover to the inner side of the left and right body and assemble the divider.

❺ 디바이더 체결 후 외측커버를 조립한다.

Attach the outer cover after assemble the divider.

❻ 고정브라켓과 고정단바디와 M8 둥근머리 볼트를 준비한다.

Prepare a fixed bracket, fixed bracket body and M8 round headed bolt.

❼ 고정브라켓과 바디를 M8 둥근머리 볼트로 조립한다.

Assemble the fixed bracket and body with M8 round headed bolt.

❽ 고정단 세트❼를 연결 후 커버를 체결한다.

Assemble the fixed bracket❼ and attach the cover.

❾ 무빙브라켓과 M8 둥근머리 볼트를 바디 무빙단과 조립한다.

Assemble moving bracket and body with M8 round headed bolt.

❿ 무빙브라켓 조립완료.

Moving bracket complete.

⓫ 조립완료.

Assembly Completed.

❶ 커버 해체시 커버고리부에 "—"드라이버를 이용해 커버를 해체한다.

When removing a cover, remove the cover using a flat-head screwdriver on the cover loop.

❷ 바디 해체시 커버 해체 후 "—"드라이버를 링크연결부 사이에 넣어 45° 곡률방향으로 회전시켜 해체한다.

After disassembling the cover, insert a flat-head screwdriver between the link connections and rotate it in the direction of 45° radius.

Smart Carrier

KSC588/10(25) | KSC715/10(25) | KSC91 | KSC588/S | KSC715/S | KM715/10(25)

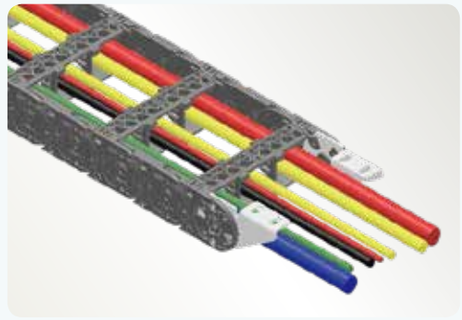
Smart Carrier

CE RoHS

엔지니어링 플라스틱을 사용해 가볍고 내구성이 우수하다. 외장형 곡률핀을 사용해 곡률핀 변경만으로 곡률조절이 손쉽게 가능하다. 또한 자재관리의 효율을 극대화 할 수 있는 독창적이고 스마트한 캐리어이다. 특히 링크 연결이 2중결합 구조로 되어 있어 장력 및 내구성이 뛰어나다.

Light and durable, using engineering plastics with excellent impact strength. Apply detachable radius pin, easily adjust radius by changing only radius pin. Also, it is a unique and smart carrier that can maximize the efficiency of material management. Dual link-connecting structure, it provides excellent tension and durability.

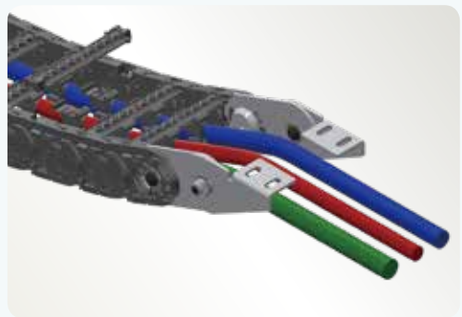
- **주요 사용장비 :** 겐트리로봇, 공작기계, 용접장비, 절단장비 등
- **Applications :** Gantry robot equipment, Machine tool, Welding equipment, Cutting equipment etc.



Standard Type

Smart Carrier (Short Distance)

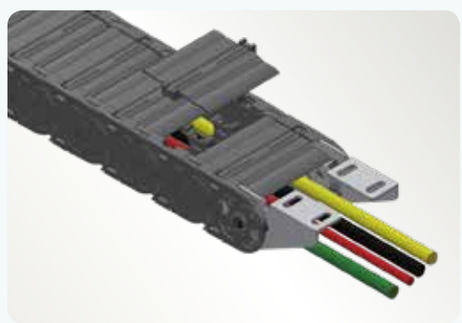
- **KSC588/10(25)** Page : B 09
- **KSC715/10(25)** Page : B 11
- **KSC91** Page : B 13



Standard Type

Smart Carrier (Long Distance)

- **KSC588/S** Page : B 15
- **KSC715/S** Page : B 17



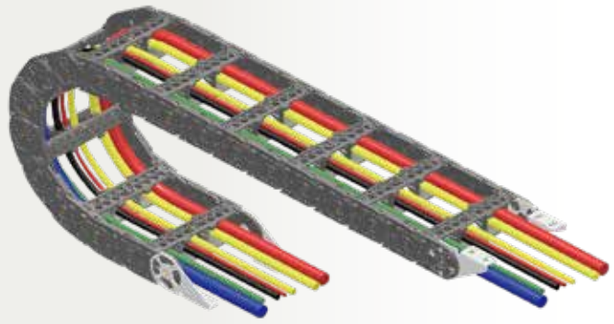
Enclosed Type

Smart Carrier (Short Distance)

- **KM715/10(25)** Page : B 19

Smart Carrier Features

Smart Carrier 특징



Use External Multi-Radius Pins

외장형 멀티곡률핀 사용

Smart Carrier는 바디 자체에서 곡률형성되는 기존방식과 달리 외장형 멀티곡률핀의 곡률조절 돌기를 이용하여 곡률반경이 형성된다. 곡률값을 자유자재로 교체 할수 있는 구조이며, 바디 외측에서 곡률핀을 분해, 조립할 수 있어 잘못된 곡률선정시 교체가 용이한 구조로 되어있다. 또한 조립부는 3~5 Point로 견고히 체결되어 어떠한 충격에도 곡률핀이 이탈되지 않는다.
Smart Carrier는 곡률별 바디가 필요없어 재고관리가 용이하다. 바디 연결후 곡률핀을 조립하는 구조로 되어 있어 바디링크 반조립 상태로 재고관리가 가능하여 생산성의 효율을 높일 수 있는 제품이다.

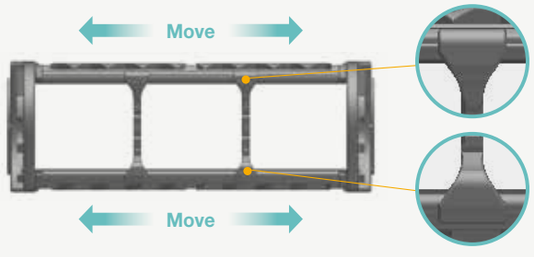
Smart Carrier curvature radius is made by external multi-Radius pin's radius control protrusion, unlike existing method of curvature radius control in the body. The radius value can be freely replaced, and the Radius pin can be disassembled and assembled on the outside of the body, making it easy to replace when selecting the wrong Radius.
In addition, the assembly point is rigidly fastened with 3 to 5 points so that the Radius pin does not deviate from any impact.
Smart Carrier does not need a body by radius, so it is easy to manage inventory management is easy. It is a structure that assembles radius pins after connecting the body, allowing stock in semi-assembled body-link state, which can increase the efficiency of productivity.

Divider Structure for Easy Cable Installation

케이블 포설이 용이한 디바이더 구조

Smart Carrier 디바이더는 고정식이 아닌 유동형으로 레일형식(Cover)의 구조에 디바이더를 체결한다.
디바이더가 좌, 우 이동이 되는 방식으로 케이블 및 호스의 포설이 용이하며 또한 케이블의 움직임에 디바이더 이탈이 없는 구조이다.

The divider is movable, not fixed. Put divider in the rail-type(cover) structure.
Divider structure is easy to moves left and right, it make not deviate from the divider due to the movement of the cable and easy to install cables.



Expansion of Cable Installation Space by Separator

세퍼레이터에 의한 케이블 입선공간 범위확대

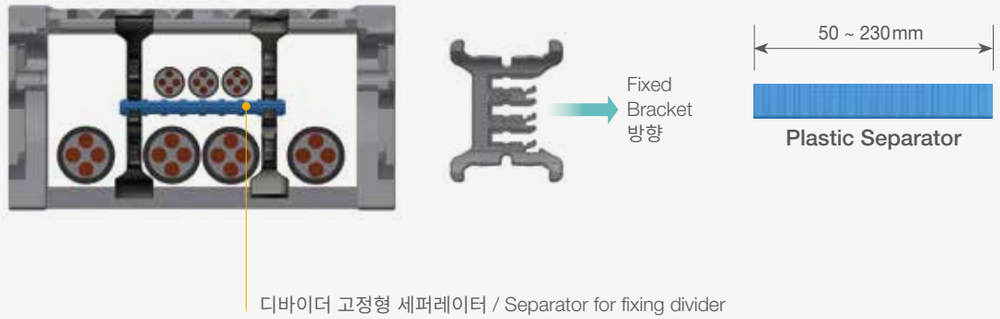
디바이더에서 입선공간 범위 확대 필요시 세퍼레이터를 적용해 입선공간을 확대 할 수 있으며, 기존 설치되어 있는 공간에서 케이블 추가시 세퍼레이터 체결이 용이하여 현장적용이 편리하다.

If it is necessary to expand installation space in the divider, you can expand the installation space by applying a separator. When add more cables from the existing installed space, it is easy to attach the separator to the field.

[Fixed Separator / 고정형 세퍼레이터]

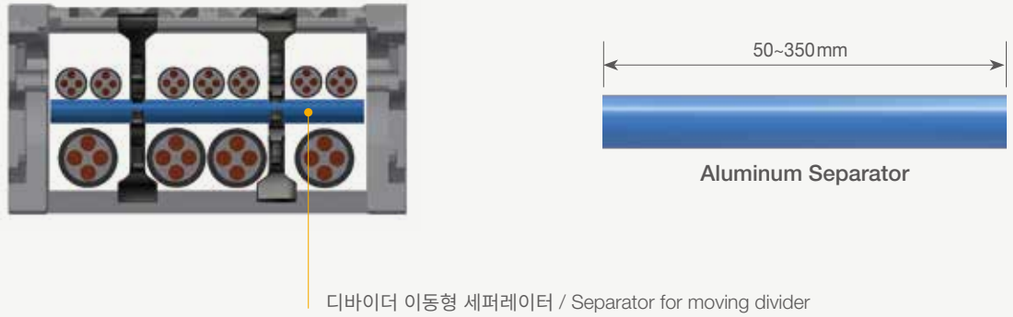
- 길이는 최소 50~230mm이며 3mm 간격으로 절단 사용가능.
- 내폭의 전체가 아닌 부분 입선공간 활용시 사용. (Plastic Separator)
- 플라스틱 커버 타입만 적용가능.

- Length is 50 to 230mm and can cut every 3mm.
- Used to utilize partial standing spaces, not the inner width. (Plastic Separator)
- Only Plastic Cover Type can be applied.



[Moving Separator / 이동형 세퍼레이터]

- 길이는 최소 50~350mm이며 캐리어 내폭치수 -1mm를 적용해서 사용. (Aluminum Separator)
- Length is 50 to 350mm and width is -1mm of cable carrier inner width. (Aluminum Separator)



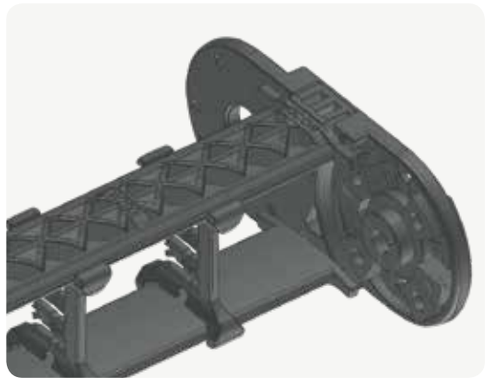
Optimized Cover Structure

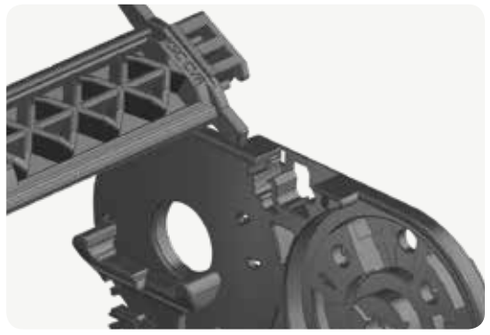
최적의 커버 구조

Smart Carrier는 커버의 걸쇠모양 돌기부가 탄성 변형하면서 바디 홈에 조립되는 구조로써 협소 공간에서 커버의 조립 및 해체가 용이하다. 커버의 두께와 너비를 강화하여 하중 및 충격에 의한 파손과 커버이탈을 최소화 하였다. 또한 케이블 및 호스의 접촉면에 대한 최적의 ROUND와 CHAMFER를 설정하여 케이블 및 호스의 쓸림을 완화하고 안전하게 보호 할 수 있는 구조의 커버이다. 제품피치별 Large Cover(KSC-CVR) 및 Middle Cover(PSC-CVR, KSC67-CVR)로 구분된다.

Smart Carrier is a structure in which the clasp-shaped protrusion of the cover is assembled into the body groove by elastic deformation, making it easy to assemble and disassemble the cover in a narrow space. The thickness and width of the cover is strengthened to minimize damage and breakaway due to load and impact. It is a cover of structure that can reduce cables and hoses' abrasion and protect it safely by setting an optimal ROUND and CHAMFER for the contact surface of the cables and hoses. Large Cover (KSC-CVR) and Middle Cover (PSC-CVR, KSC67-CVR) by pitch size.

[Large Cover]
KSC91



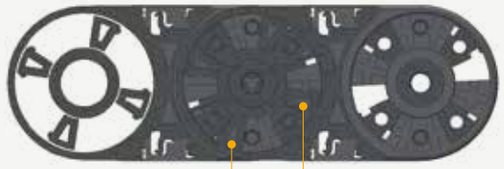


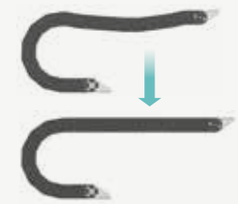
[Middle Cover]
KSC588 / KSC715

Reduce Sagging Due to Self-Load and Load 자중 및 하중에 의한 처짐완화

Smart Carrier는 링크 연결 후 처짐을 보완하는 스토퍼 4Point와 뒤틀림 방지점 4Point를 적용해 처짐과 뒤틀림을 최대한 보완할 수 있도록 설계 되었다. 동일 피치 사양대비 FreeSpan이 20% 이상 향상되어 캐리어의 내구성은 증가되고 파손율은 감소되어 케이블 및 호스의 수명이 증가된다.

Smart Carrier is designed to compensate for sagging and distortion as much as possible by applying Stopper 4 Point to compensate for sagging after link connection and 4 Point to prevent distortion.
A 20% or more improvement in FreeSpan compare with same pitch specification it increases the durability of the carrier and reduces the breakage rate, which also increases the lifespan of cables and hoses.

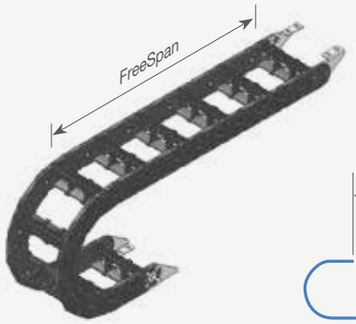




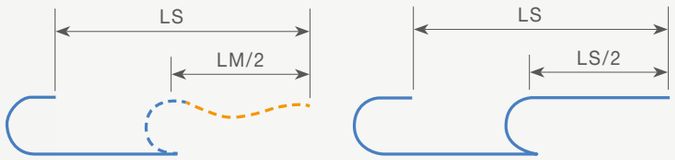
FreeSpan

케이블 캐리어의 **Self-Load**에 의한 처짐이 없는 길이를 **FreeSpan** 이라 하고, 케이블 하중에 따라 지지 하중의 길이가 달라진다. 케이블 캐리어는 처짐이 있으나 허용 가능한 길이(LM/2)와 처짐이 없이 허용가능한 길이(LS/2)가 있다.

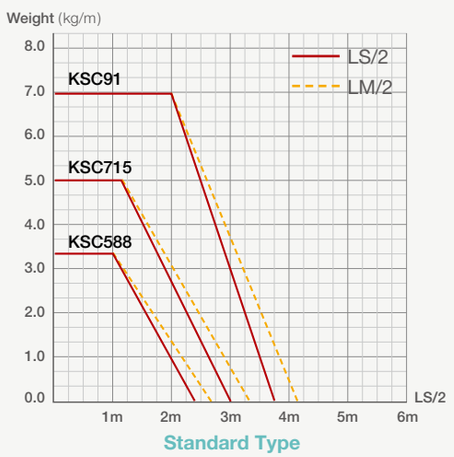
The length of the carrier without sagging by **Self-Load** is called **FreeSpan**, and the self-supporting length is depends on the value of cable load. There are two kinds of length.



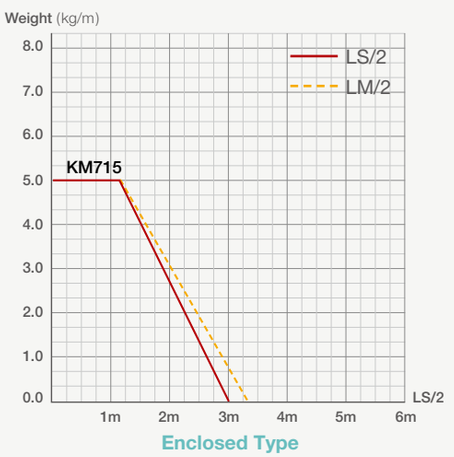
- **LS :** Travel length
- **LS / 2 :** 처짐이 없으며 허용 가능한 케이블 캐리어 길이
  No Sagging and acceptable length
- **LM / 2 :** 처짐이 있으나 허용 가능한 케이블 캐리어 길이
  Sagging but acceptable length



Load Diagrams Self-Supporting Length

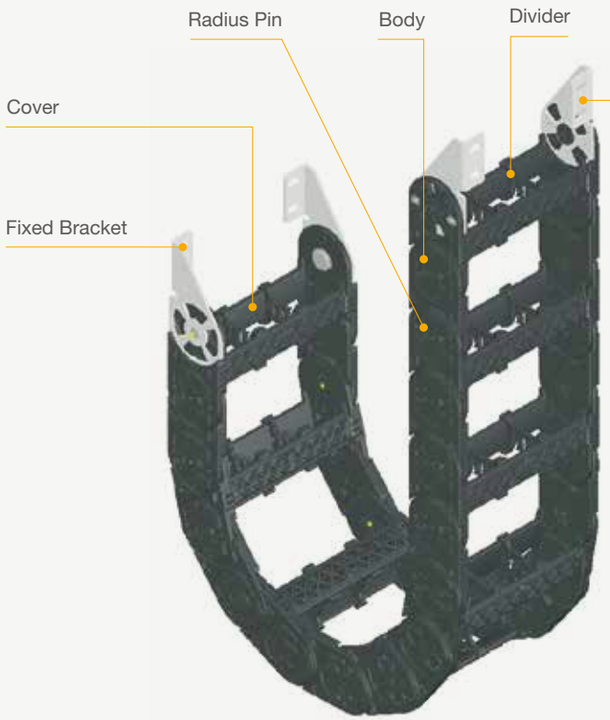


Standard Type



Enclosed Type

Structure

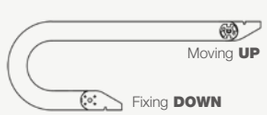


- **Material**
  : Engineering Plastic with Glass Fiber+@(UL94 HD)
- **Speed**
  : 3m/sec
- **Acceleration**
  : 10m/s^2
- **Temperature**
  : -25~125℃
- **Applications**
  : 공작기계, 자동화기계, 의료기계, 겐트리로봇, 일반산업기계 적용

  Machine tools, Automations machines, Medical equipment, Gantry robot equipment

End Bracket Setting Example

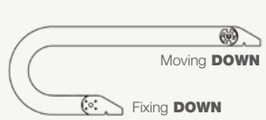
- **Short Distance Type 1 :** MU/FD(UD)



- **Short Distance Type 2 :** MU/FU(UU)

- **Long Distance Type 1 :** MU/FD(UD)

- **Short Distance Type 3 :** MD/FD(DD)



- **Short Distance Type 4 :** MD/FU(DU)

- **Long Distance Type 3 :** MD/FD(DD)

Cable Carrier Specification Selection

케이블 캐리어 사양 선정

① 케이블 캐리어 내고 설정
Cable Carrier Inner Height Setting

전선, 혹은 호스의 가장 큰 외경을 기준으로 하며 약 20% UP하여 사양에 맞는 내고를 선정한다.

Based on the largest external diameter of a cable or hose, approximately 20% up to select the inner height that meets the specifications.

② 케이블 캐리어 내폭 설정
Cable Carrier Inner Width Setting

전선, 혹은 호스의 외경(1+2+3+4)에 약 25% UP하여 사양에 맞는 내폭을 선정한다.

Select inner width according to the specification by increasing about 25% of cable and hose's outer diameter(1+2+3+4).

③ 케이블 캐리어 곡률반경 설정
Cable Carrier Radius Setting

전선, 혹은 호스의 곡률반경에 맞게 선정한다.
케이블 캐리어의 곡률반경이 전선, 혹은 호스의 곡률반경 사양 대비 큰 설정은 문제가 없지만 작은 설정은 쓸림에 의한 마모나 전선 혹은 호스에 대한 케이블 캐리어의 반작용이 발생할 수 있다.

Select for the radius of a cable or hose.
If the cable carrier radius is bigger than cable or hose, it is not a problem. But if it is smaller setting, it may cause wear due to wiping or the reaction of the cable carrier to the cable or hose.

전선 : Electronic Cables	에어호스 : Pneumatic Hoses	유압호스 : Hydraulic Hoses
케이블 외경에 6~8배	에어호스 외경에 8~10배	유압호스 외경에 12~15배
R min > 6~8 x Φ	R min > 8~10 x Φ	R min > 12~15 x Φ

④ 케이블 캐리어 길이 설정
Cable Carrier Length Setting (calculation)

장비의 행정거리 1/2 여유길이 N(Safety Length + πr) 값을 더하면 케이블 캐리어 전체 길이가 된다.
("N"값 : PAGE 10 및 각제품의 Specification 참조)

The cable carrier's total length is half of the equipment's total travel length and adding an extra length of N (Safety Length + πr) value. ("N": See PAGE10 and Specifications for each product)

Order Form

(mm)

EX) **KSC91 - W100 - R200 - 3003L - SETUD**

제품타입 Type	내폭 Width	곡률 Radius	길이 Length	브라켓 조립방향 End Bracket Setting

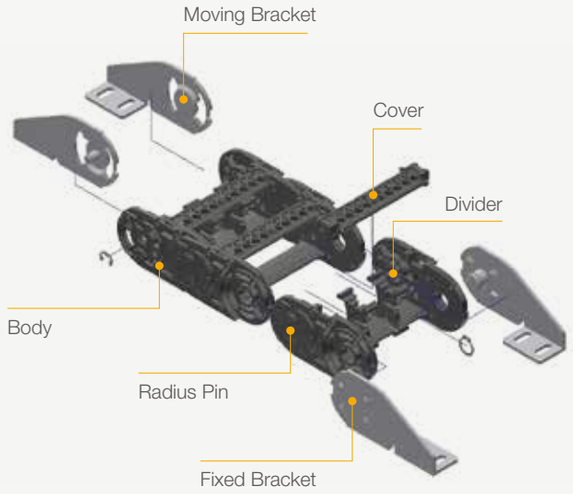
Smart Carrier

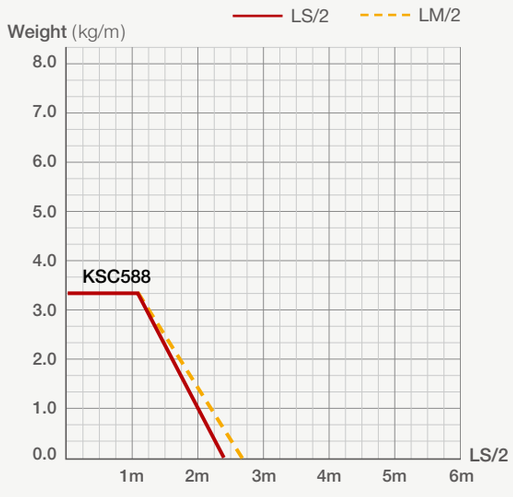
Smart Carrier

KSC588/10(25)

- **KSC588/10 :** 0~2m 미만 사용시 권장
- **KSC588/25 :** 2~4m 사용시 권장
- **KSC588/10 :** Recommended for use under 0-2m
- **KSC588/25 :** Recommended for use 2m to 4m

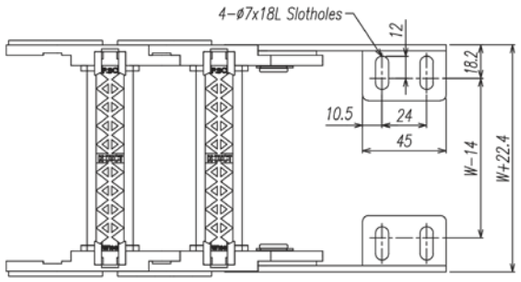
Structure



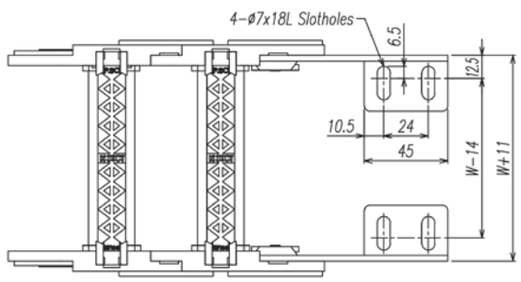


[Load Diagrams Self-Supporting Length]

End Bracket

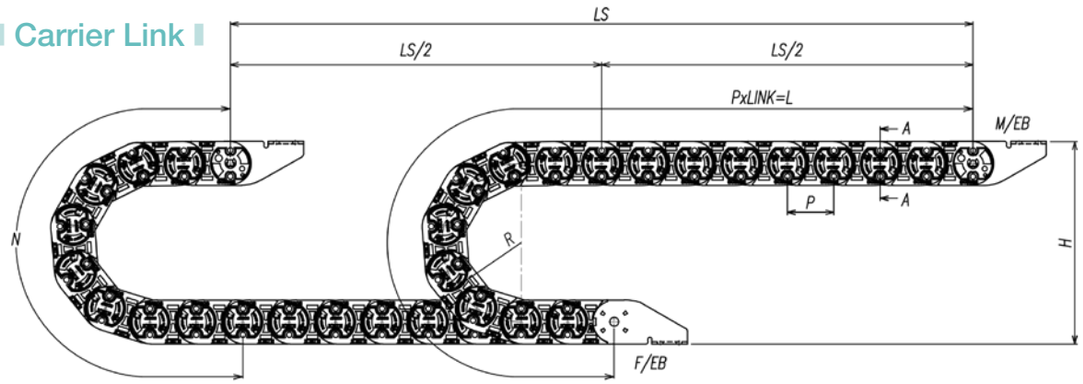


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

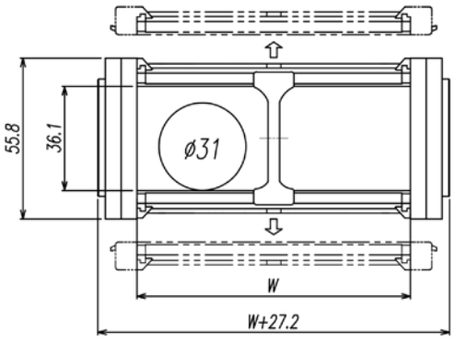
Carrier Link



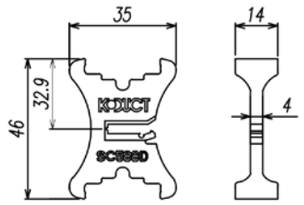
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **H :** Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : 14.5 x 4.4 (Plastic)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KSC588 /10(25)	50 (1.969)	68 (2.677)	58.8 (2.315)	192 (7.323)	450 (17.717)	0	1.275	0.64
	65 (2.559)					0	1.384	
	*75 (2.952)	80 (3.150)		216 (8.484)	490 (19.291)	0	1.550	
	80 (3.149)					1	1.659	
	*87 (3.425)	100 (3.937)		256 (10.028)	550 (21.654)	1	1.714	
	100 (3.937)					1	1.727	
	120 (4.724)	125 (4.921)		306 (11.815)	630 (24.803)	2	1.931	
	*150 (5.905)					2	2.156	
	160 (6.299)	150 (5.906)		356 (14.024)	710 (27.953)	2	2.482	
	*175 (6.889)					2	2.594	
	*187 (7.362)	200 (7.874)		456 (17.953)	870 (34.252)	2	2.758	
	200 (7.874)					2	3.033	

* 주문 제작 가능 / Can make to order

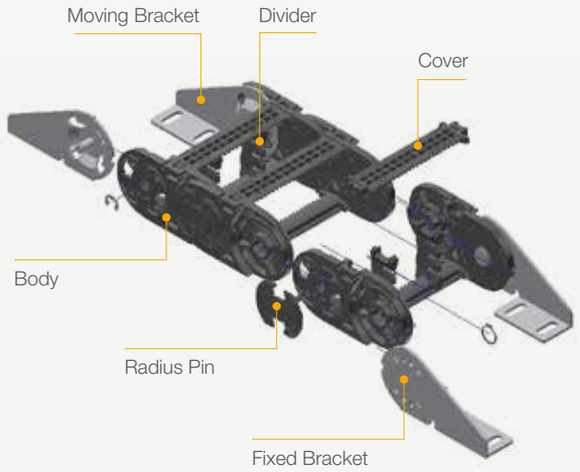
(1inch = 25.4mm)

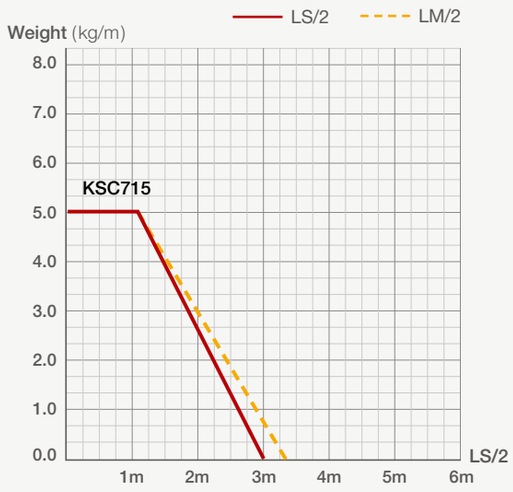
Smart Carrier

KSC715/10(25)

- **KSC715/10 :** 0~2m 미만 사용시 권장
- **KSC715/25 :** 2~4m 사용시 권장
- **KSC715/10 :** Recommended for use under 0-2m
- **KSC715/25 :** Recommended for use 2m to 4m

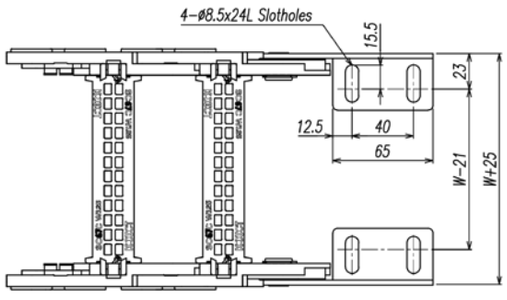
Structure

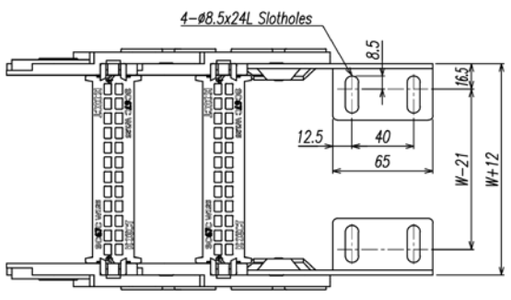


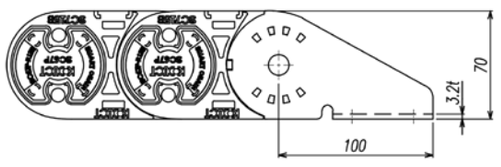


[Load Diagrams Self-Supporting Length]

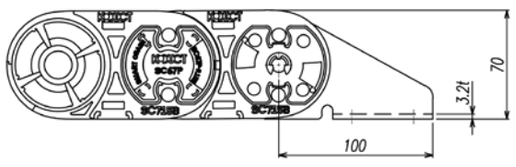
End Bracket





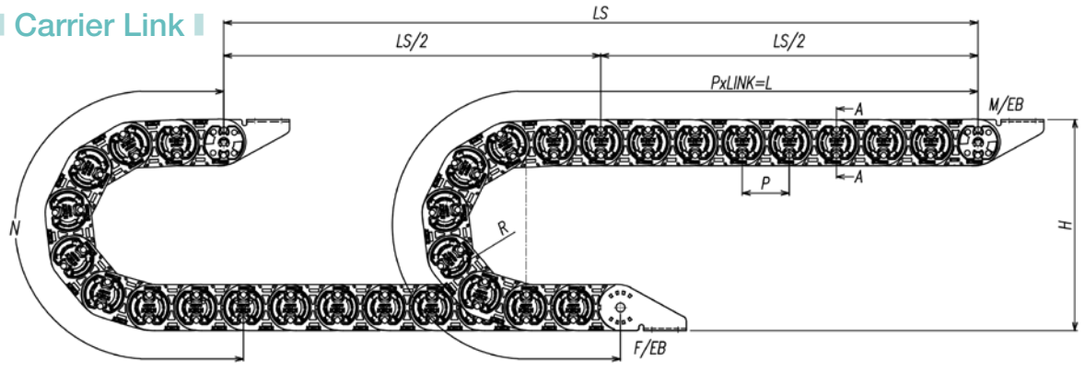


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

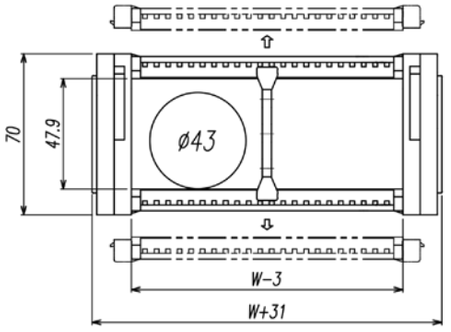
Carrier Link



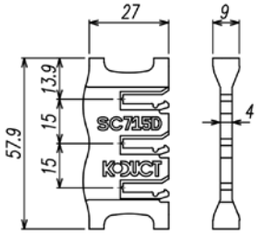
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **H :** Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : 14.5 x 4.4 (Plastic)

Specification

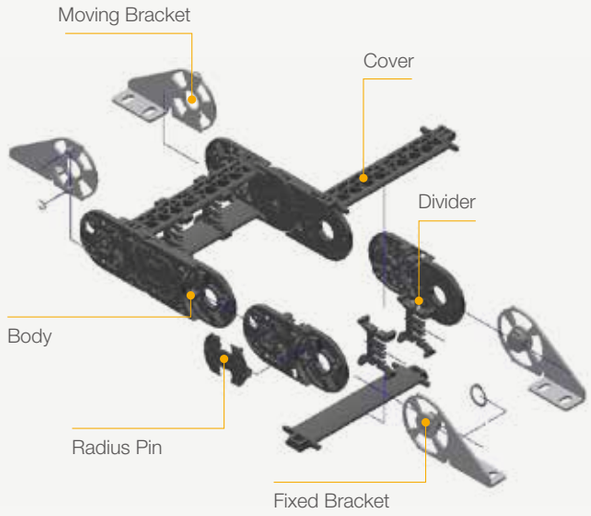
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KSC715 /10(25)	65 (2.559)	80 (3.150)	71.5 (2.815)	230 (9.055)	537 (21.142)	0	2.55	0.75
	80 (3.149)					1	2.63	
	100 (3.937)	100 (3.937)		270 (10.630)	600 (23.622)	1	2.72	
	125 (4.921)	125 (4.921)		320 (12.598)	679 (26.732)	2	2.80	
	150 (5.905)					2	2.88	
	175 (6.889)	150 (5.906)		370 (14.567)	757 (29.803)	2	2.97	
	200 (7.874)	200 (7.874)		470 (18.504)	914 (35.984)	2	3.05	
	225 (8.858)					3	3.14	
	250 (9.842)	250 (9.843)		570 (22.441)	1,071 (42.165)	3	3.22	

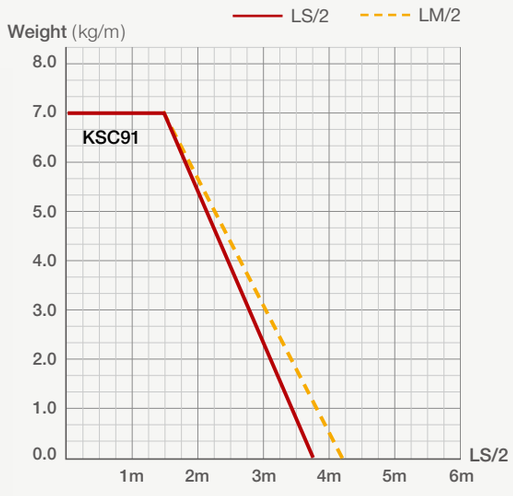
(1inch = 25.4mm)

Smart Carrier

KSC91 CE RoHS

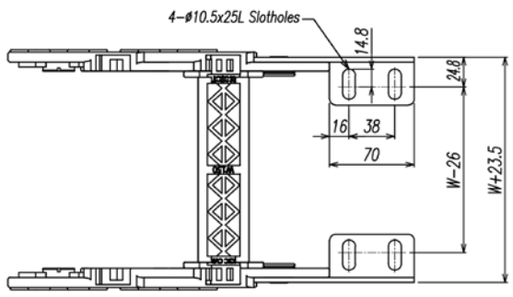
Structure

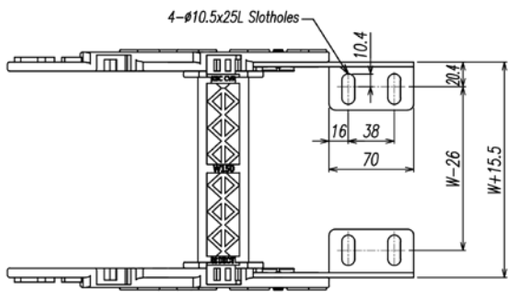


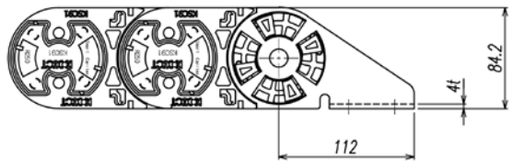


[Load Diagrams Self-Supporting Length]

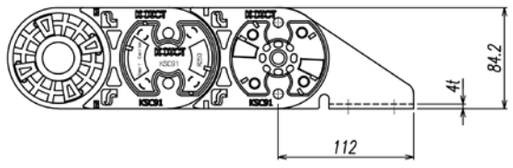
End Bracket





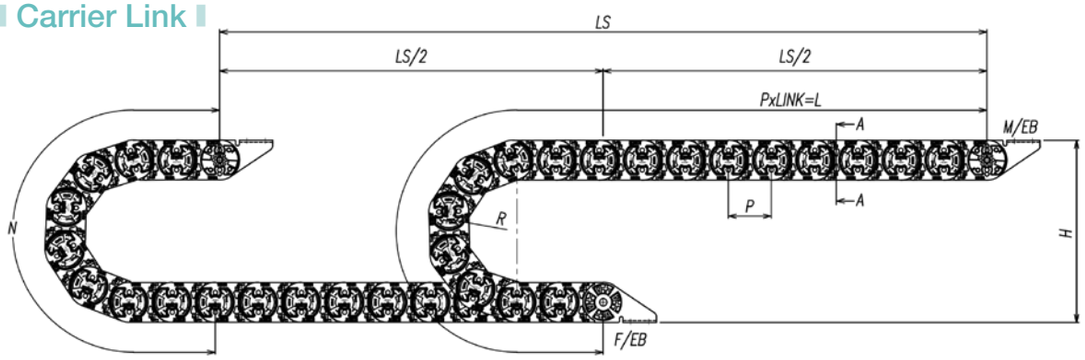


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

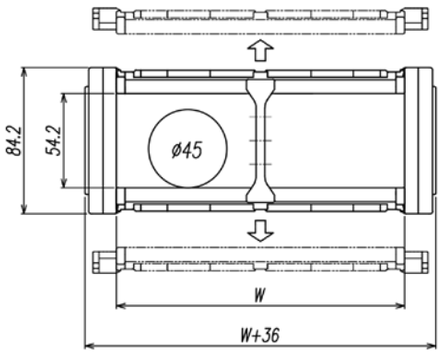
Carrier Link



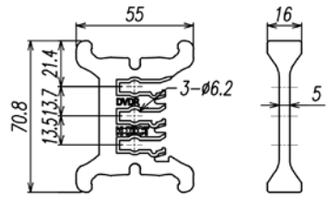
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

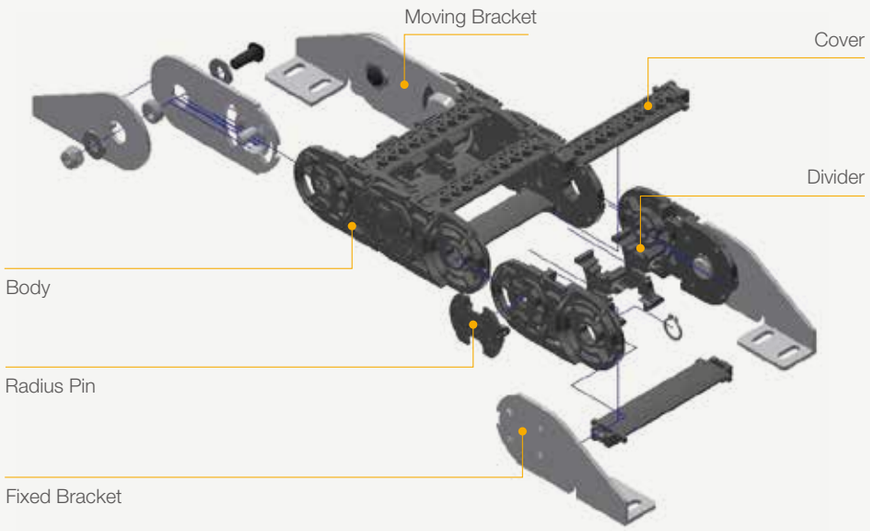
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KSC91	100 (3.937)	150 (5.906)	91 (3.583)	384 (15.118)	835 (32.874)	1	3.336	1.138
	150 (5.906)					2	3.625	
	200 (7.874)	200 (7.874)		484 (19.055)	992 (39.055)	2	3.830	
	250 (9.483)	250 (9.842)		584 (22.992)	1,149 (45.236)	3	4.066	
	300 (11.811)					3	4.308	
	350 (13.780)	300 (11.811)		684 (26.929)	1,306 (51.417)	4	4.598	

(1inch = 25.4mm)

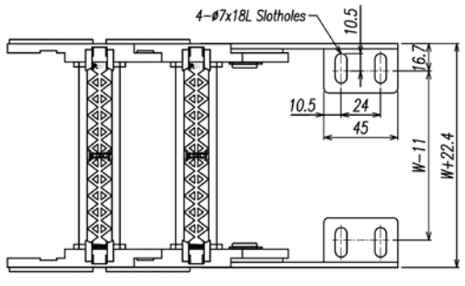
Smart Carrier

KSC588/S

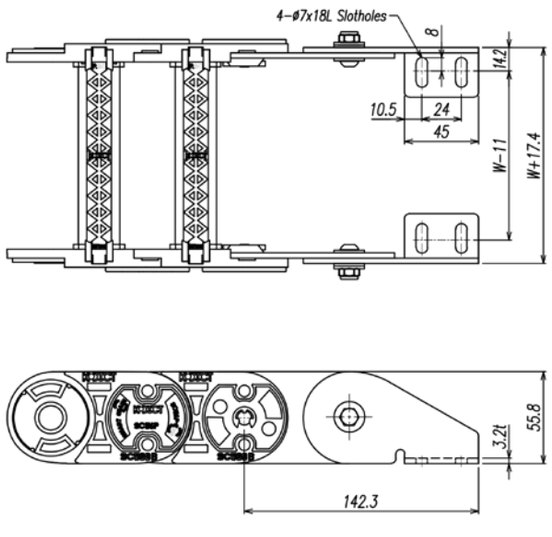
Structure



End Bracket

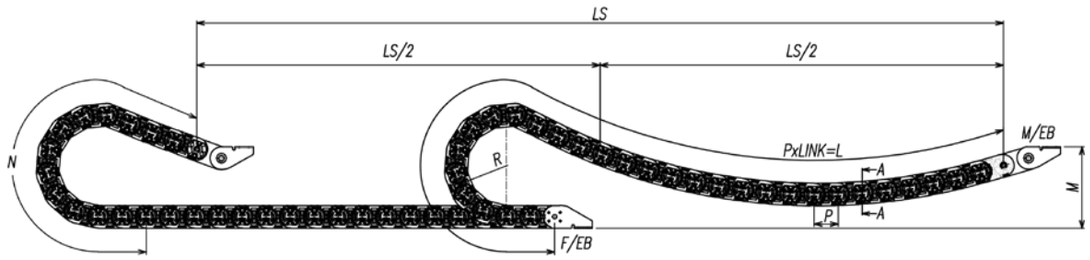


[**Fixed Bracket** (F/EB)]



[**Moving Bracket** (M/EB)]

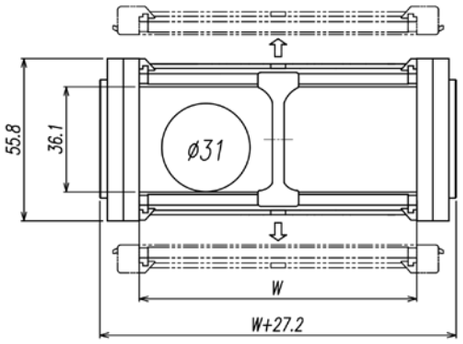
Carrier Link



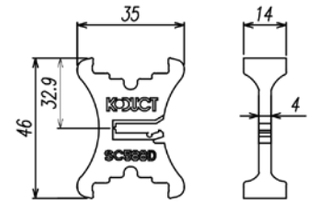
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : 14.5 x 4.4 (Plastic)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KSC588/S	50 (1.969)	68 (2.677)	58.8 (2.315)	200 (7.874)	650 (25.591)	0	1.275	0.79
	65 (2.559)					0	1.384	
	*75 (2.952)	80 (3.150)			750 (29.527)	0	1.550	
	80 (3.149)					1	1.659	
	*87 (3.425)	100 (3.937)			900 (35.433)	1	1.714	
	100 (3.937)					1	1.727	
	120 (4.724)	125 (4.921)			1,100 (43.307)	2	1.931	
	*150 (5.905)					2	2.156	
	160 (6.299)	150 (5.906)			1,300 (51.181)	2	2.482	
	*175 (6.889)					2	2.594	
	*187 (7.362)	200 (7.874)			1,500 (59.055)	2	2.758	
	200 (7.874)					2	3.033	

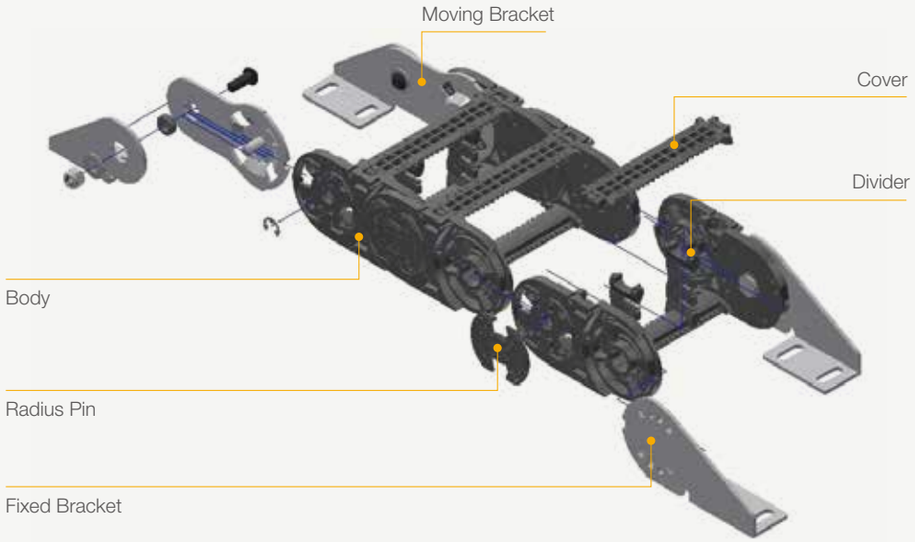
* 주문 제작 가능 / Can make to order

(1inch = 25.4mm)

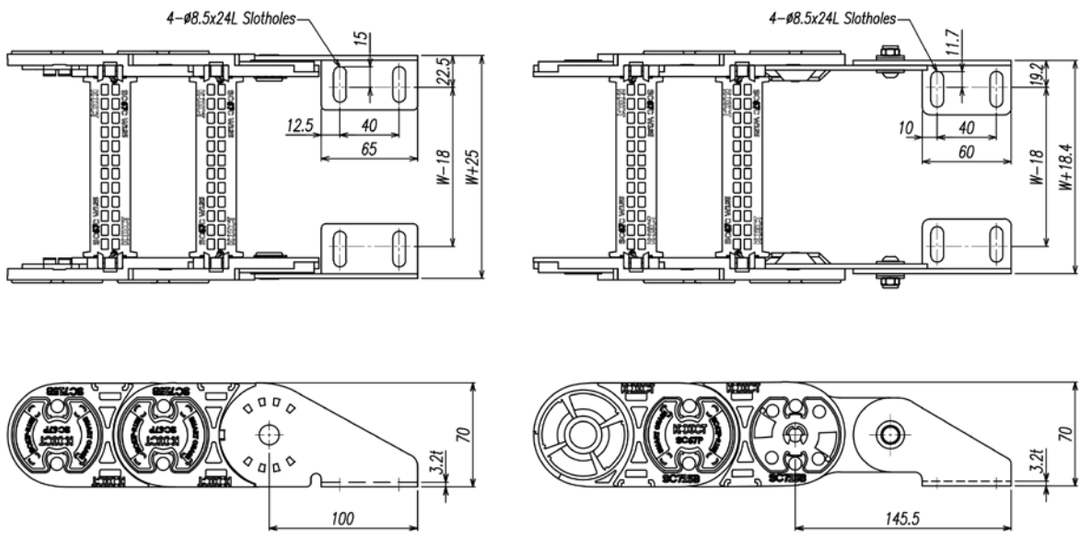
Smart Carrier

KSC715/S

Structure



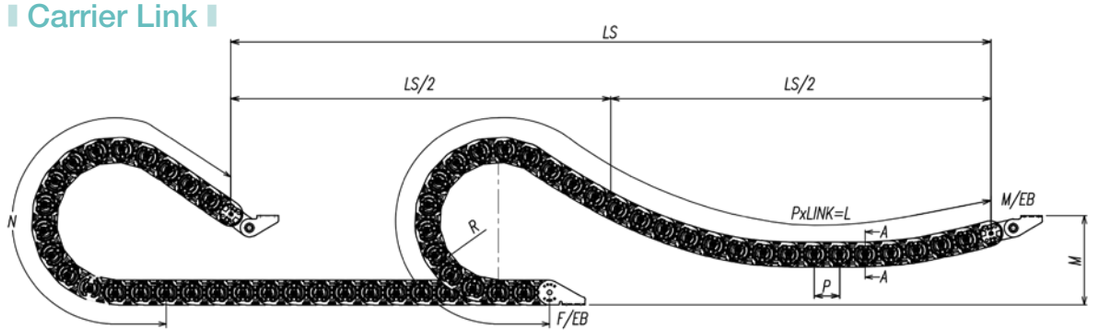
End Bracket



[**Fixed Bracket** (F/EB)]

[**Moving Bracket** (M/EB)]

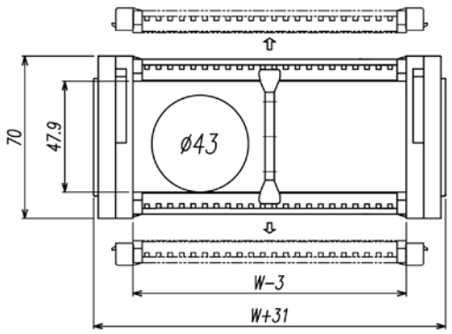
Carrier Link



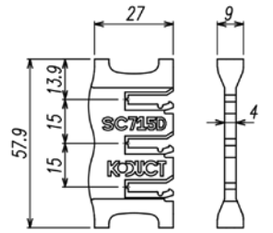
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : 14.5 x 4.4 (Plastic)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KSC715/S	65 (2.559)	80 (3.150)	71.5 (2.815)	250 (9.84)	800 (31.496)	0	2.55	0.92
	80 (3.149)					1	2.63	
	100 (3.937)	100 (3.937)			1,000 (39.370)	1	2.72	
	125 (4.921)	125 (4.921)			1,300 (51.181)	2	2.80	
	150 (5.905)					2	2.88	
	175 (6.889)	150 (5.906)			1,500 (59.055)	2	2.97	
	200 (7.874)	200 (7.874)			1,800 (70.866)	2	3.05	
	225 (8.858)					3	3.14	
	250 (9.842)	250 (9.843)			2,100 (82.677)	3	3.22	

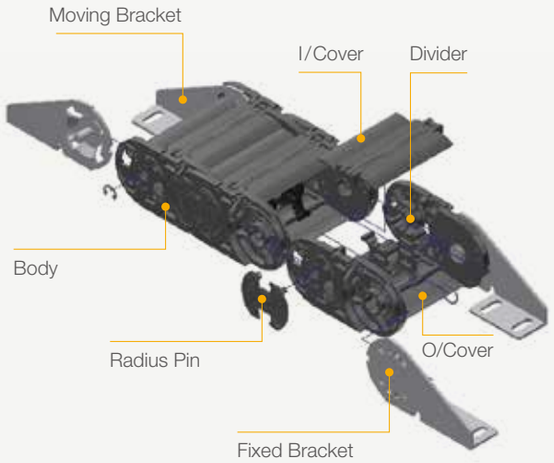
(1inch = 25.4mm)

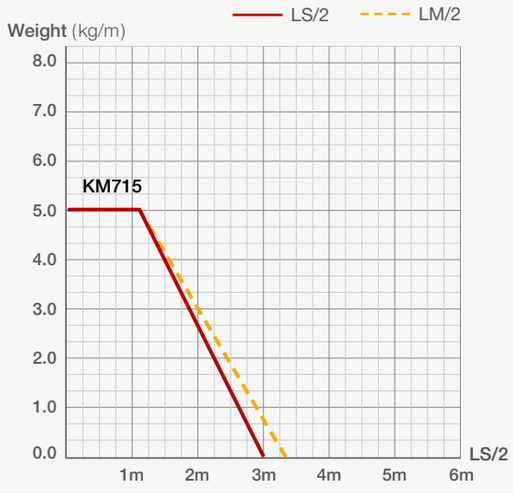
Smart Carrier

KM715/10(25)

- **KM715/10 :** 0~2m 미만 사용시 권장
- **KM715/25 :** 2~4m 사용시 권장
- **KM715/10 :** Recommended for use under 0-2m
- **KM715/25 :** Recommended for use 2m to 4m

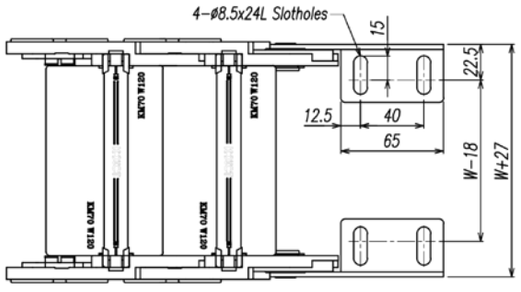
Structure

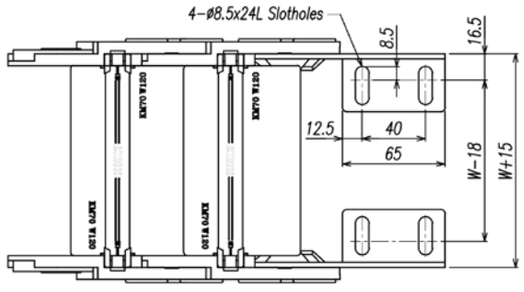


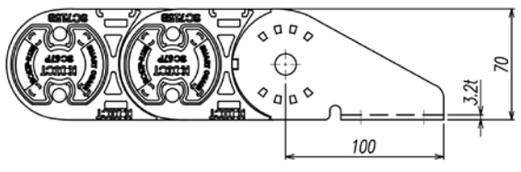


[Load Diagrams Self-Supporting Length]

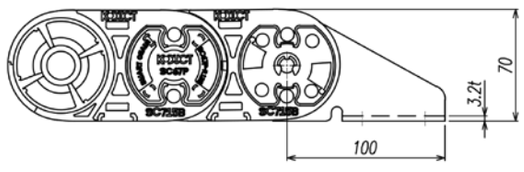
End Bracket





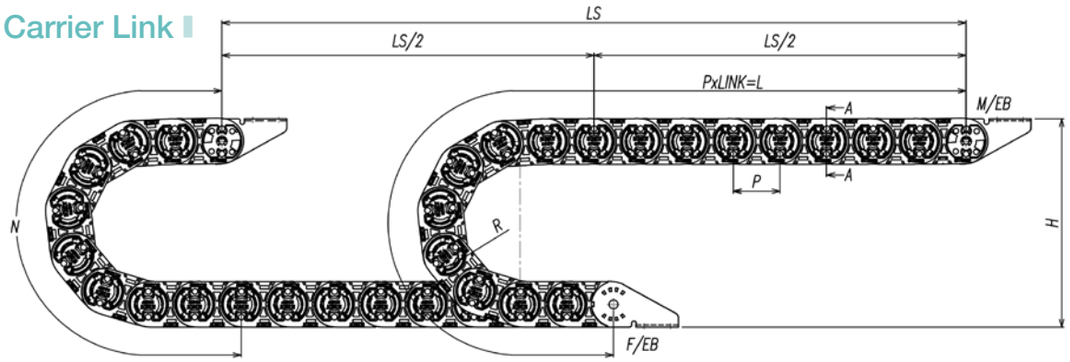


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

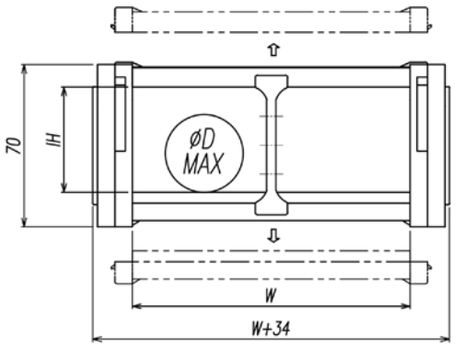
Carrier Link



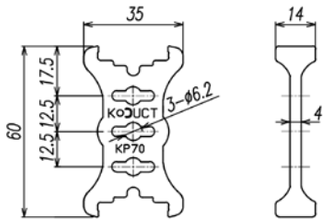
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **H :** Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	IH mm (inch)	ØD max	DVDR (ea)	1m (kg)	EB Set (kg)
KM715 /10(25)	75 (2.952)	100 (3.937)	71.5 (2.815)	270 (10.630)	600 (23.622)	37 (1.456)	Ø16	0	3.06	0.75
		125 (4.921)		320 (12.598)	679 (26.732)	41 (1.614)	Ø20			
	100 (3.937)	150 (5.906)		370 (14.567)	757 (29.803)	43 (1.692)	Ø25	1	3.38	
		200 (7.874)		470 (18.504)	914 (35.984)	44 (1.732)	Ø33			
	120 (4.724)	250 (9.843)		570 (22.441)	1,071 (42.165)	45 (1.771)	Ø41	2	4.5	

(1inch = 25.4mm)

Smart Carrier - **Middle Cover** (KSC588 / KSC715)

Assembly and Disassembly 조립·해체 방법

❶ 바디링크 연결시 바디를 45° 꺾어서 링크를 연결한다.

When connecting the body link, bend the body 45° to connect the link.

❷ 곡률핀을 조립시 바디를 수평으로 한 상태에서 조립한다.

Assemble the Radius pin with the body horizontal.

❸ 바디링크와 곡률핀을 연결한다.

Assemble the body link and radius pin.

❹ 좌, 우 바디열을 연결커버로 바디 내측부를 우선 조립한다.

First assemble the inner part of the body with the inner cover of the left and right body.

❺ 좌, 우 바디열 내측에 커버를 조립 후 디바이더를 체결한다.

Attach the cover to the inner side of the left and right body and tighten the divider.

❻ 디바이더 체결 후 외측커버를 조립한다.

Attach the outer cover after attaching the divider.

❼ 고정브라켓을 준비 후 바디 고정단에 조립 후 스냅링을 체결한다.

After preparing the fixed bracket, assemble it on the body and tighten the snap ring.

❽ 무빙브라켓을 준비 후 바디 무빙단에 조립 후 E링을 체결한다.

Prepare a moving bracket, assemble it on the body and attach the E-ring.

❾ 조립완료.

Assembly Completed.

❶ 커버 해체시 커버고리부에 "—" 드라이버를 이용해 커버를 해체한다.

When disassembling the cover, remove the cover using a flat-head screwdriver on the cover loop.

❷ 바디 해체시 커버 해체 후 "—" 드라이버를 링크연결부 사이에 넣어 45° 곡률방향으로 회전 시켜서 해체한다.

After disassembling the covers, insert a flat-head screwdriver in the link connection and break it down in the 45° direction.

Smart Carrier - **Large Cover** (KSC91)

Assembly and Disassembly 조립·해체 방법

❶ 바디링크 연결시 바디를 45° 꺾어서 링크를 연결한다.

When connecting the body link, bend the body 45° to connect the link.

❷ 곡률핀 조립시 바디를 수평으로 한 상태에서 조립한다.

Assemble the Radius pin with the body horizontal.

❸ 바디링크와 곡률핀을 연결한다.

Assemble the body link and radius pin.

❹ 좌, 우 바디열을 커버 좌측 돌출부 바디 내측부 홈에 세워서 끼운다.

Place the left and right body on the left protrusion of the cover and on the inner groove of the body.

❺ 10° 이상 세운 커버를 바디홈에 체결 후 망치로 완전조립한다.

Tighten the cover more than 10° to the body groove and fully assemble it with a hammer.

❻ 좌, 우 바디열 내측에 커버를 조립 후 디바이더를 체결한다.

Attach the cover to the inner side of the left and right body and tighten the divider.

❼ 디바이더 체결 후 외측커버를 조립한다.

After assembling the divider, assemble the outer cover.

❽ 고정브라켓을 준비 후 바디 고정단에 조립 후 스냅링을 체결한다.

After preparing the fixed bracket, assemble it on the body and tighten the snap ring.

❾ 무빙브라켓을 준비 후 바디 무빙단에 조립 후 E링을 체결한다.

Prepare a moving bracket, assemble it on the body and attach the E-ring.

❿ 조립완료.

Assembly complete.

❶ 커버 해체시 커버홈에 "—" 드라이버를 이용해 커버를 해체한다.

When removing a cover, remove the cover using a flat-head screwdriver on the cover loop.

❷ 바디 해체시 커버 해체 후 "—" 드라이버를 연결부 링크 연결부 사이에 넣어 45° 곡률방향으로 회전시켜 해체한다.

After disassembling the cover, insert a flat-head screwdriver between the link connections and rotate it in the direction of 45° radius.

Fork Carrier

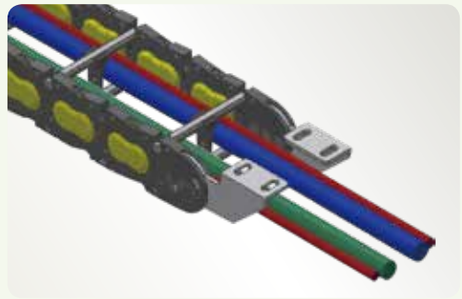
CDS070 | CDS080 | CDS100 | CDS150 | SRS070 | SRS080 | SRS100 | SRS150 | KDP070 | CDP080 | CDP100 | KDPS070 | CDPS080 | CDPS100 | CDM080 | CDM100

Fork Carrier

엔지니어링 플라스틱을 사용해 가볍고 내구성이 우수하다. 외장형 곡률핀을 사용해 곡률핀 변경만으로 곡률조절이 손쉽게 가능하다. 또한 자재관리의 효율을 극대화 할 수 있는 독창적이고 우수한 캐리어다.
3 Pin 구조로된 링크(곡률)핀은 장력이 우수한 링크 결합 방식으로 타사 대비 인장력이 20% 이상 뛰어나 장거리 적용에도 캐리어 파손 및 이탈이 없으며, 링크 간 공차가 거의 없어 케이블 및 호스의 수명이 증가된다.

Light and durable, using engineering plastics with excellent impact strength. Apply detachable radius pin, easily adjust radius by changing only radius pin. Also, it is a unique and smart carrier that can maximize the efficiency of material management. 3 Pin structure link pin(Radius) is excellent tension, the tensile strength is 20 percent better than other companies' product. By strengthening the thickness and width of the cover and minimizing the contact surface of the cables and hoses, the product's damage rate was reduced and the life of the cables and hoses is extended.

- **주요 사용장비 :** 골리앗크레인, 겐트리로봇캐리지, 공작기계, 용접장비, 절단장비 등
- **Applications :** Goliath crane, Gantry robot, Machine tool, Welding machine, Cutting machine etc.



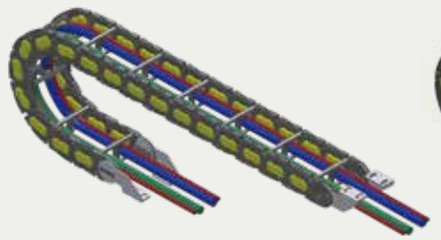
AL Bar Type

PL Cover Type

Enclose Type

Fork Carrier Features

Fork Carrier 특징



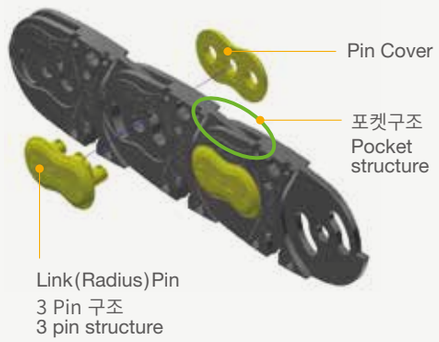
[AL Bar Type]

[PL Cover Type]

Excellent Durability 뛰어난 내구성

Fork Carrier의 3 Pin 구조로된 링크(곡률)핀은 장력이 우수한 결합방식이며 장거리 사용에도 파손되거나 이탈되지 않는다.
바디링크간 체결은 포켓 형식으로 되어있고 링크핀(곡률핀)과 핀커버가 바디링크를 잡아주며 체결되어 바디 파손 및 이탈 그리고 뒤틀림을 방지할 수 있는 구조이다.
3 Pin 구조의 제품은 내구성이 뛰어나고 안정적인 사용이 가능하다.

3 pin structure link connection radius pin, it is unique and excellent product with no breakage or fall out of the carrier even in long-distance applications.
Pocket type body links assembly structure, it can hold body link with link pins (radius pins) and pin covers one more time, No body breakage, fall out and twists.
Products with 3 Pin structure are particularly durable and can be used reliably.



Use Linkpin Type Multi-Radius Pin 링크핀형 멀티곡률핀 사용

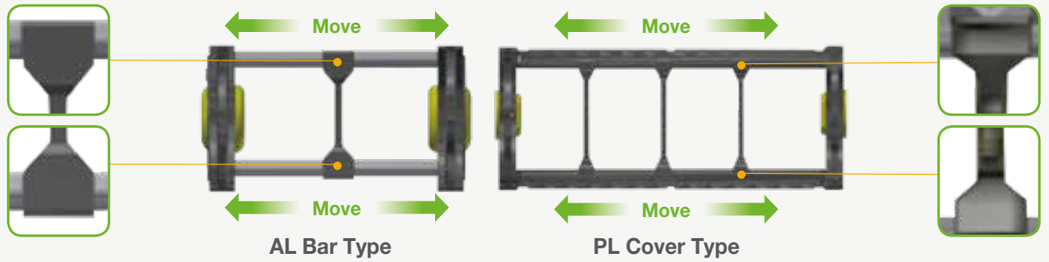
Fork Carrier는 바디 자체에서 곡률조절되는 기존방식과 달리 링크핀형 멀티곡률핀의 곡률조절 돌기를 이용하여 곡률반경이 형성된다. 곡률값을 자유자재로 교체할 수 있는 구조이며, 바디 외측에서 곡률핀을 분해·조립할 수 있어 잘못된 곡률 선정시 교체가 용이한 구조로 되어있다. 또한 핀과 핀커버를 조립해 견고히 체결이 되어 어떠한 충격에도 곡률핀이 이탈되지 않는다.
Fork Carrier는 곡률별 바디가 필요없어 재고관리가 용이하다. 바디 연결 후 곡률핀을 조립하는 구조로 되어있어 바디링크 반조립 상태로 재고관리가 가능하여 생산성의 효율을 높일 수 있는 제품이다.

Fork Carrier curvature radius is made by link multi-radius pin's radius control protrusion, unlike existing method of curvature radius control in the body. It is a structure that can freely replace the value of radius, and it is easy to replace the radius pin when selecting the wrong radius because it can be disassembled and assembled on the outside of the body. Also, the pin and pin cover are firmly assembled so that the radius pin does not deviate from any impact.
Fork carrier does not need a body link by radius, so inventory management is simple. The structure is to assemble radius pins after connecting the body, so inventory management is possible in a semi-assembled body link, which can increase the efficiency of productivity.

Divider Structure for Easy Cable Installation 케이블 포설이 용이한 디바이더 구조

Fork Carrier 디바이더는 고정식이 아닌 유동형으로 레일형식(Bar 또는 Cover)의 구조에 디바이더를 체결한다.
디바이더가 좌, 우 이동이 되는 방식으로 케이블 및 호스의 포설에 용이하며 또한 케이블의 움직임에 디바이더 이탈이 없는 구조이다.

The divider is movable, not fixed. Put divider in the rail-type(bar or cover) structure.
Divider structure is easy to moves left and right, it make not deviate from the divider due to the movement of the cable and easy to install cables.



Expansion of Cable Installation Space by Separator

세퍼레이터에 의한 케이블 입선공간 범위확대

디바이더에서 입선공간 범위 확대 필요시 세퍼레이터를 적용해 입선공간을 확대 할 수 있으며, 기존 설치되어 있는 공간에서 케이블 추가시 세퍼레이터 체결이 용이하여 현장적용이 편리하다.

If it is necessary to expand installation space in the divider, you can expand the installation space by applying a separator. When add more cables from the existing installed space, it is easy to attach the separator to the field.

[Fixed Separator / 고정형 세퍼레이터]

- 길이는 최소 50~230mm이며 3mm 간격으로 절단 사용가능.
- 내폭의 전체가 아닌 부분 입선공간 활용시 사용. (Plastic Separator)
- 플라스틱 커버 타입만 적용가능.

- Length is 50 to 230mm and can cut every 3mm.
- Used to utilize partial standing spaces, not the inner width. (Plastic Separator)
- Only Plastic Cover Type can be applied.

[Moving Separator / 이동형 세퍼레이터]

- 길이는 최소 80~400mm이며 캐리어 내폭치수 -1mm를 적용해서 사용. (Aluminum Separator)
- Length is 80 to 400mm and width is -1mm of cable carrier inner width. (Aluminum Separator)

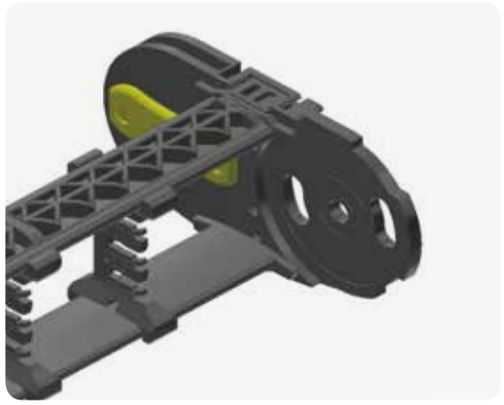
Optimized Cover Structure

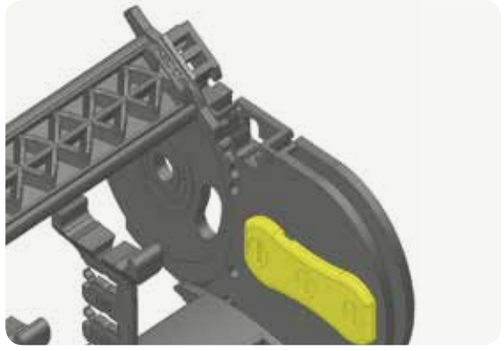
최적의 커버조립 구조

Fork Carrier Plastic Cover Type은 커버의 걸쇠모양 돌기부가 탄성 변형하면서 바디 홈에 조립되는 구조로써 협소 공간에서 커버의 조립 및 해체가 용이하다. 커버의 두께 및 너비를 강화하여 하중이나 충격에 의한 파손과 커버이탈을 최소화 하였다.
또한 케이블 및 호스의 접촉면에 대한 최적의 ROUND와 CHAMFER를 설정하여 케이블 및 호스의 쓸림을 완화하고 안전하게 보호 할 수 있는 커버 구조로 설계 되어있다. 제품피치별 Large Cover(KSC-CVR) 및 Middle Cover(PSC-CVR, KSC67-CVR)로 구분된다.

Fork Carrier Plastic Cover Type is easy to assemble and disassemble as the body or cover loop is tensioned in the shape of a ring. The thickness and width of the cover have been strengthened to minimize damage and dislocation due to load and impact.
Also, it is a cover of structure that can protect cables and hoses from sliding by setting the optimal ROUND and CHAMFER on the contact surfaces of cables and hoses. Large Cover (KSC-CVR) and Middle Cover (PSC-CVR, KSC67-CVR) by product pitch.

[Large Cover]
CDP100





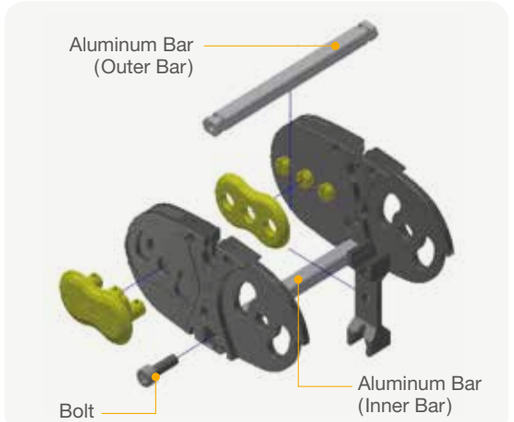
[Middle Cover]
KDP070

Highly Durable BAR Assembly Structure

내구성이 뛰어난 BAR 조립구조

Fork Carrier Al/Bar Type은 좌, 우 바디링크 연결구조가 Aluminum Bar를 볼트로 조립하여 Bar의 빠짐으로 인한 이탈이 없다.
외력에 의한 좌, 우 바디링크 간의 분해가 거의 되지 않는 구조임으로 안정적인 사용이 가능하다.

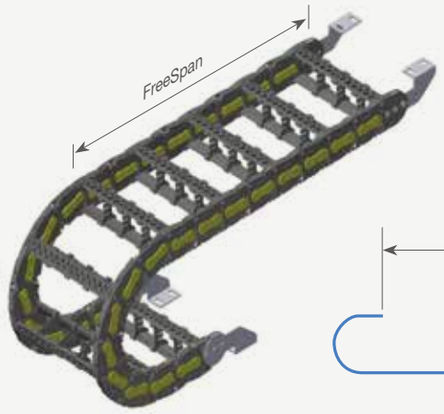
For the **Fork Carrier Al/Bar Type**, the left and right body link connections assemble the aluminum bar with bolts so that the bar does not fall out due to deviate.
It is a structure that rarely decomposes between left and right body links due to external forces, enabling stable use.



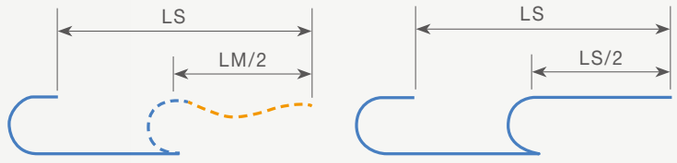
FreeSpan

케이블 캐리어의 **Self-Load**에 의한 처짐이 없는 길이를 **FreeSpan** 이라 하고, 케이블 하중에 따라 지지 하중의 길이가 달라진다.
케이블 캐리어는 처짐이 있으나 허용 가능한 길이(LM/2)와 처짐이 없이 허용가능한 길이(LS/2)가 있다.

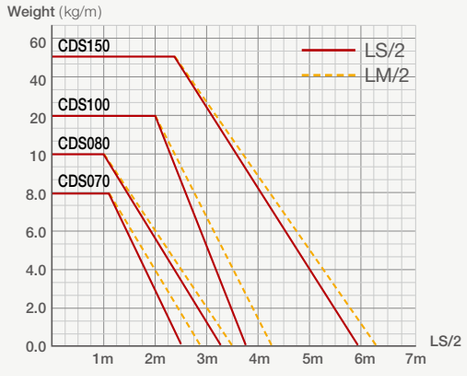
The length of the carrier without sagging by **Self-Load** is called **FreeSpan**, and the self-supporting length is depends on the value of cable load. There are two kinds of length.



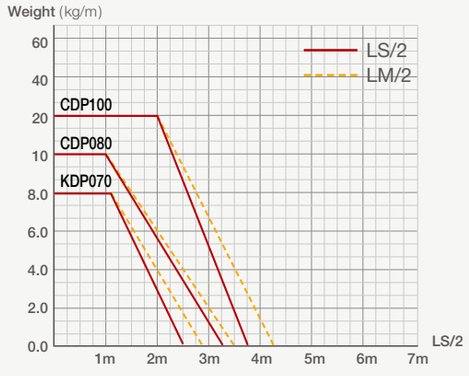
- **LS :** Travel length
- **LS / 2 :** 처짐이 없으며 허용 가능한 케이블 캐리어 길이
  No Sagging and acceptable length
- **LM / 2 :** 처짐이 있으나 허용 가능한 케이블 캐리어 길이
  Sagging but acceptable length



Load Diagrams Self-Supporting Length



AL Bar Type

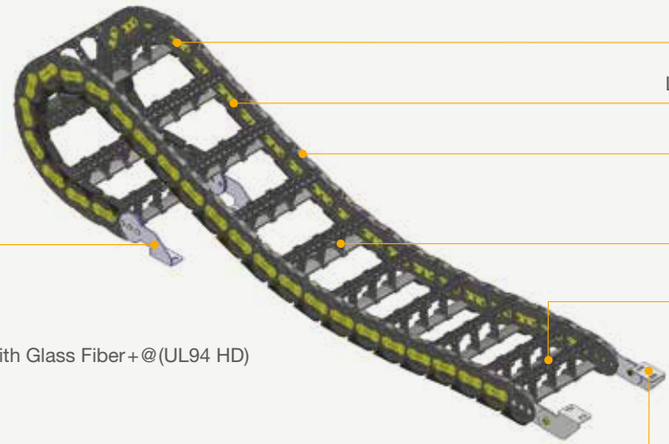


PL Cover Type

Structure AL Bar Type-Short Distance

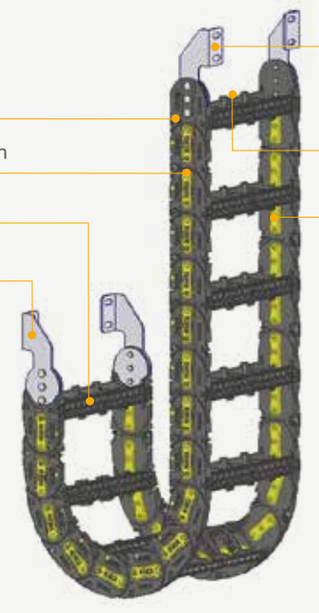
- **Material**
  : Engineering Plastic with Glass Fiber+@(UL94 HD), AL6063
- **Speed**
  : 5m/sec
- **Acceleration**
  : 15m/s^2
- **Temperature**
  : -25~125°C
- **Applications**
  : 자동화기계, 공작기계, 겐트리로봇, 일반산업기계 적용
  Automation machines, Machine tools, Gantry robot and General industrial machinery

Structure PL Cover Type-Long Distance



- **Material**
  : Engineering Plastic with Glass Fiber+@(UL94 HD)
- **Speed**
  : 5m/sec
- **Acceleration**
  : 15m/s^2
- **Temperature**
  : -25~125°C
- **Applications**
  : 크레인, 자동화기계, 공작기계, 겐트리로봇, 일반산업기계 적용
  Crane, Automation machines, Machine tools, Gantry robot and General industrial machinery

Structure PL Cover Type-Short Distance



- **Material**
  : Engineering Plastic with Glass Fiber+@(UL94 HD)
- **Speed**
  : 5m/sec
- **Acceleration**
  : 15m/s^2
- **Temperature**
  : -25~125°C
- **Applications**
  : 자동화기계, 공작기계, 겐트리로봇, 일반산업기계 적용
  Automation machines, Machine tools, Gantry robot and General industrial machinery

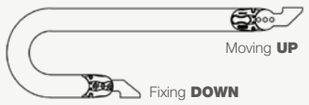
Structure AL Bar Type-Long Distance

- **Material**
  : Engineering Plastic with Glass Fiber+@(UL94 HD), AL6063
- **Speed**
  : 5m/sec
- **Acceleration**
  : 15m/s^2
- **Temperature**
  : -25~125°C
- **Applications**
  : 크레인, 자동화기계, 공작기계, 겐트리로봇, 일반산업기계 적용
  Crane, Automation machines, Machine tools, Gantry robot and General industrial machinery

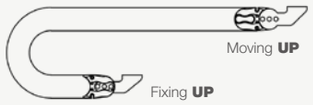
Fork Carrier

End Bracket Setting Example

• **Short Distance Type 1 :** MU/FD(UD)

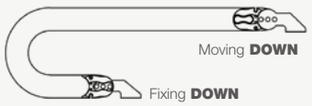


• **Short Distance Type 2 :** MU/FU(UU)



• **Long Distance Type 1 :** MU/FD(UD)

• **Short Distance Type 3 :** MD/FD(DD)



• **Short Distance Type 4 :** MD/FU(DU)

• **Long Distance Type 3 :** MD/FD(DD)

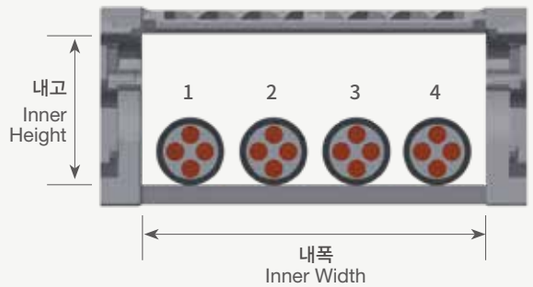
Cable Carrier Specification Selection

케이블 캐리어 사양 선정

① 케이블 캐리어 내고 설정
Cable Carrier Inner Height Setting

전선, 혹은 호스의 가장 큰 외경을 기준으로 하며
약 20% UP하여 사양에 맞는 내고를 선정한다.

Based on the largest external diameter of a cable or hose, approximately 20% up to select the inner height that meets the specifications.



② 케이블 캐리어 내폭 설정
Cable Carrier Inner Width Setting

전선, 혹은 호스의 외경(1+2+3+4)에 약 25% UP하여 사양에 맞는 내폭을 선정한다.

Select inner width according to the specification by increasing about 25% of cable and hose's outer diameter(1+2+3+4).

③ 케이블 캐리어 곡률반경 설정
Cable Carrier Radius Setting

전선, 혹은 호스의 곡률반경에 맞게 선정한다.
케이블 캐리어의 곡률반경이 전선, 혹은 호스의 곡률반경 사양 대비 큰 설정은 문제가 없지만 작은 설정은 쓸림에 의한 마모나 전선 혹은 호스에 대한 케이블 캐리어의 반작용이 발생할 수 있다.

Select for the radius of a cable or hose.
If the cable carrier radius is bigger than cable or hose, it is not a problem. But if it is smaller setting, it may cause wear due to wiping or the reaction of the cable carrier to the cable or hose.

전선 : Electronic Cables	에어호스 : Pneumatic Hoses	유압호스 : Hydraulic Hoses
케이블 외경에 6~8배	에어호스 외경에 8~10배	유압호스 외경에 12~15배
R min > 6~8 x Φ	R min > 8~10 x Φ	R min > 12~15 x Φ

④ 케이블 캐리어 길이 설정
Cable Carrier Length Setting (calculation)

장비의 행정거리 1/2 여유길이 N(Safety Length + πr) 값을 더하면 케이블 캐리어 전체 길이가 된다.
("N"값 : PAGE 10 및 각제품의 Specification 참조)

The cable carrier's total length is half of the equipment's total travel length and adding an extra length of N (Safety Length + πr) value. ("N": See PAGE10 and Specifications for each product)

Order Form

(mm)

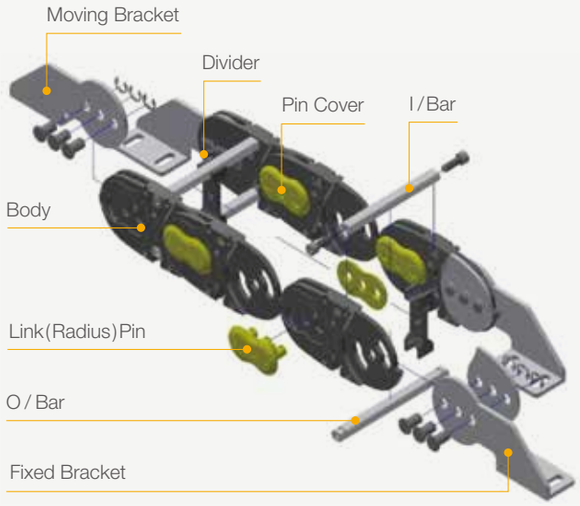
EX) **CDP100 - W200 - R200 - 4000L - SETUD**

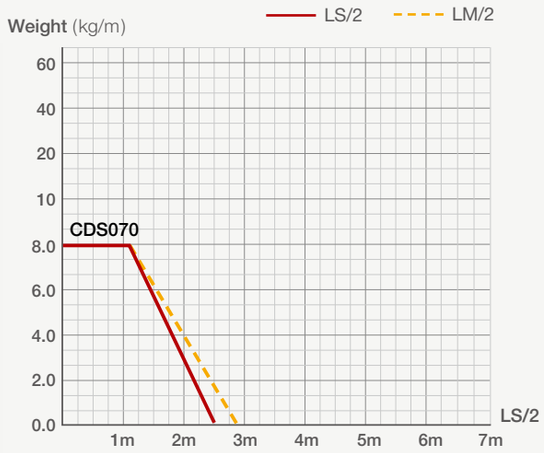
제품타입 Type	내폭 Width	곡률 Radius	길이 Length	브라켓 조립방향 End Bracket Setting

Fork Carrier

CDS070

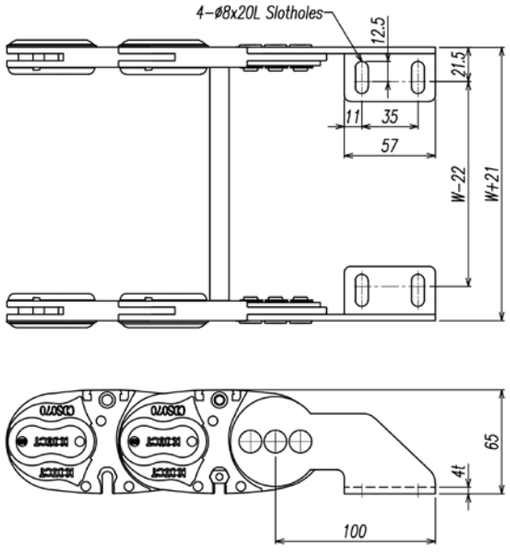
Structure



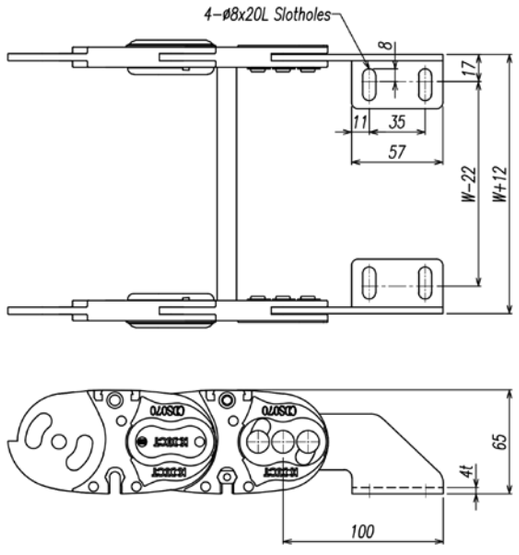


[Load Diagrams Self-Supporting Length]

End Bracket

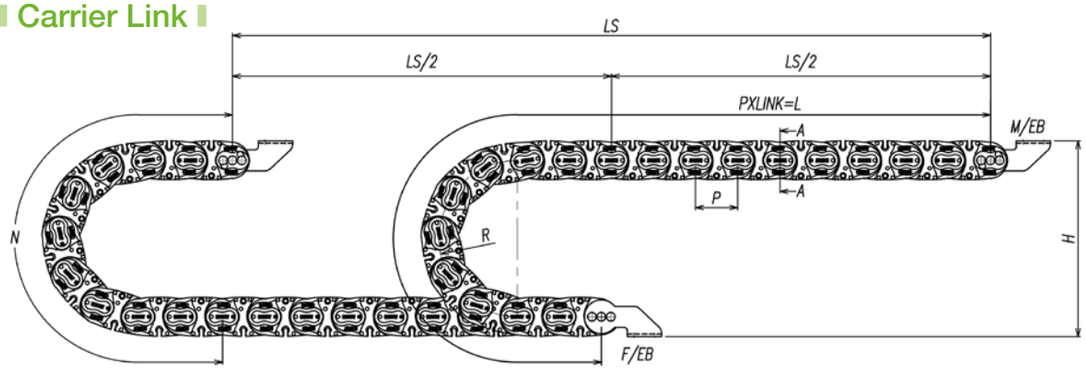


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

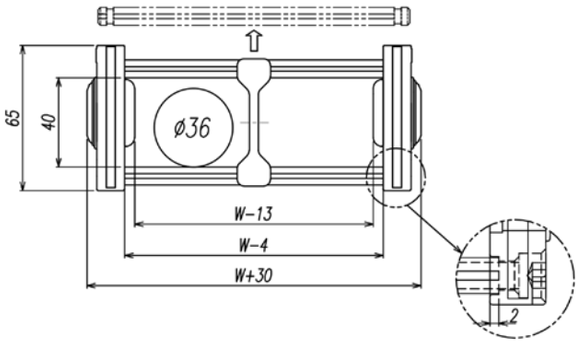
Carrier Link



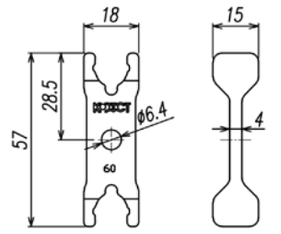
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDS070	80 (3.149)	75 (2.923)	70 (2.756)	215 (8.464)	516 (20.315)	1	2.403	0.996
	100 (3.937)					1	2.453	
	120 (4.724)	100 (3.937)		265 (10.433)	594 (23.386)	2	2.503	
	150 (5.905)					2	2.607	
	200 (7.874)	130 (5.118)		325 (12.795)	688 (27.095)	2	2.732	
	250 (9.842)					3	2.886	
	300 (11.811)	180 (7.087)		425 (16.732)	845 (33.276)	3	3.012	
	350 (13.779)	230 (9.055)		525 (20.669)	1,002 (40.088)	4	3.166	
	400 (15.748)					4	3.291	

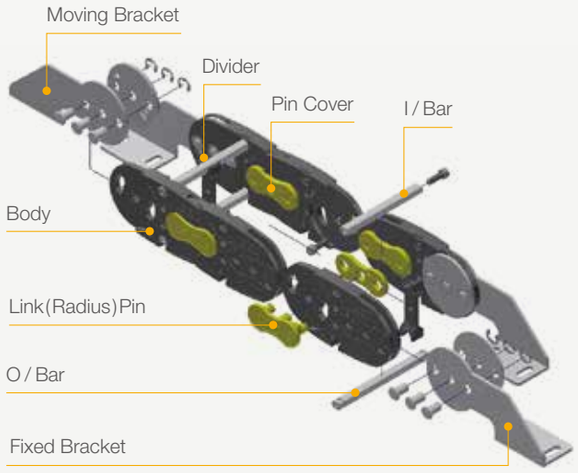
* Width 주문에 따라 제작가능 / Width can make to order

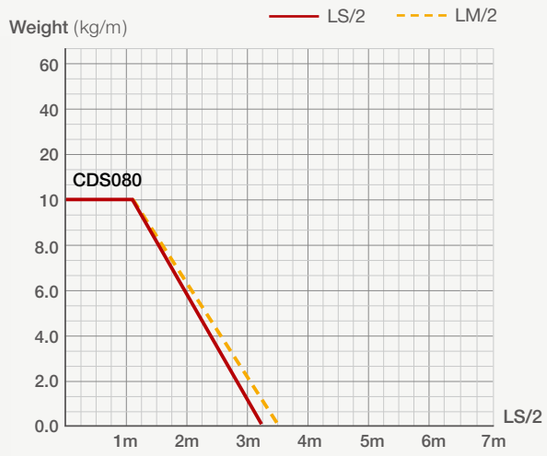
(1inch = 25.4mm)

Fork Carrier

CDS080

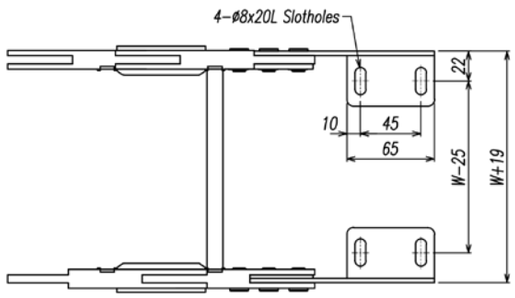
Structure

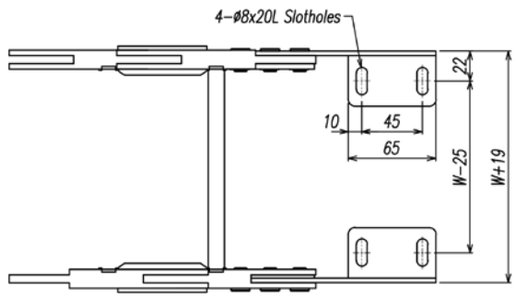


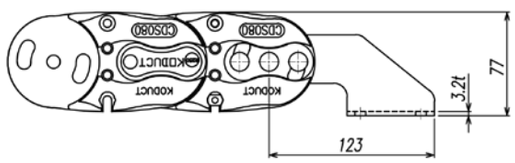


[Load Diagrams Self-Supporting Length]

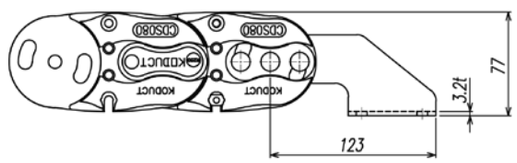
End Bracket





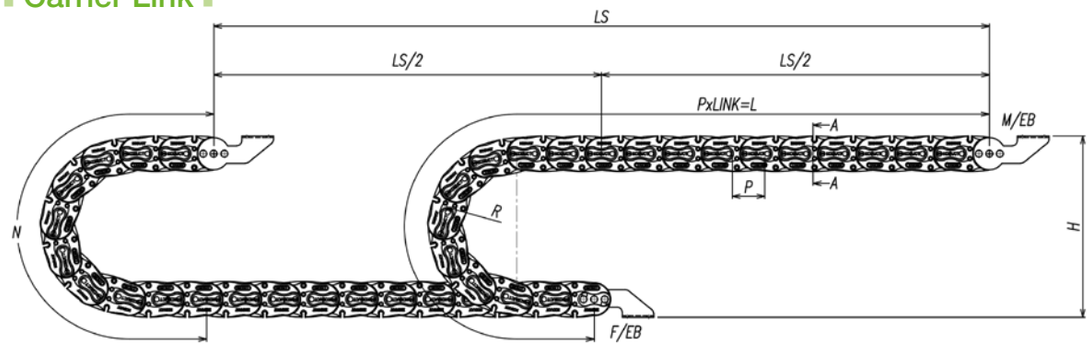


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

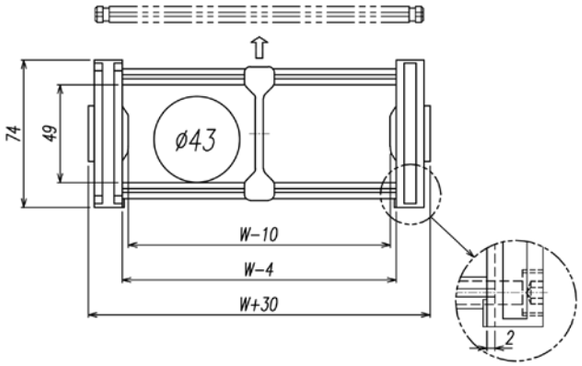
Carrier Link



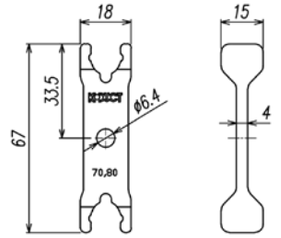
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDS080	80 (3.149)	150 (5.906)	80 (3.150)	380 (14.960)	791 (31.142)	1	2.775	1.435
	100 (3.937)					1	2.833	
	120 (4.724)	200 (7.874)		480 (18.897)	948 (37.323)	2	3.024	
	150 (5.905)					2	3.170	
	200 (7.874)	250 (9.843)		580 (22.834)	1,105 (43.504)	2	3.363	
	250 (9.842)					3	3.513	
	300 (11.811)	280 (11.024)		640 (25.196)	1,199 (42.205)	3	3.707	
	350 (13.779)	400 (15.748)		880 (34.645)	1,576 (62.047)	4	4.217	
	400 (15.748)					4	4.441	

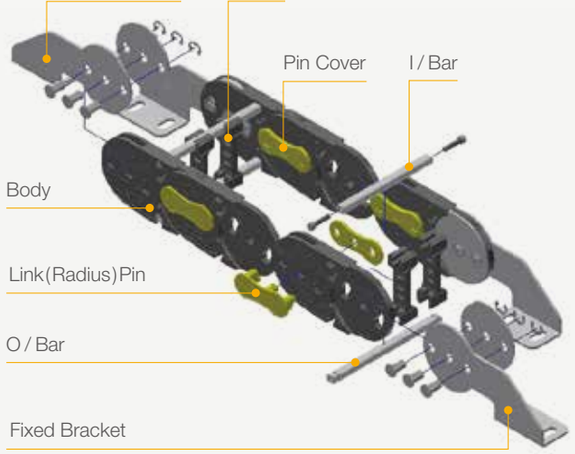
* Width 주문에 따라 제작가능 / Width can make to order

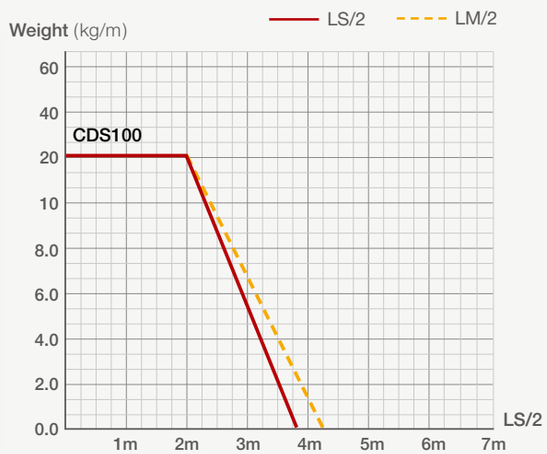
(1inch = 25.4mm)

Fork Carrier

CDS100

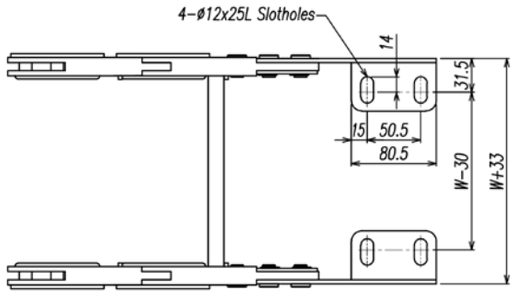
Structure

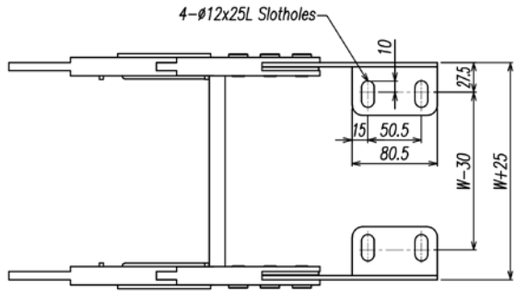


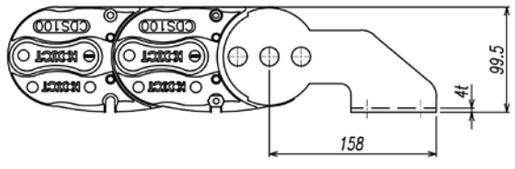


[Load Diagrams Self-Supporting Length]

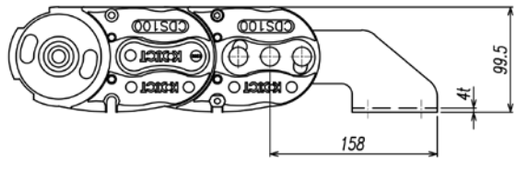
End Bracket





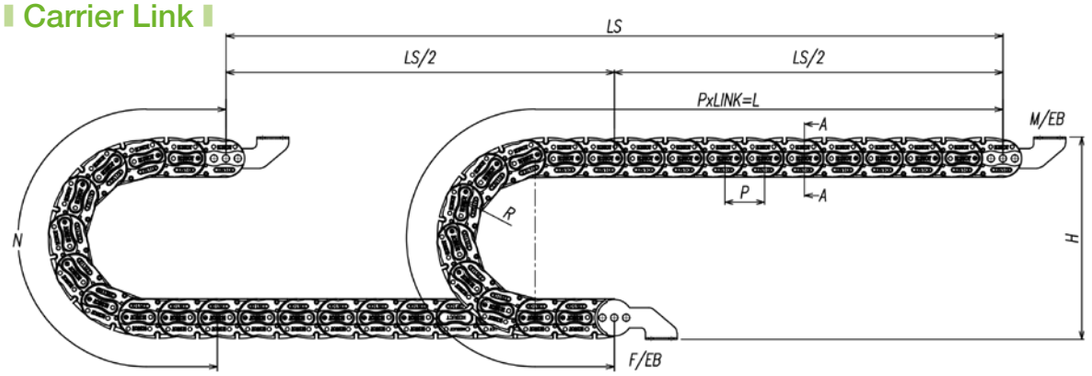


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

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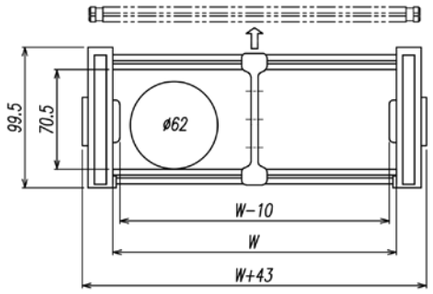
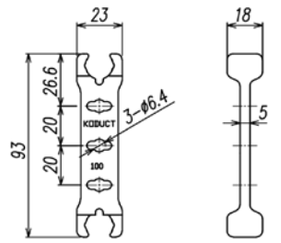
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDS100	100 (3.937)	200 (7.874)	100 (3.937)	504 (19.842)	1,028 (40.472)	1	3.833	3.043
	150 (5.905)					2	4.069	
	200 (7.874)	250 (9.843)		604 (23.779)	1,185 (46.653)	2	4.238	
	250 (9.842)	300 (11.811)		704 (27.716)	1,342 (52.835)	3	4.471	
	300 (11.811)					3	4.638	
	350 (13.779)	350 (13.779)		804 (31.653)	1,499 (59.016)	4	4.913	
	400 (15.748)	400 (15.748)		904 (35.590)	1,656 (65.197)	4	5.081	
	500 (19.685)					5	6.758	
	600 (23.622)	500 (19.685)		1,104 (43.464)	1,970 (77.559)	6	7.317	

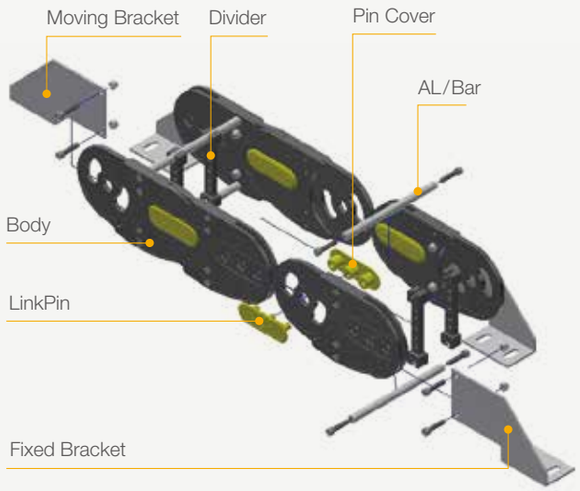
* Width 주문에 따라 제작가능 / Width can make to order

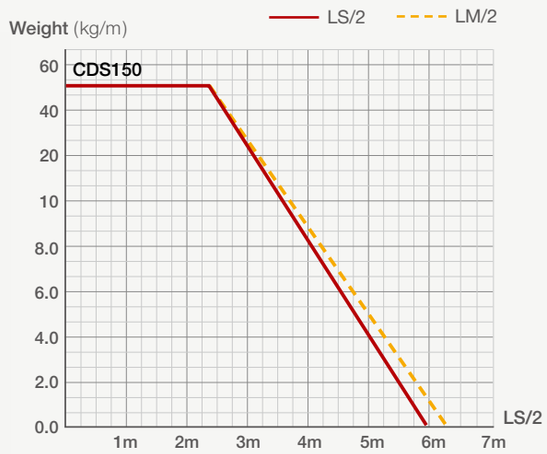
(1inch = 25.4mm)

Fork Carrier

CDS150

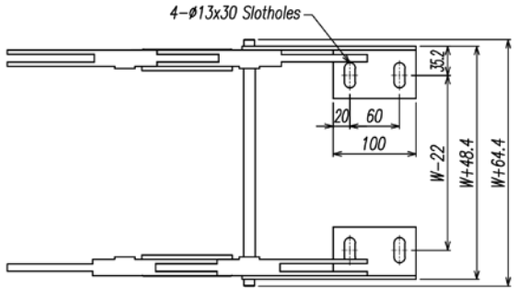
Structure

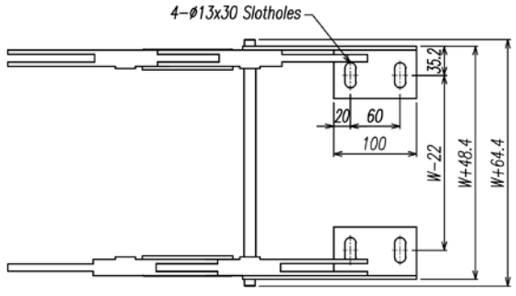


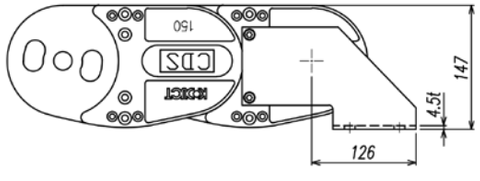


[Load Diagrams Self-Supporting Length]

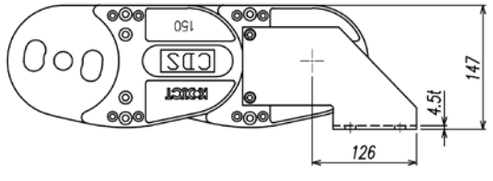
End Bracket





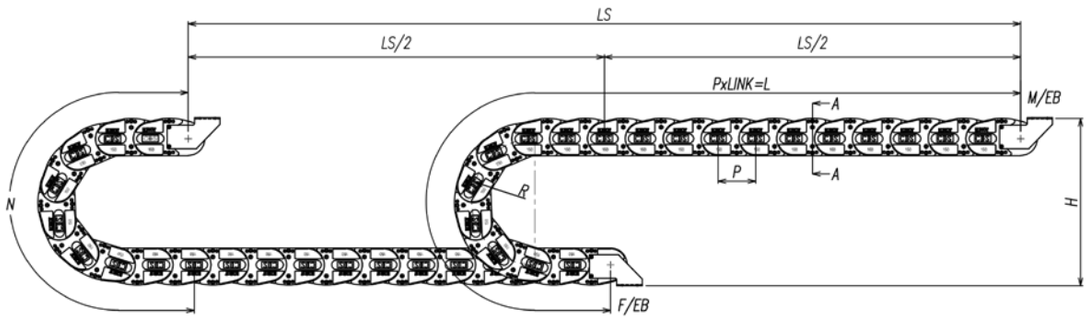


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

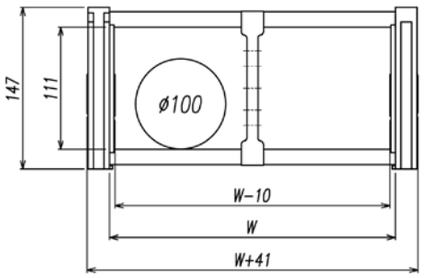
Carrier Link



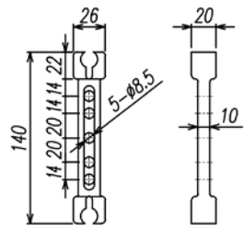
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø8 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDS150	200 (7.874)	200 (7.874)	150 (5.906)	560 (22.047)	1,228 (48.346)	2	7.025	3.344
	250 (9.842)					3	7.230	
	300 (11.811)	300 (11.811)		760 (29.921)	1,543 (60.748)	3	7.554	
	400 (15.748)					4	8.066	
	450 (17.716)	400 (15.748)		960 (37.795)	1,856 (73.071)	5	9.094	
	500 (19.685)					5	9.283	
	600 (23.622)	500 (19.685)		1,160 (45.669)	2,170 (85.433)	6	9.866	
	700 (27.559)	600 (23.622)		1,360 (53.543)	2,484 (97.795)	7	10.460	
	800 (31.496)					8	11.037	

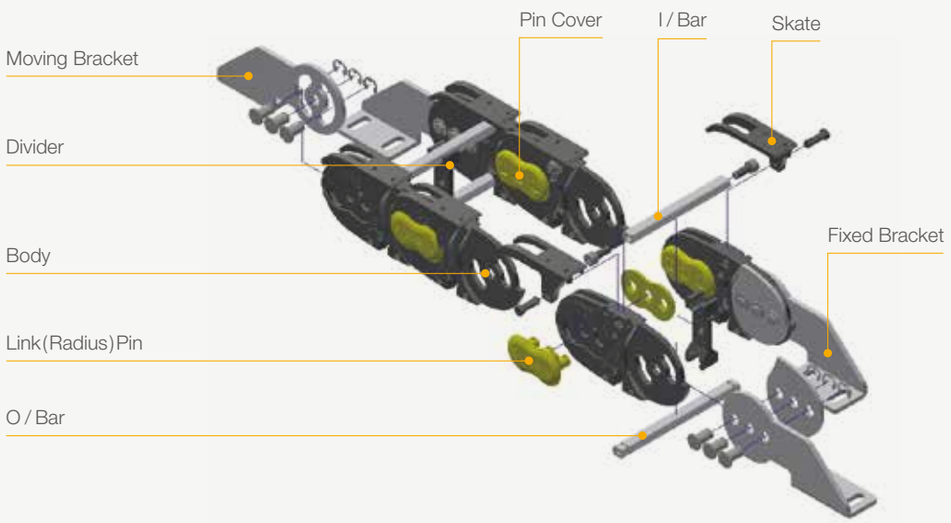
* Width 주문에 따라 제작가능 / Width can make to order

(1inch = 25.4mm)

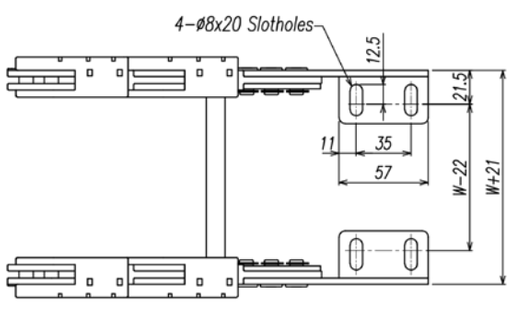
Fork Carrier

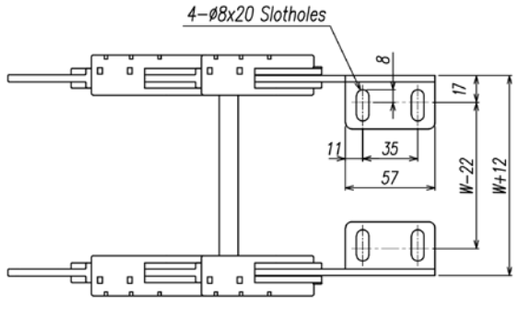
SRS070

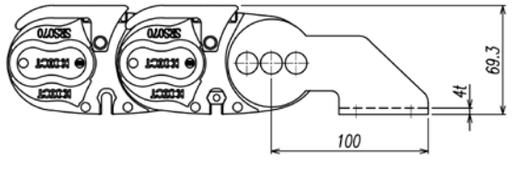
Structure



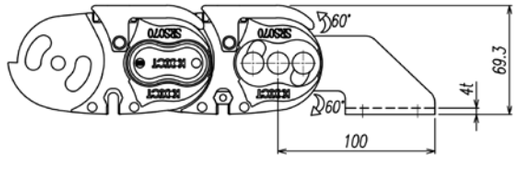
End Bracket





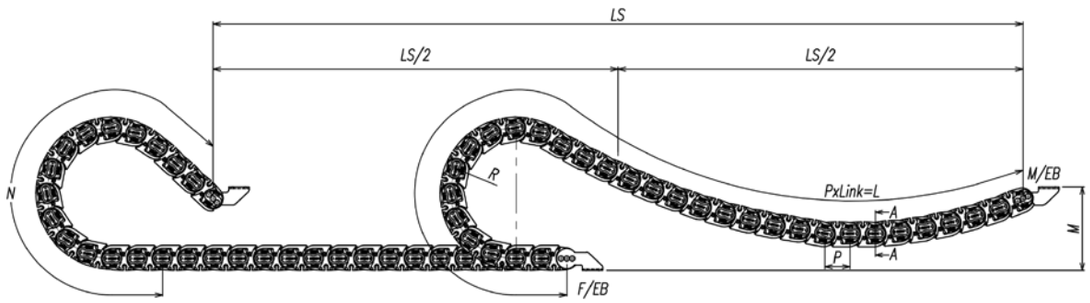


[**Fixed Bracket** (F/EB)]



[**Moving Bracket** (M/EB)]

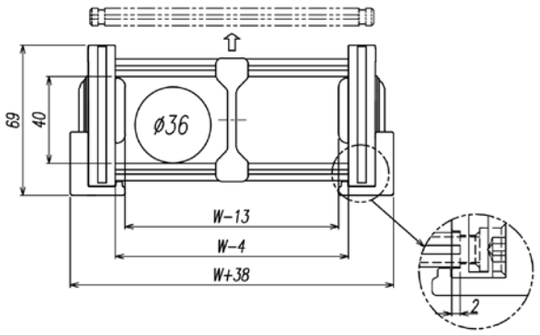
Carrier Link



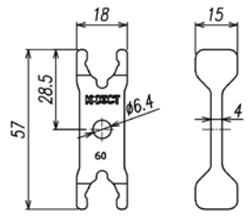
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
SRS070	80 (3.149)	75 (2.923)	70 (2.756)	230 (9.055)	800 (31.496)	1	2.741	0.982
	100 (3.937)					1	2.792	
	120 (4.724)	100 (3.937)			1,000 (39.370)	2	2.850	
	150 (5.905)					2	2.917	
	200 (7.874)	130 (5.118)			1,500 (59.055)	2	3.042	
	250 (9.842)					3	3.168	
	300 (11.811)	180 (7.087)			1,800 (70.866)	3	3.294	
	350 (13.779)	230 (9.055)			2,100 (82.677)	4	3.420	
	400 (15.748)					4	3.545	

* Width 주문에 따라 제작가능 / Width can make to order

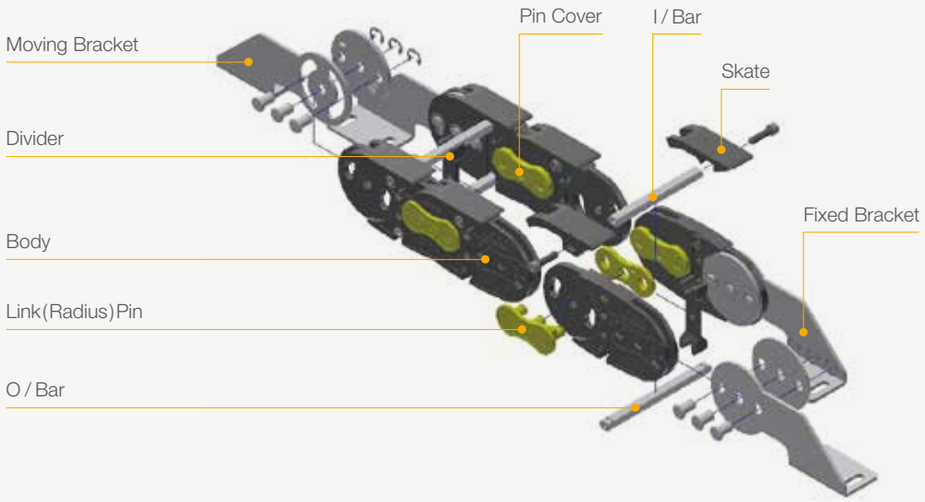
(1inch = 25.4mm)

SRS070

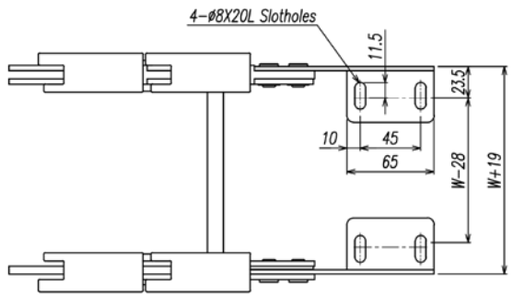
Fork Carrier

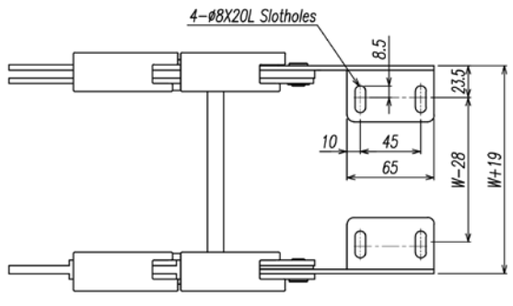
SRS080

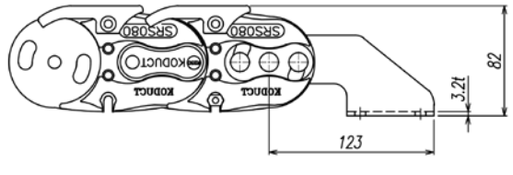
Structure



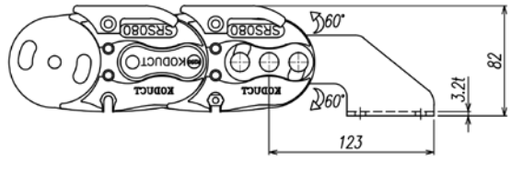
End Bracket





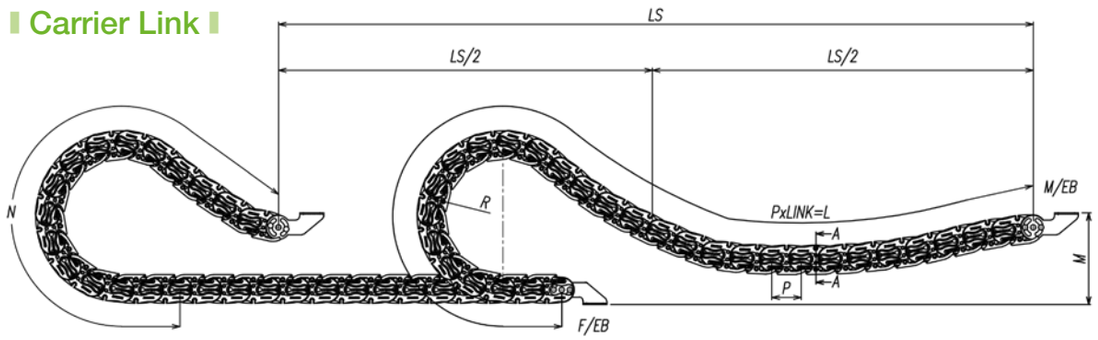


[**Fixed Bracket** (F/EB)]



[**Moving Bracket** (M/EB)]

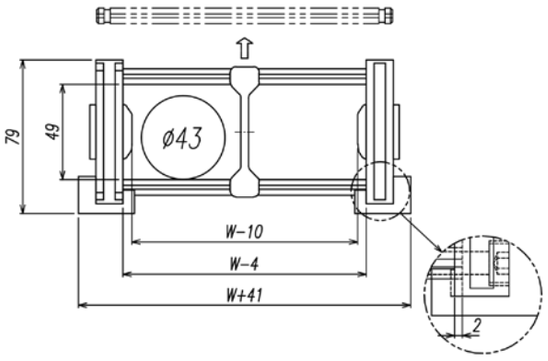
Carrier Link



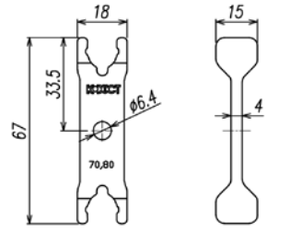
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
SRS080	80 (3.149)	150 (5.906)	80 (3.150)	250 (9.843)	1,000 (39.370)	1	3.264	0.983
	100 (3.937)					1	3.322	
	120 (4.724)	200 (7.874)			1,300 (51.181)	2	3.390	
	150 (5.905)					2	3.512	
	200 (7.874)	250 (9.843)			1,600 (62.992)	2	3.659	
	250 (9.842)					3	3.851	
	300 (11.811)	280 (11.024)			2,000 (78.740)	3	4.002	
	350 (13.779)	400 (15.748)			3,000 (118.110)	4	4.196	
	400 (15.748)					4	5.263	

* Width 주문에 따라 제작가능 / Width can make to order

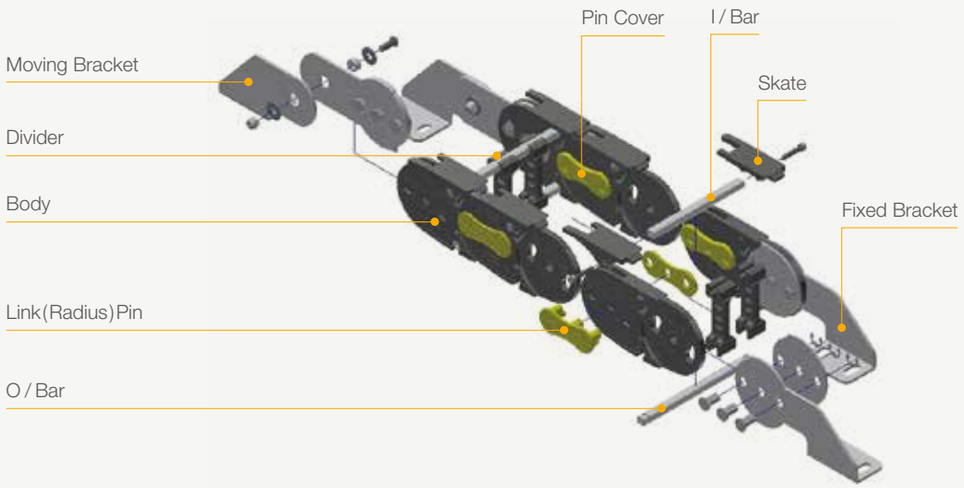
(1inch = 25.4mm)

SRS080

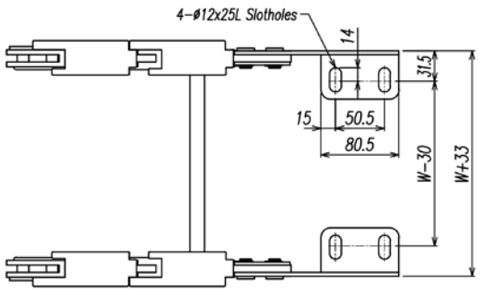
Fork Carrier

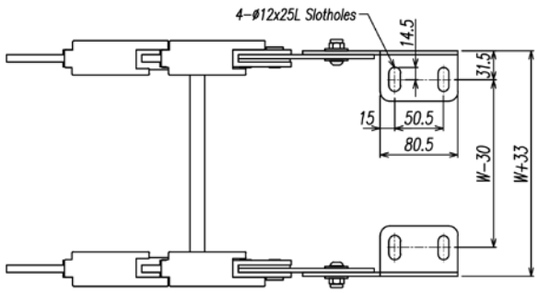
SRS100

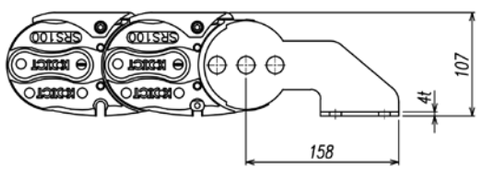
Structure



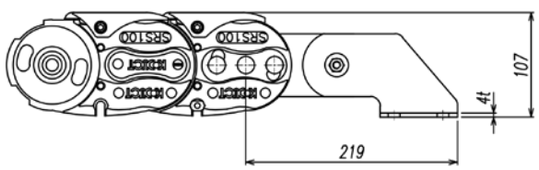
End Bracket





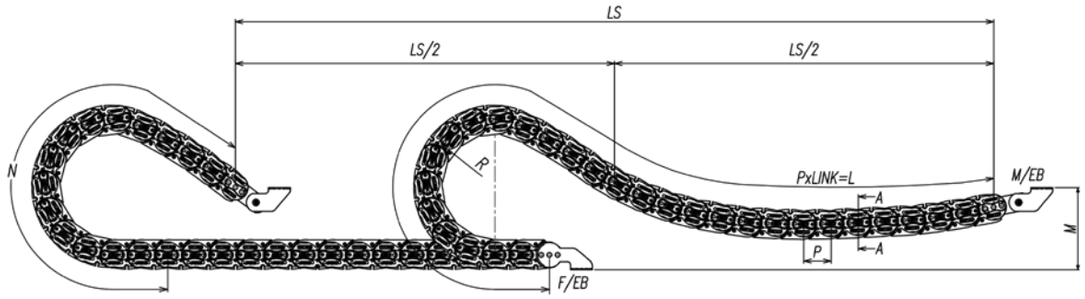


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

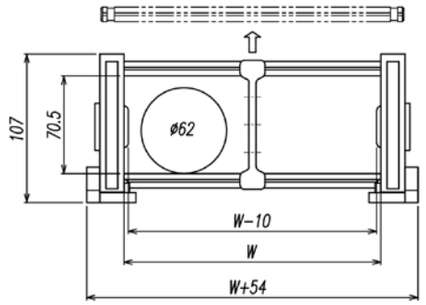
Carrier Link



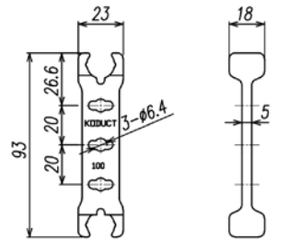
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
SRS100	100 (3.937)	200 (7.874)	100 (3.937)	300 (11.811)	1,200 (47.244)	1	5.233	3.633
	150 (5.905)					2	5.517	
	200 (7.874)	250 (9.843)			1,400 (55.118)	2	5.917	
	250 (9.842)	300 (11.811)			1,500 (59.055)	3	6.203	
	300 (11.811)					3	6.488	
	350 (13.779)	350 (13.779)			2,100 (82.677)	4	6.773	
	400 (15.748)	400 (15.748)			2,500 (98.425)	4	7.173	
	500 (19.685)	500 (19.685)				5	7.744	
	600 (23.622)				3,500 (137.795)	6	8.429	

* Width 주문에 따라 제작가능 / Width can make to order

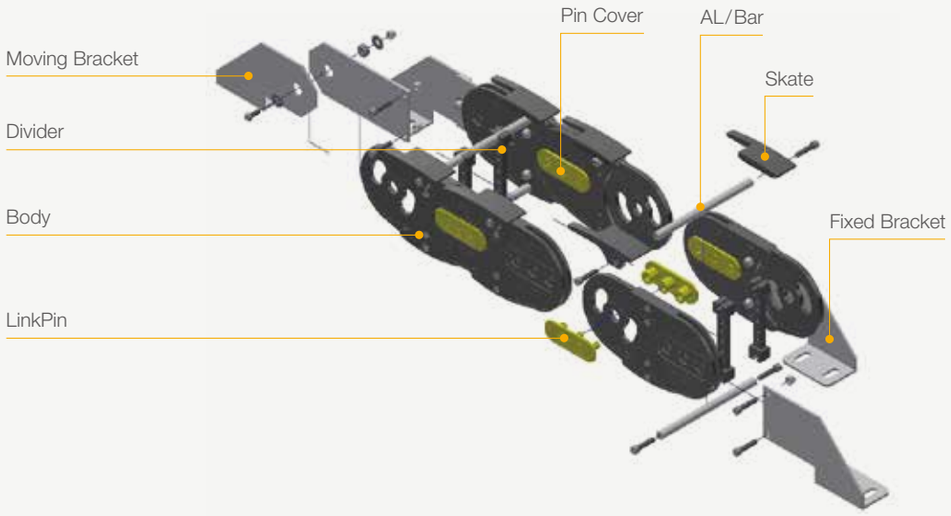
(1inch = 25.4mm)

SRS100

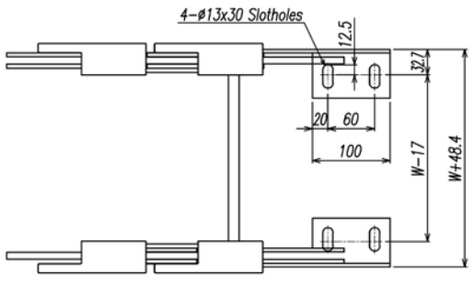
Fork Carrier

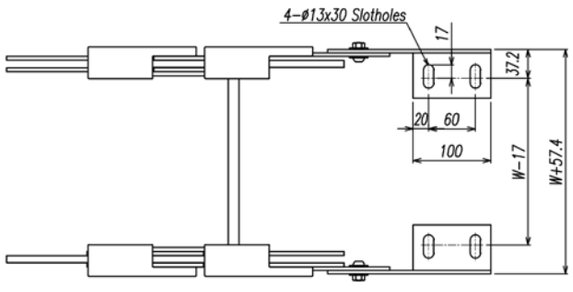
SRS150

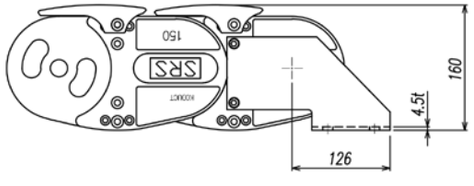
Structure



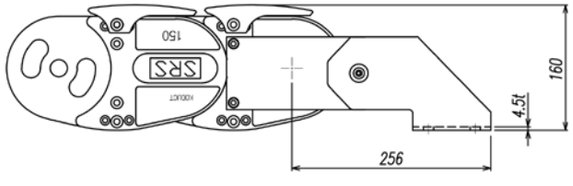
End Bracket





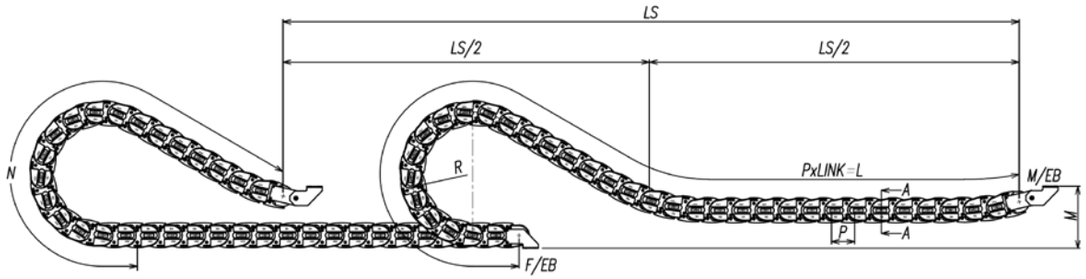


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

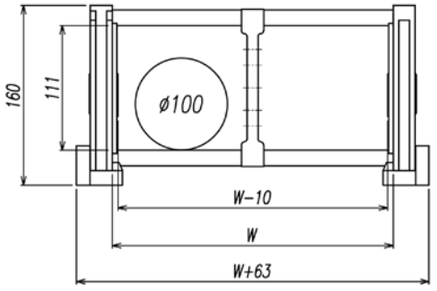
Carrier Link



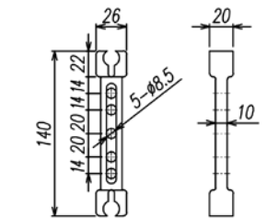
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø8 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
SRS150	200 (7.874)	200 (7.874)	150 (5.906)	560 (22.047)	1,228 (48.346)	2	8.050	4.376
	250 (9.842)					3	8.324	
	300 (11.811)	300 (11.811)		760 (29.921)	1,543 (60.748)	3	8.815	
	400 (15.748)					4	9.362	
	450 (17.716)	400 (15.748)		960 (37.795)	1,856 (73.071)	5	9.635	
	500 (19.685)					5	9.908	
	600 (23.622)	500 (19.685)		1,160 (45.669)	2,170 (85.433)	6	10.673	
	700 (27.559)	600 (23.622)		1,360 (53.543)	2,484 (97.795)	7	11.220	
	800 (31.496)					8	11.985	

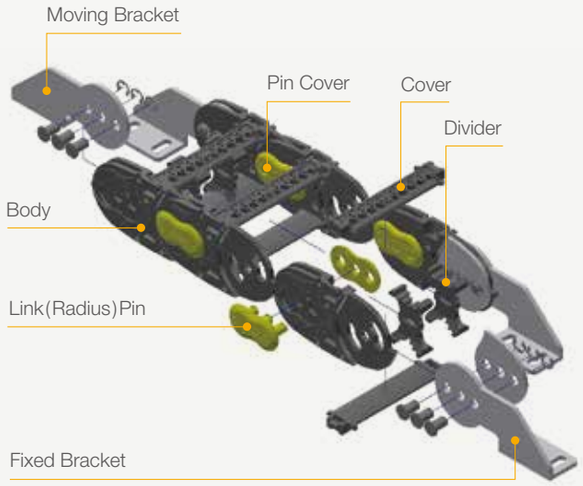
* Width 주문에 따라 제작가능 / Width can make to order

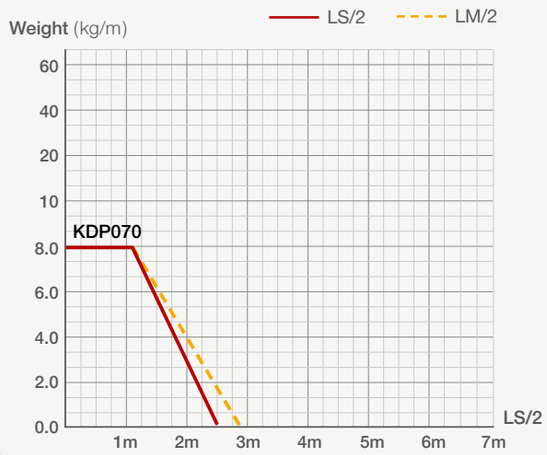
(1inch = 25.4mm)

Fork Carrier

KDP070

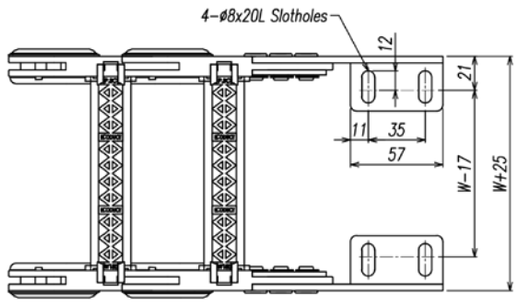
Structure

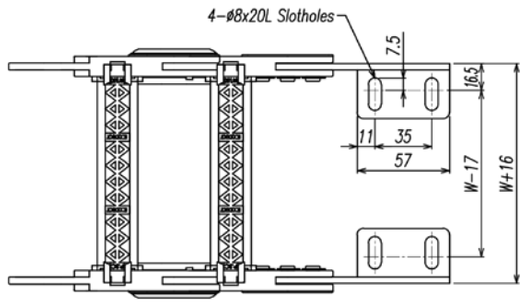


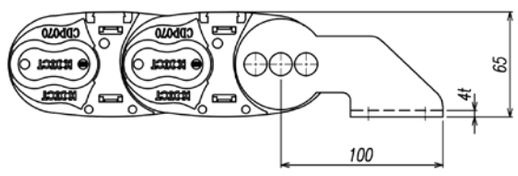


[Load Diagrams Self-Supporting Length]

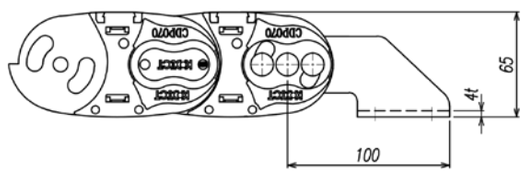
End Bracket





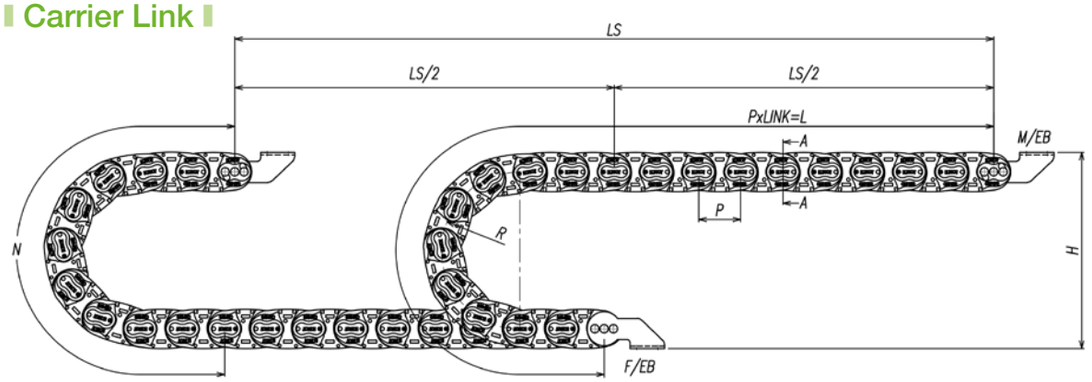


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

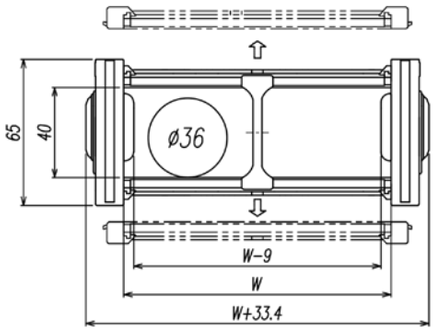
Carrier Link



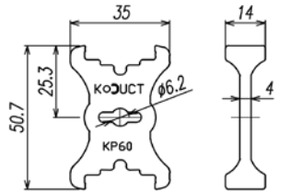
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KDP070	65 (2.559)	75 (2.923)	70 (3.937)	215 (8.464)	516 (20.314)	0	2.341	0.996
	*75 (2.952)					0	2.391	
	80 (3.149)	100 (3.937)		265 (10.433)	594 (23.385)	1	2.483	
	*87 (3.425)					1	2.530	
	100 (3.937)					1	2.567	
	120 (4.724)	130 (5.118)		325 (12.795)	688 (27.086)	2	2.700	
	*150 (5.905)					2	2.842	
	160 (6.299)	180 (7.087)		425 (16.732)	845 (33.267)	2	2.868	
	*175 (6.889)					2	2.924	
	*187 (7.362)	230 (9.055)		525 (20.669)	1,002 (39.448)	2	3.008	
	200 (7.874)					2	3.056	

* 주문 제작 가능 / Can make to order

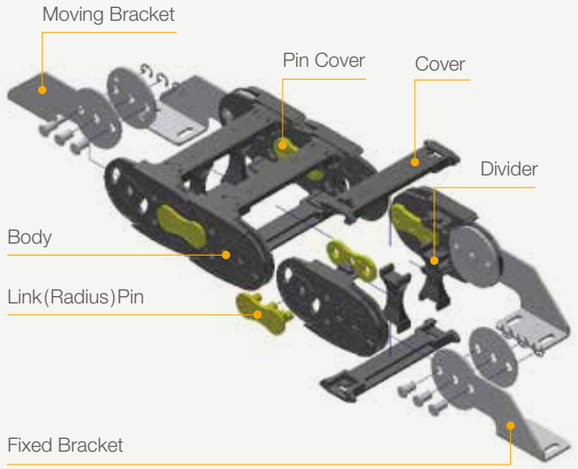
(1inch = 25.4mm)

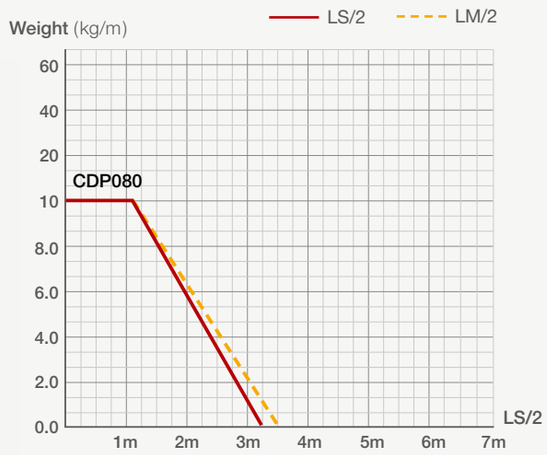
KDP070

Fork Carrier

CDP080

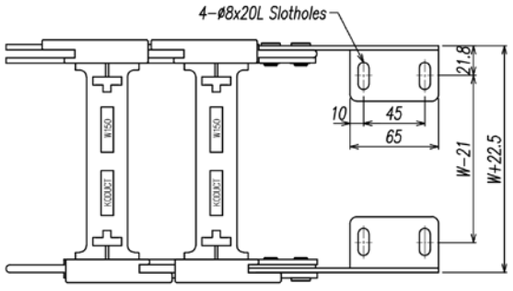
Structure

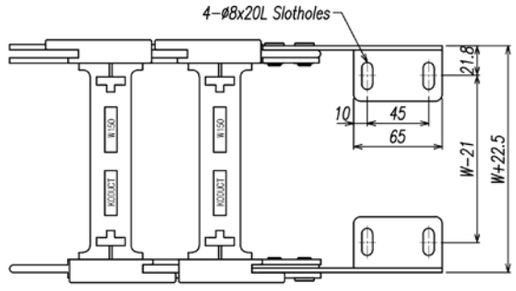


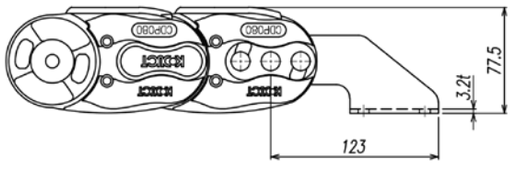


[Load Diagrams Self-Supporting Length]

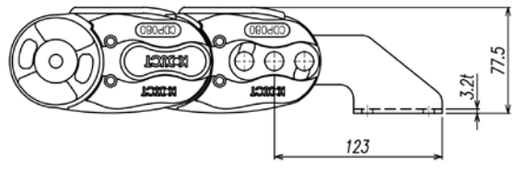
End Bracket





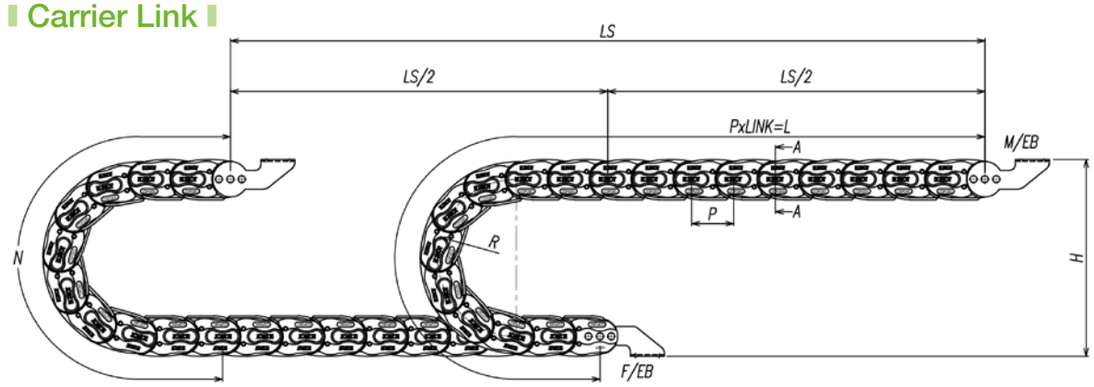


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

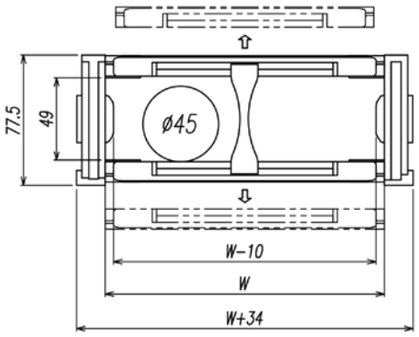
Carrier Link



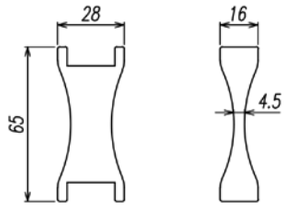
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDP080	100 (3.937)	150 (5.906)	80 (3.150)	376 (14.803)	791 (31.142)	1	3.060	1.435
	150 (5.905)	200 (7.874)		476 (18.740)	948 (37.323)	2	3.416	
	200 (7.874)					2	3.851	
	250 (9.842)	250 (9.843)		576 (22.039)	1,105 (43.504)	3	4.132	
	300 (11.811)	280 (11.024)		636 (25.039)	1,199 (42.205)	3	4.607	
	350 (13.779)					4	4.631	
	400 (15.748)	400 (15.748)		876 (34.488)	1,576 (62.047)	4	4.995	

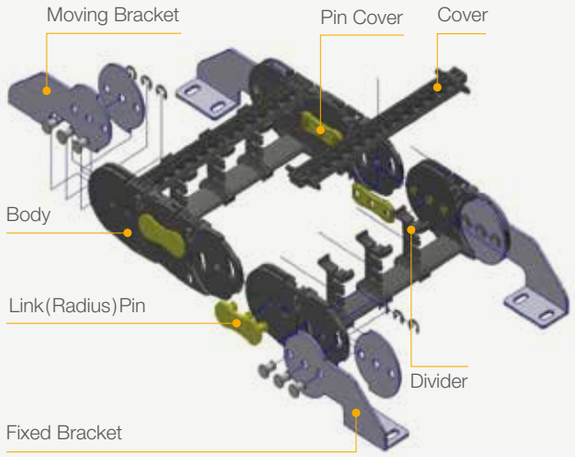
(1inch = 25.4mm)

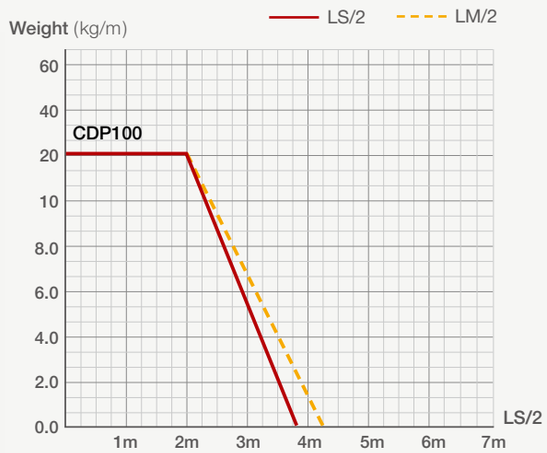
CDP080

Fork Carrier

CDP100

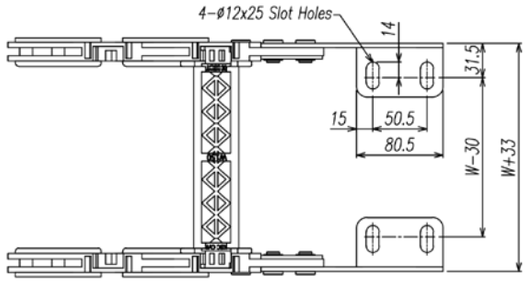
Structure

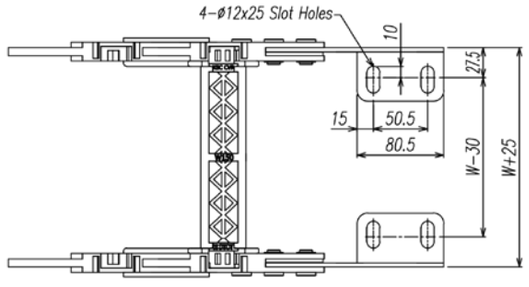


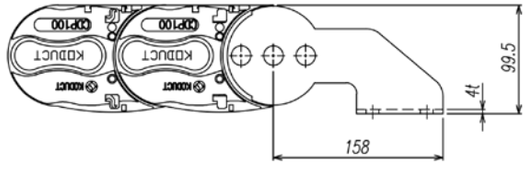


[Load Diagrams Self-Supporting Length]

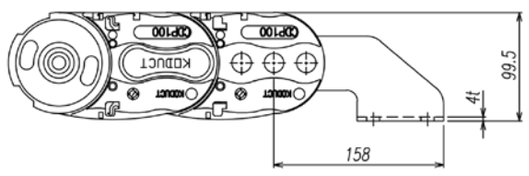
End Bracket





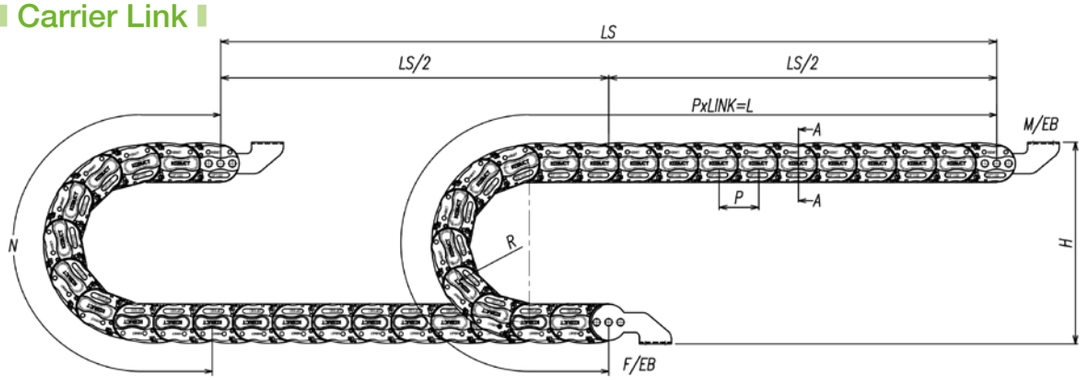


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

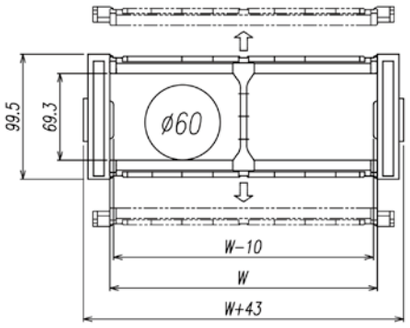
Carrier Link



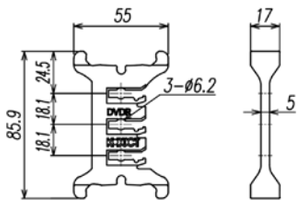
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

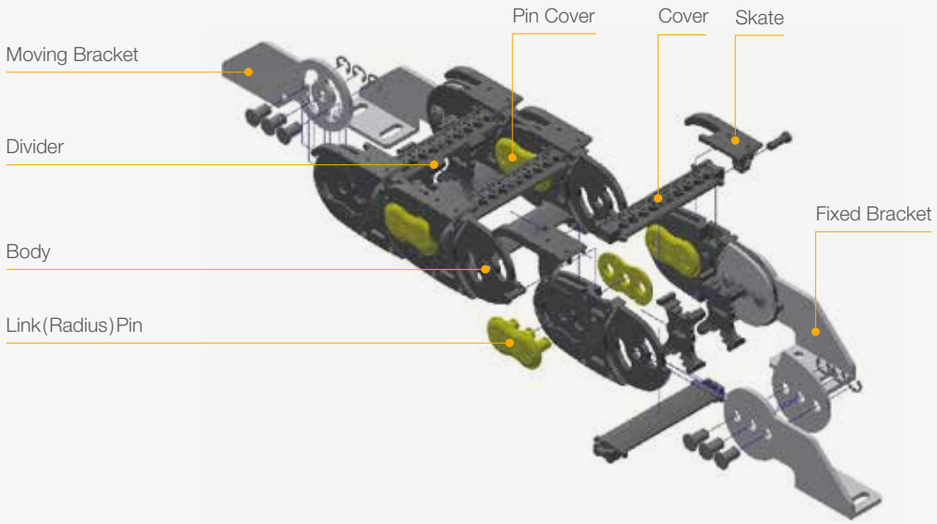
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDP100	100 (3.937)	200 (7.874)	100 (3.937)	504 (19.843)	1,028 (40.472)	1	3.776	3.043
	150 (5.905)	250 (9.842)		604 (23.780)	1,185 (46.653)	2	4.075	
	200 (7.874)	300 (11.811)		704 (27.727)	1,342 (52.835)	2	4.262	
	250 (9.483)	350 (13.780)		804 (31.654)	1,499 (59.016)	3	4.514	
	300 (11.811)	400 (15.748)		904 (35.591)	1,656 (65.197)	3	4.734	
	350 (13.780)	500 (19.685)		1,104 (43.465)	1,970 (77.559)	4	5.034	

(1inch = 25.4mm)

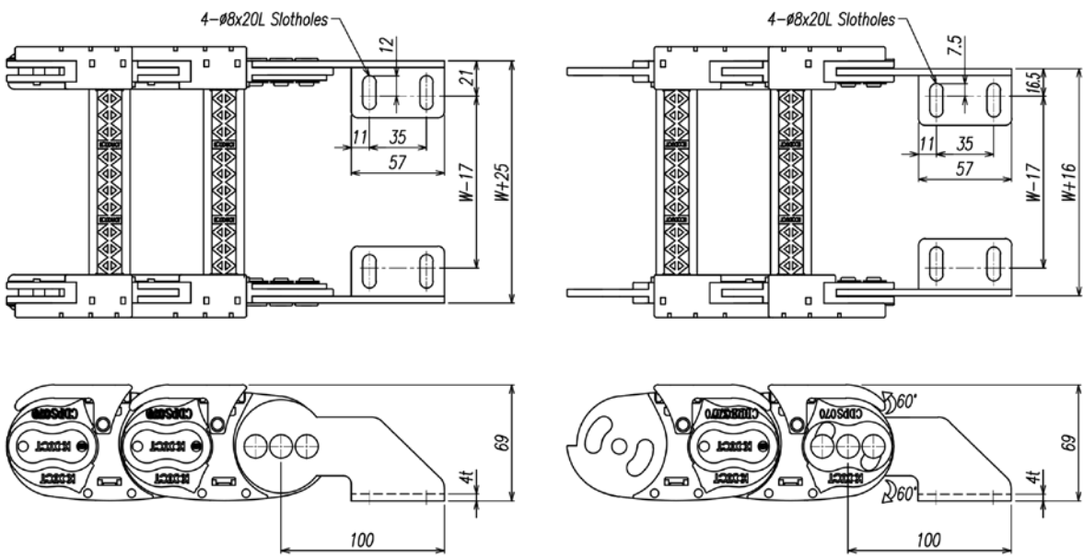
Fork Carrier

KDPS070

Structure



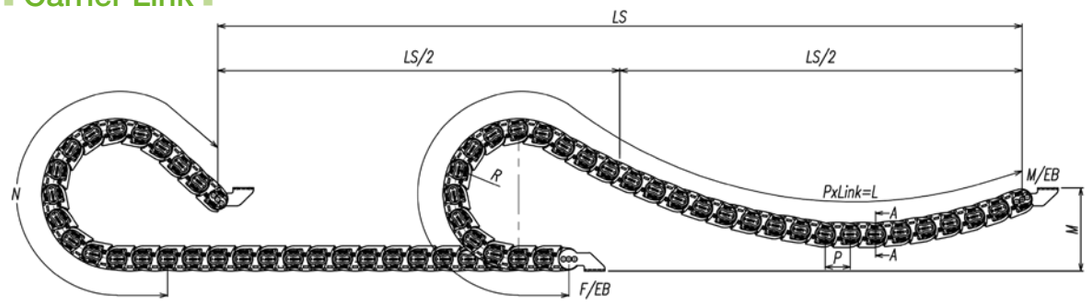
End Bracket



[Fixed Bracket (F/EB)]

[Moving Bracket (M/EB)]

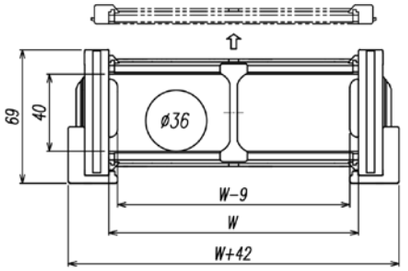
Carrier Link



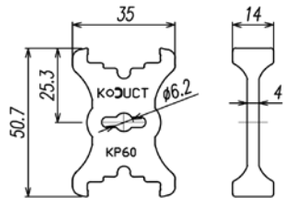
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KDPS070	65 (2.559)	75 (2.923)	70 (3.937)	230 (9.055)	800 (31.496)	0	2.660	0.982
	*75 (2.952)					0	2.760	
	80 (3.149)	100 (3.937)			1,000 (39.370)	1	2.802	
	*87 (3.425)					1	2.849	
	100 (3.937)					1	2.886	
	120 (4.724)	130 (5.118)			1,500 (59.055)	2	3.020	
	*150 (5.905)					2	3.160	
	160 (6.299)	180 (7.087)			1,800 (70.866)	2	3.188	
	*175 (6.889)					2	3.244	
	*187 (7.362)	230 (9.055)			2,100 (82.677)	2	3.328	
	200 (7.874)					2	3.375	

* 주문 제작 가능 / Can make to order

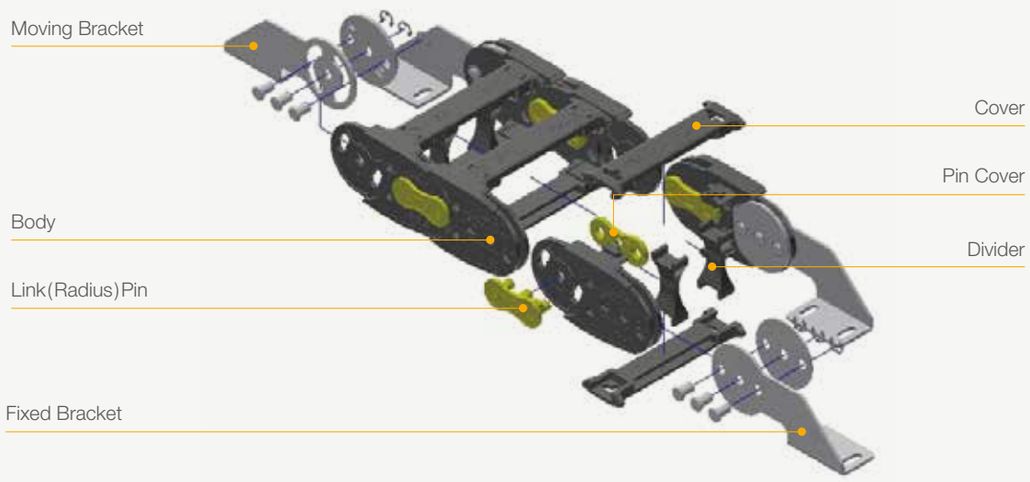
(1inch = 25.4mm)

KDPS070

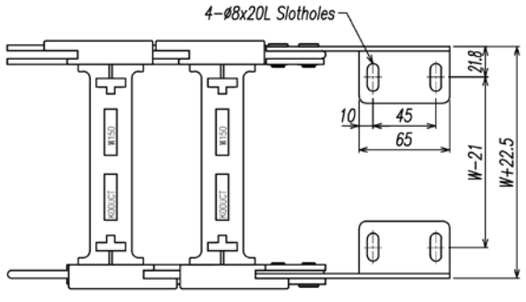
Fork Carrier

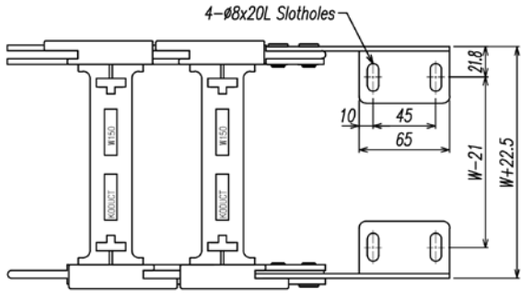
CDPS080

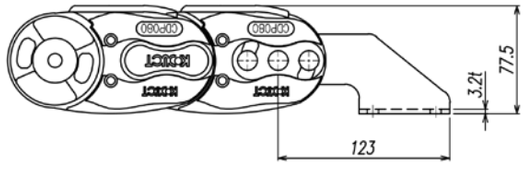
Structure



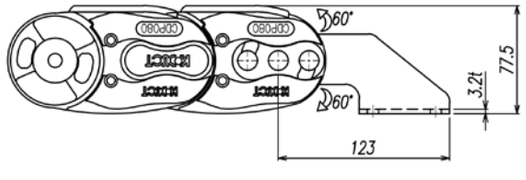
End Bracket





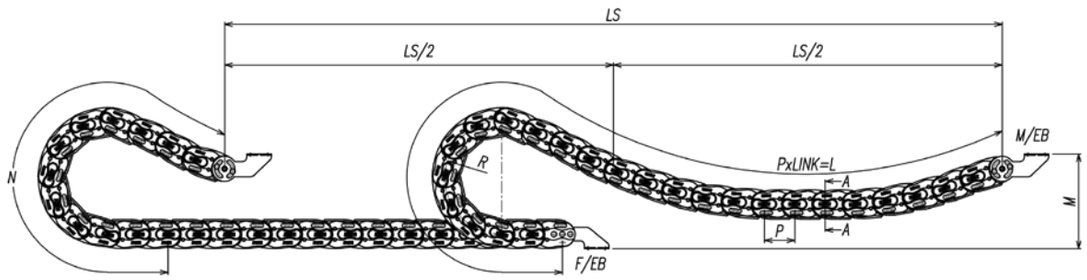


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

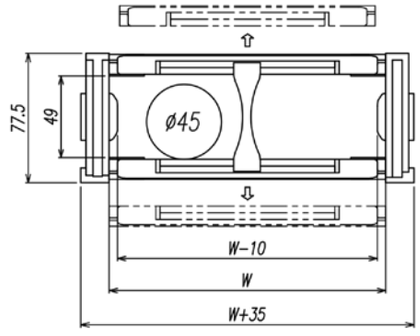
Carrier Link



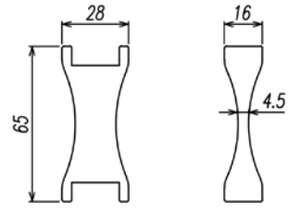
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Specification

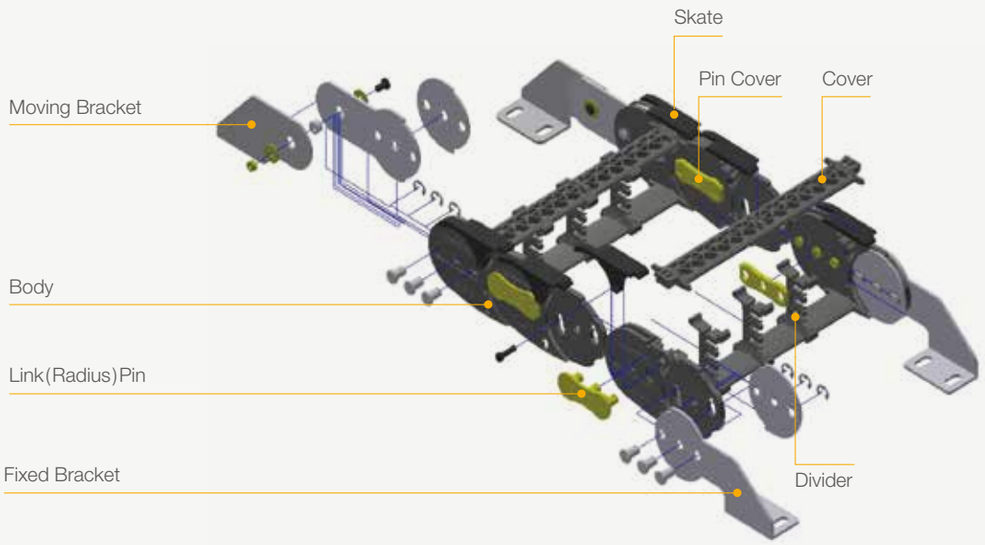
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDPS080	100 (3.937)	150 (5.906)	80 (3.150)	250 (9.843)	1,000 (39.370)	1	3.060	1.435
	150 (5.905)	200 (7.874)			1,300 (51.181)	2	3.416	
	200 (7.874)					2	3.851	
	250 (9.842)	250 (9.843)			1,600 (62.992)	3	4.132	
	300 (11.811)	280 (11.024)			2,000 (78.740)	3	4.607	
	350 (13.779)					4	4.631	
	400 (15.748)	400 (15.748)			3,000 (118.110)	4	4.995	

(1inch = 25.4mm)

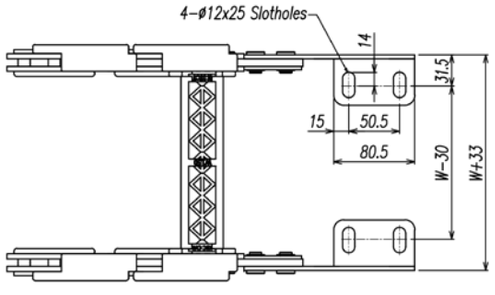
Fork Carrier

CDPS100

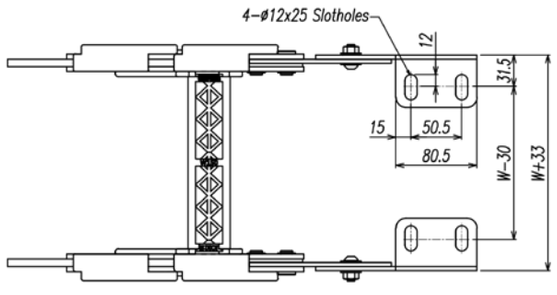
Structure



End Bracket

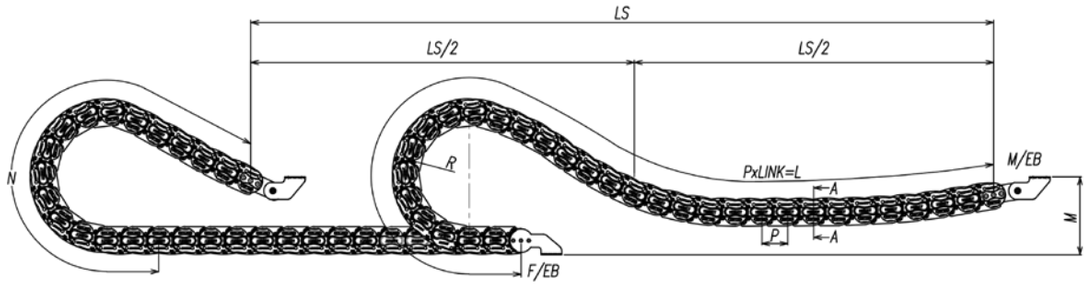


[**Fixed Bracket** (F/EB)]



[**Moving Bracket** (M/EB)]

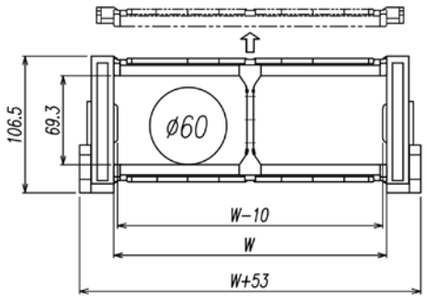
Carrier Link



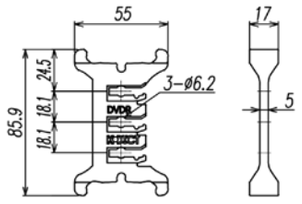
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

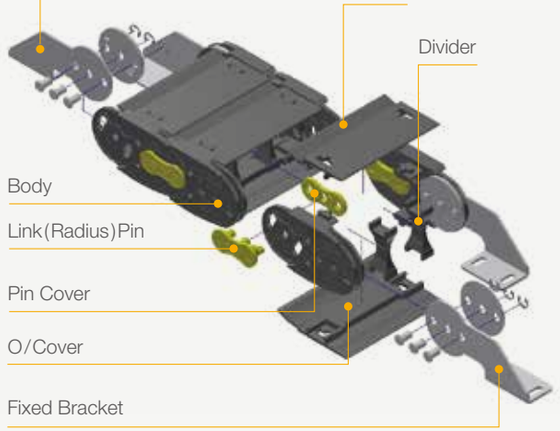
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDPS100	100 (3.937)	200 (7.874)	100 (3.937)	300 (11.811)	1,200 (47.244)	1	4.242	3.633
	150 (5.905)	250 (9.842)			1,400 (55.118)	2	4.429	
	200 (7.874)	300 (11.811)			1,500 (59.055)	2	4.728	
	250 (9.483)	350 (13.780)			2,100 (82.677)	3	4.980	
	300 (11.811)	400 (15.748)			2,500 (98.425)	3	5.200	
	350 (13.780)	500 (19.685)			3,500 (137.795)	4	5.500	

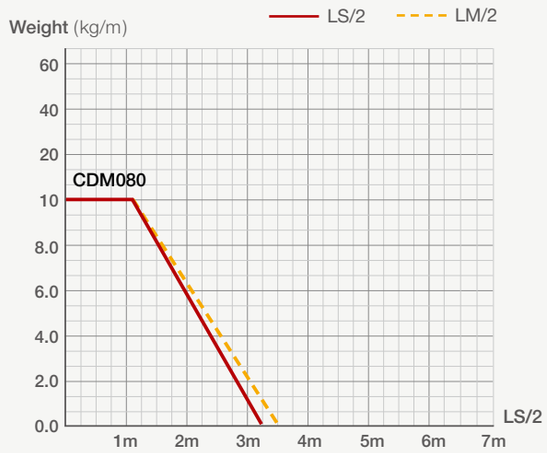
(1inch = 25.4mm)

Fork Carrier

CDM080

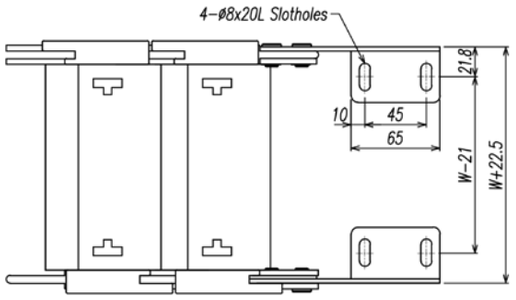
Structure



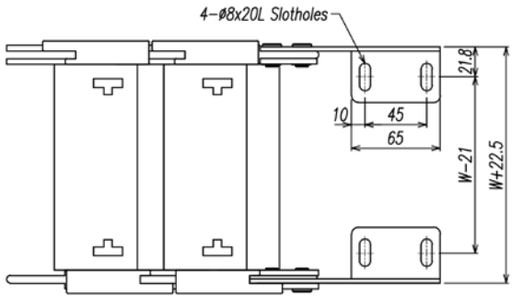


[Load Diagrams Self-Supporting Length]

End Bracket

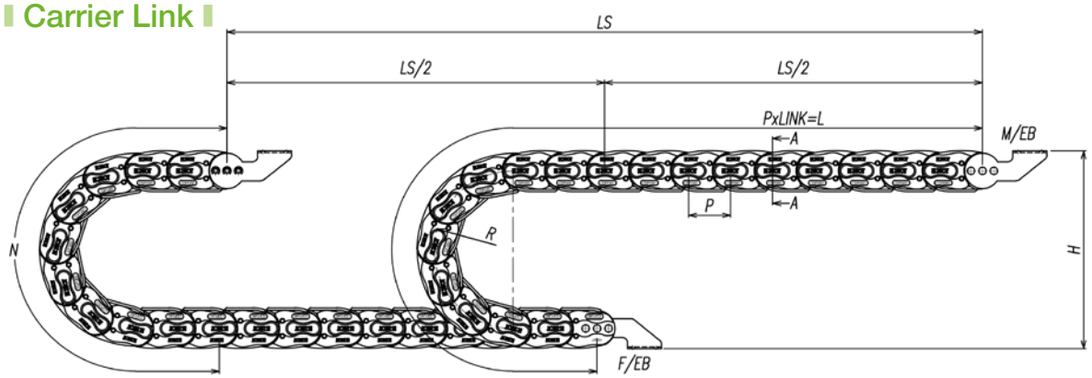


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

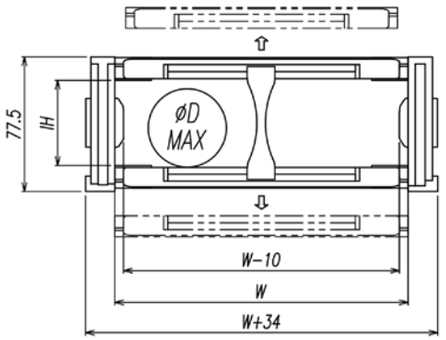
Carrier Link



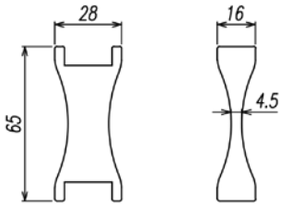
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Specification

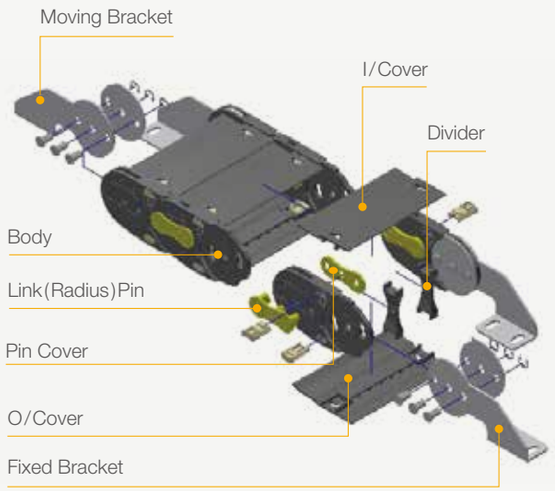
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	IH mm (inch)	ØD MAX	DVDR (ea)	1m (kg)	EB Set (kg)
CDM080	150 (5.906)	150 (5.906)	80 (3.150)	380 (14.960)	791 (31.142)	41 (1.614)	Ø25	2	4.490	1.435
		200 (7.874)		480 (18.897)	948 (37.323)	45 (1.771)	Ø33			
	200 (7.874)	250 (9.843)		580 (22.834)	1,105 (43.504)	49 (1.929)	Ø41	2	5.215	
	300 (11.811)	280 (11.024)		640 (25.196)	1,199 (42.205)	49 (1.929)	Ø45	3	6.758	
		400 (15.748)		880 (34.645)	1,576 (62.047)					

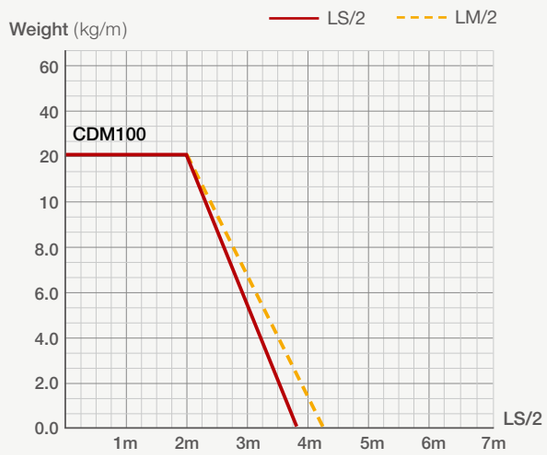
(1inch = 25.4mm)

Fork Carrier

CDM100

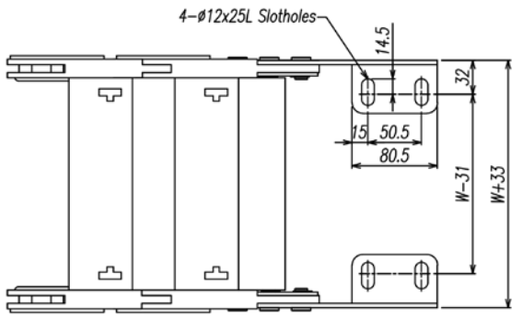
Structure

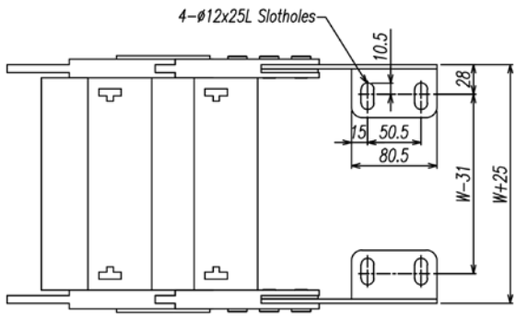


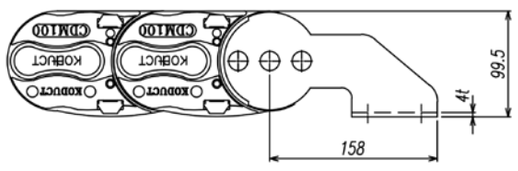


[Load Diagrams Self-Supporting Length]

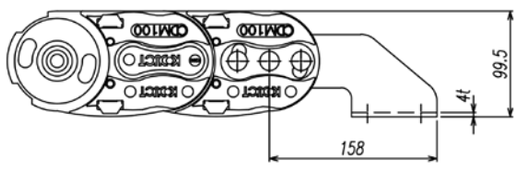
End Bracket





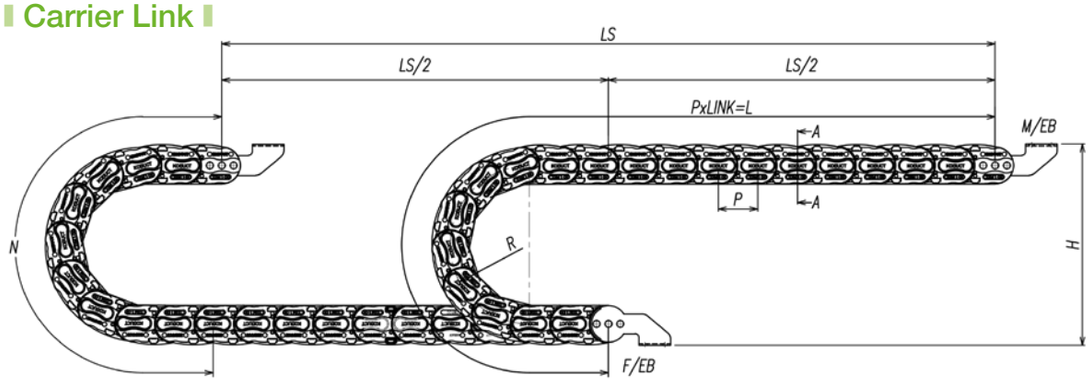


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

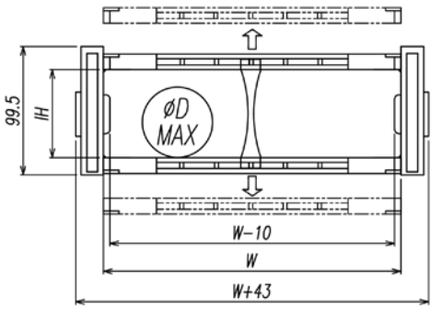
Carrier Link



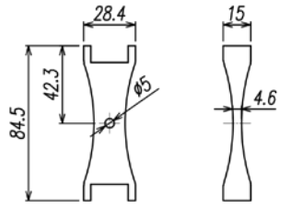
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø5 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	IH mm (inch)	ØD MAX	DVDR (ea)	1m (kg)	EB Set (kg)
CDM100	150 (5.906)	200 (7.874)	100 (3.937)	506 (19.921)	1,028 (40.472)	63 (2.480)	Ø33	2	5.322	3.043
		250 (9.843)		606 (23.858)	1,185 (46.653)	66 (2.598)	Ø42			
	200 (7.874)	300 (11.811)		706 (27.795)	1,342 (52.835)	68 (2.677)	Ø50	2	5.746	
		350 (13.780)		806 (31.732)	1,499 (59.016)	68 (2.677)	Ø58			
	300 (11.811)	400 (15.748)		906 (35.669)	1,656 (65.197)	68 (2.677)	Ø64	3	7.199	
		500 (19.685)		1,106 (43.543)	1,970 (77.559)	68 (2.677)	Ø64			

(1inch = 25.4mm)

CDM100

Fork Carrier - CDS070 / CDS080 / CDS100

Assembly and Disassembly 조립·해체 방법

❶ 바디를 바디포켓에 삽입해
링크를 연결한다.

Insert the body into the body pocket to
connect the link.

❷ 연결된 바디에 링크핀을 조립한다.

Assemble the link pin
on the connected body.

❸ 바디뒷면에 링크핀 커버를
링크핀과 조립한다.

Assemble the link pin cover with the
link pin on the back side of the body.

❹ 바디와 링크핀을 연결시
망치 사용 불가할때 핀집게를 이용한다.

Use hammer when connecting body
and link pin. Use pliers when you
can't use hammer.

❺ 좌, 우 바디를 내측 BAR로 연결하고
렌치볼트로 체결한다.

Connect the left and right body
to the inner BAR and tighten
it with a wrench bolt.

❻ 내측 BAR 조립 후 디바이더를 조립한다.

After assembling the inner BAR,
insert the divider.

❼ 바디외측에 O/Bar를 꽂은 후
스패너를 이용 90° 돌려서 조립한다.

Insert the O/Bar on the outside of the
body and assemble it by turning it 90°
using a spanner.

❽ 고정브라켓과 플레이트에
앤드링크핀을 관통한 후 E링으로 체결한다.

Tighten the fixing bracket and plate
through the End link pin with E-ring.

❾ 무빙브라켓과 플레이트를
엔드링크핀과 E링으로 함께 체결한다.

Tighten the moving bracket and plate
together with the End link pin and E-ring.

❶ 외측 BAR 해체시 12스패너를 이용
90° 회전시켜 외측 BAR를 해체한다.

When disassembling the outer BAR,
use the 12 spanner to rotate the
upper BAR by 90°.

❷ 바디 해체시 링크핀을 "—"드라이버를
링크핀 커버 홈에 넣어 망치를 이용해 해체한다.

When the body is disassembled,
insert the flat-head driver into the link pin
cover groove and use a hammer
to disassemble it.

❸ 해체완료.

Disassembling complete.

Fork Carrier - CDP100

Assembly and Disassembly 조립·해체 방법

❶ 바디를 바디포켓에 삽입해
링크를 연결한다.

Insert the body into the body pocket to
connect the link.

❷ 연결된 바디에 링크핀을 조립한다.

Assemble the link pin
on the connected body.

❸ 바디뒷면에 링크핀 커버를
링크핀과 조립한다.

Assemble the link pin cover with the
link pin on the back side of the body.

❹ 바디와 링크핀을 연결시
망치 사용 불가할때 핀집게를 이용한다.

Use hammer when connecting body
and link pin. Use pliers when you
can't use hammer.

❺ 좌, 우 바디 내측 홈에 커버좌측
돌출부를 세워서 끼운다.

Insert protrusion on left side of cover into
inner groove of the left and right sides of
the body.

❻ 10° 이상 세운 커버를 바디홈에 체결 후
망치로 완전 조립한다.

Push the cover more than 10° to the body
groove and fully assemble it
with a hammer.

❼ 내측 커버에 디바이더 조립 후
외측 커버를 조립한다.

After assembling the divider on the inner
cover, assemble the outer cover.

❽ 고정브라켓과 플레이트를
엔드링크핀과 E링으로 함께 체결한다.

Tighten the fixing bracket and plate
together with the End link pin and E-ring.

❾ 무빙브라켓과 플레이트를
엔드링크핀과 E링으로 함께 체결한다.

Tighten the moving bracket and plate
together with the End link pin and E-ring.

❿ 조립완료

Assembly Completed.

❶ 커버 해체시 커버홈에
"—"드라이버를 이용해 커버를 해체한다.

When removing a cover, using a flat-head
screwdriver on the cover groove.

❷ 바디 해체시 링크핀을 "—"드라이버를
링크핀 커버 홈에 넣어 망치를 이용해 해체한다.

When the body is disassembled,
insert the flat-head driver into the link pin
cover groove and use a hammer
to disassemble it.

Fork Carrier - SRS070 / SRS080 / SRS100

Assembly and Disassembly 조립·해체 방법

❶ 바디를 바디포켓에 삽입해
링크를 연결한다.

Insert the body into the body pocket to connect the link.

❷ 연결된 바디에 링크핀을 조립한다.

Assemble the link pin
on the connected body.

❸ 바디뒷면에 링크핀 커버를
링크핀과 조립한다.

Assemble the link pin cover with the link pin on the back side of the body.

❹ 바디와 링크핀을 연결시
망치 사용 불가할때 핀집게를 이용한다.

Use hammer when connecting body and link pin. Use pliers when you can't use hammer.

❺ 좌, 우 각각 스케이트를 바디에 조립한다.

Assemble the skates on the left and right. Body.

❻ 좌, 우 바디를 BAR와 렌치볼트를 이용해
체결한다.

Tighten the left and right body using the BAR and wrench bolts.

❼ BAR 없는 부분은 렌치볼트와
너트로 체결한다.

Tighten with the wrench bolts and nut without the bar part.

❽ 디바이더 조립후 상측 외측 BAR를
스패너를 이용 회전 조립한다.

After inserting the divider, rotate the upper outer BAR using a spanner.

❾ 무빙브라켓을 볼트와 너트, 부싱와샤를
활용해 체결한다.

Use bolts, nuts, and bushing washer to tighten the moving bracket.

❿ 무빙브라켓과 플레이트를
엔드링크핀과 E링으로 함께 체결한다.

Assemble the moving bracket and plate together with the end link pin and E-ring.

⓫ 조립완료.

Assembly Completed.

❶ 바디 해체시 링크핀을
"—"드라이버를 링크핀 커버 홈에 넣어
망치를 이용해 해체한다.

When the body is disassembled, insert the flat-head driver into the link pin cover groove and use a hammer to disassemble it.

Fork Carrier - CDPS100

Assembly and Disassembly 조립·해체 방법

❶ 바디를 바디포켓에 삽입해
링크를 연결한다.

Insert the body into the body pocket to connect the link.

❷ 링크핀 조립 후 바디뒷면에
링크핀 커버를 링크핀과 조립한다.

Assemble the link pin on the connected body.

❸ 좌, 우 바디열을 커버 좌측 돌출부
바디 내측부 홈에 끼워 조립한다.

Insert the left and right body line into the inner groove of the body.

❹ 내측 커버에 디바이더 조립 후
외측 커버를 조립한다.

After assembling the divider on the inner cover, assemble the outer cover.

❺ 스케이트를 바디 내측 스케이트 홈에
체결 후 망치로 조립한다.

Put skates to the inner skate groove of the body and assemble them with a hammer.

❻ 스케이트 조립 후 스케이트핀을 체결 후
망치로 조립한다.

After assembling the skates, tighten the skates pin and assemble it with a hammer.

❼ 고정브라켓과 플레이트에 앤드링크핀을
관통한 후 E링으로 체결한다.

Assemble the fixing bracket and plate together with the end link pin and E-ring.

❽ 무빙브라켓과 플레이트를
엔드링크핀과 E링으로 함께 체결한다.

Assemble the moving bracket and plate together with the end link pin and E-ring.

❾ 조립완료.

Assembly Completed.

❶ 커버해체시 커버홈에
"—"드라이버를 이용해 커버를 해체한다.

When removing a cover, using a flat-head screwdriver on the cover groove.

❷ 바디 해체시 링크핀을
"—"드라이버를 링크핀 커버 홈에 넣어
망치를 이용해 해체한다.

When the body is disassembled, insert the flat-head driver into the link pin cover groove and use a hammer to disassemble it.

❸ 엔드링크 해체시 E링을 "—"드라이버와
망치를 이용해 해체한다.

When Disassembling the end link and E-ring using a flat-head screwdriver and hammer.

Hybrid Carrier

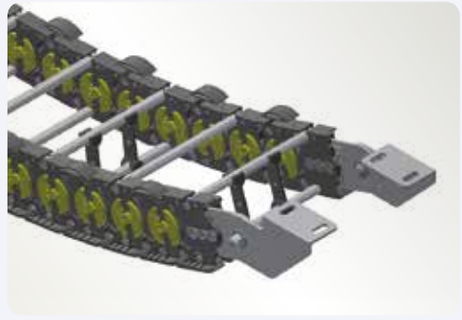
KH526/S | KHA526/S | KHA91/S | KHA92/S

Hybrid Carrier

엔지니어링 플라스틱을 사용해 가볍고 내구성이 우수하다. 장거리 적용시 소음 발생이 기존 케이블 캐리어 보다 최대 10db까지 감소 되었다. 내구성이 뛰어난 제품구조로 고속 이동시 파손이 거의 없으며 동작이 부드러워 고속이동에 적합한 구조이다. 특히 마찰, 진동에 의한 소음을 최소화 하는 구조로 설계되었다.

Light and durable, using engineering plastics with excellent impact strength. Long distance application reduces noise more than 10dB compared to the existing cable carriers. Due to its durable product structure, it rarely breaks when moving at high speeds, and its smooth operation makes it suitable for high-speed movement. In particular, it is designed to minimize noise caused by friction and vibration.

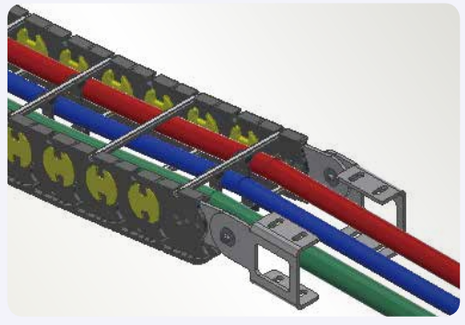
- **주요 사용장비 :** 고속용 겐트리로봇, 로봇 케리지 등
- **Applications :** High-speed Gantry robot, Robot carriage etc.



Gantry Robot

Hybrid Carrier
(Long Distance)

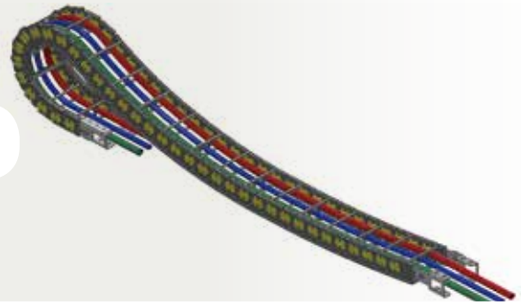
- **KH526/S** Page : D 09
- **KHA526/S** Page : D 11



Robot Carrige

Hybrid Carrier
(Long Distance)

- **KHA91/S** Page : D 13
- **KHA92/S** Page : D 15



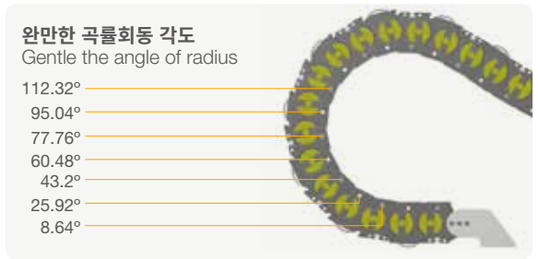
Hybrid Carrier Features

Hybrid Carrier 특징

Noise Minimization Structure 소음을 최소화한 제품구조

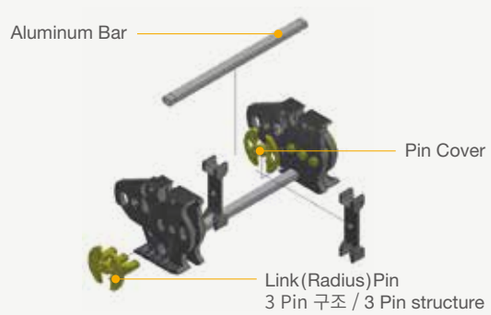
Hybrid Carrier는 링크사이 스케이트 간 단차를 2mm 이하로 줄여 마찰소음을 최소화 할 수 있는 구조로 되어있다. 스케이트와 바디는 일체형으로 이탈이 없으며 내마모성이 우수한 재료를 배합하여 마모도는 줄이고 내구성은 최상으로 높였다. 또한 피치 대비 케이블 인입구(내고)의 비율이 타제품 보다 10% 감소되어 케이블 캐리어 곡률회동 각도를 완만히 하였고 이로인해 소음 및 케이블의 꺽임이 최소화 되어 케이블 피로도는 감소되고 내구성은 기존대비 30% 이상 증가 되었다.

Hybrid carrier is designed to minimize friction noise by reducing the skates gap between links less than 2mm. Skate and body are all-in-one so No breakaway, and the combination of materials with excellent abrasion resistance reduces wear and improves durability. Ratio of cable entrances (internal height) decreased by 10% compared to other products and it make gentle the angle of curvature of cable carriers, thereby minimizing noise and cable distortion, reducing cable fatigue and increasing durability by more than 30%.



Excellent Durability 뛰어난 내구성

Hybrid Carrier는 3 Pin 구조로된 링크(곡률)핀은 장력이 우수한 링크결합방식이며 장거리 사용에도 파손되거나 이탈되지 않는다. 바디링크간 체결은 포켓 형식으로 되어있고 링크핀(곡률핀)과 핀커버가 바디링크를 잡아주며 체결되어 바디 바디의 뒤틀림을 막을 수 있는 구조이다. 3 Pin 구조의 제품은 특히 내구성이 뛰어나고 안정적인 사용이 가능하다.
Hybrid Carrier AL Bar Type은 좌, 우 바디링크 연결구조가 Aluminum Bar를 볼트로 조립하여 Bar의 빠짐으로 인한 이탈이 없다. 외력에 의한 좌, 우 바디링크간에 분해가 거의 되지않은 구조임으로 안정적으로 사용이 가능하다.

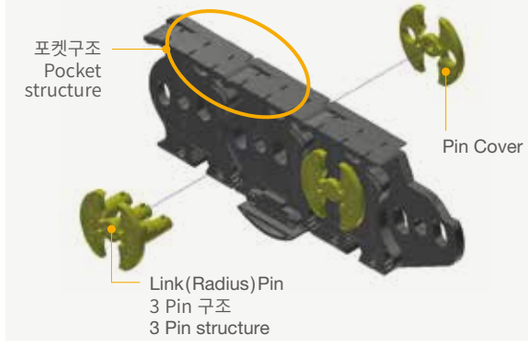


The **Hybrid Carrier's** link pin (radius pin) is 3 Pin structure and high tension link-combination method and does not break or deviate due to long-distance use. The body link is in pocket shape, and link pin (radius pin) and pin cover are assembly hold the body link to prevent body twist. Especially, 3 Pin structure is durability makes it possible for stable use.
The **Hybrid Carrier AL Bar Type** is Aluminum Bar bolted left and right body-link connection structure so that the AL bar does not breakaway due to fall out. It is a structure with little decomposition between left and right body links due to external forces, so it can be used stably.

Use Linkpin Type Multi-Radius Pin

링크핀형 멀티곡률핀 사용

Hybrid Carrier는 바디 자체에서 곡률이 형성되는 기존 방식과 달리 링크핀형 멀티곡률핀의 곡률조절 돌기를 이용하여 곡률반경이 형성된다. 곡률값을 자유자제로 교체할 수 있는 구조이며 바디 외측에서 곡률핀을 분해, 조립 할 수 있어 잘못된 곡률 선정시 교체가 용이하다. 고속 주행시 중력에 의한 바디간의 이탈을 방지하기 위해 3 Pin으로 견고하게 바디를 체결 하였다.
Hybrid Carrier는 곡률별 바디가 필요없어 재고관리가 용이하다. 바디 연결 후 곡률핀을 조립하는 구조로 되어있어 바디링크 반조립 상태로 재고관리가 가능하여 생산성의 효율을 높일 수 있는 제품이다.



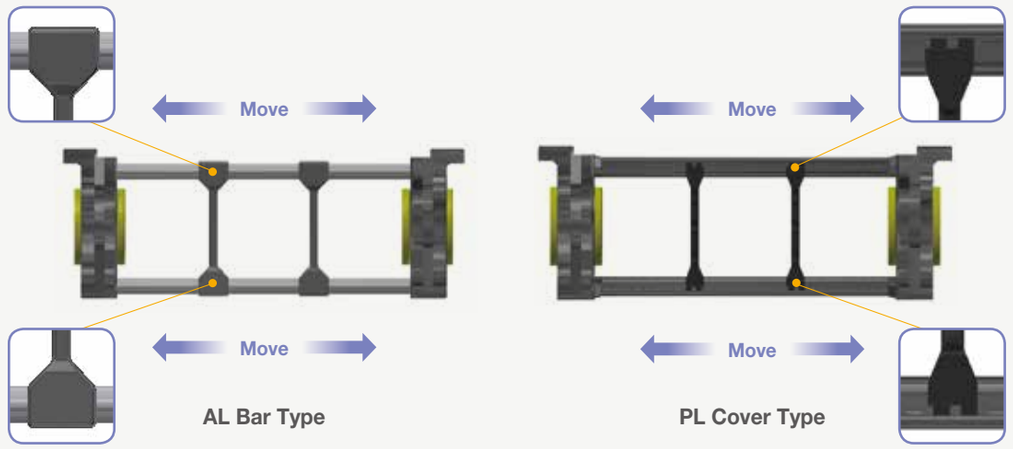
Hybrid Carrier curvature radius is formed using linkpin type multi-radius pin differently than existing method of curvature radius control in the body, it is a structure that can freely replace the value of radius, and it is easy to replace the radius pin when selecting the wrong radius because it can be disassembled and assembled on the outside of the body. In order to prevent the separation of the body due to gravity at high speed operation, the body was firmly fastened with a 3 Pin structure.
Hybrid Carrier does not need a body link by radius, so inventory management is simple. The structure is to assemble radius pins after connecting the body, so inventory management is possible in a semi-assembled body link, which can increase the efficiency of productivity.

Divider Structure for Easy Cable Installation

케이블 포설이 용이한 디바이더 구조

Hybrid Carrier 디바이더는 고정식이 아닌 유동형으로 레일형식(Bar 또는 Cover)의 구조에 디바이더를 체결한다.
디바이더가 좌, 우 이동이 되는 방식으로 케이블 및 호스의 포설에 용이하며 또한 케이블의 움직임에 디바이더 이탈이 없는 구조이다.

The divider is movable, not fixed. Put divider in the rail-type(bar or cover) structure.
Divider structure is easy to moves left and right, it make not deviate from the divider due to the movement of the cable and easy to install cables.



Expansion of Cable Installation Space by Separator
세퍼레이터에 의한 케이블 입선공간 범위확대

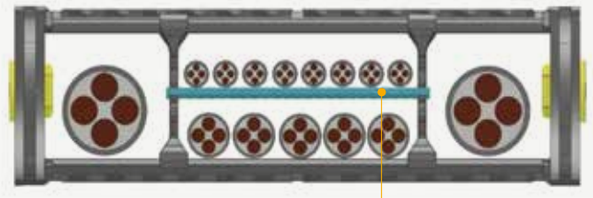
디바이더에서 입선공간 범위 확대 필요시 세퍼레이터를 적용해 입선공간을 확대 할 수 있으며, 기존 설치되어 있는 공간에서 케이블 추가시 세퍼레이터 체결이 용이하여 현장적용이 편리하다.

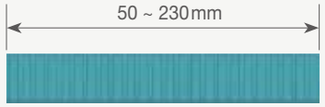
If it is necessary to expand installation space in the divider, you can expand the installation space by applying a separator. When add more cables from the existing installed space, it is easy to attach the separator to the field.

[Fixed Separator / 고정형 세퍼레이터]

- 길이는 최소 50~230mm이며 4mm 간격으로 절단 사용가능.
- 내폭의 전체가 아닌 부분 입선공간 활용시 사용. (Plastic Separator)
- 플라스틱 커버 타입만 적용가능.

- It is at least 50 to 230mm long and can be cut every 4mm.
- Used to utilize partial standing spaces, not the inner width. (Plastic Separator)
- Only Plastic Cover Type can be applied.



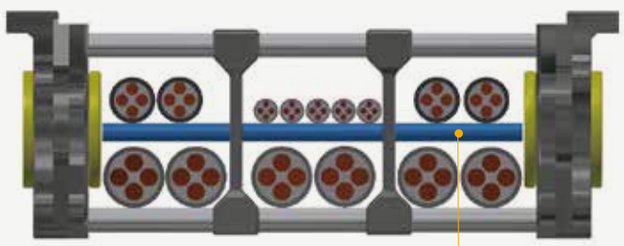


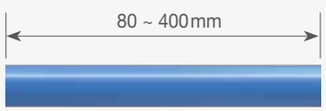
Plastic Separator

디바이더 고정형 세퍼레이터 / Separator for fixing divider

[Moving Separator / 이동형 세퍼레이터]

- 길이는 최소 80~400mm이며 캐리어 내폭치수 -1mm를 적용해서 사용. (Aluminum Separator)
- Used with a minimum length of 80 to 400mm and a carrier width dimension of -1mm. (Aluminum Separator)





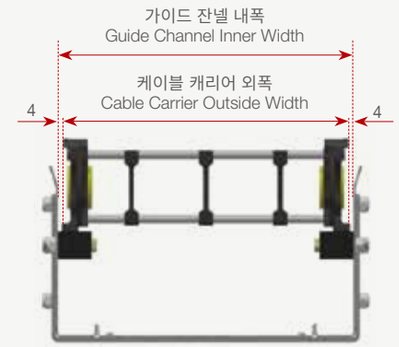
Aluminum Separator

디바이더 이동형 세퍼레이터 / Separator for moving divider

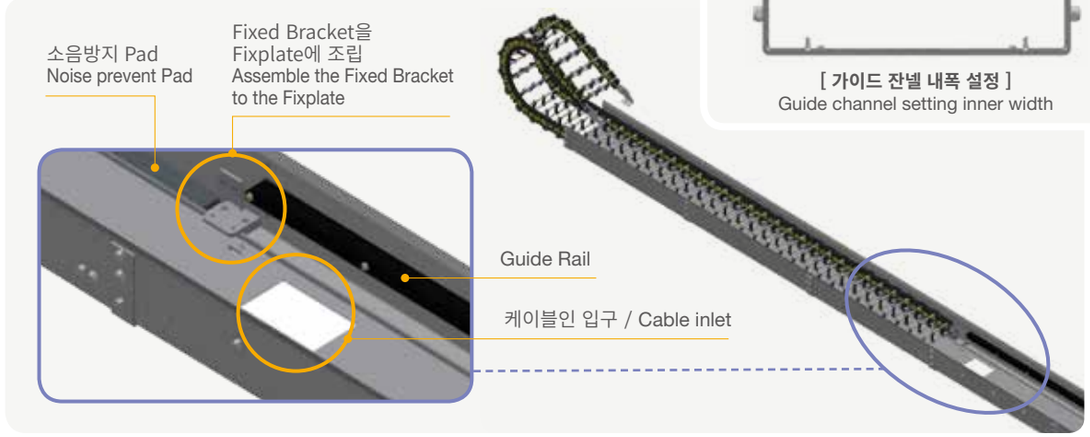
Guide Channel 가이드 잔넬

- 케이블 캐리어의 원할한 직선운동을 위해 Hybrid 전용 가이드 잔넬 (Special Type)을 사용한다.
- 잔넬 소음 방지를 위해 케이블 캐리어 후진 방향에 소음방지 Pad를 부착한다.
- 가이드레일의 재질은 사용환경에 따라 플라스틱 또는 스틸이 적용된다.

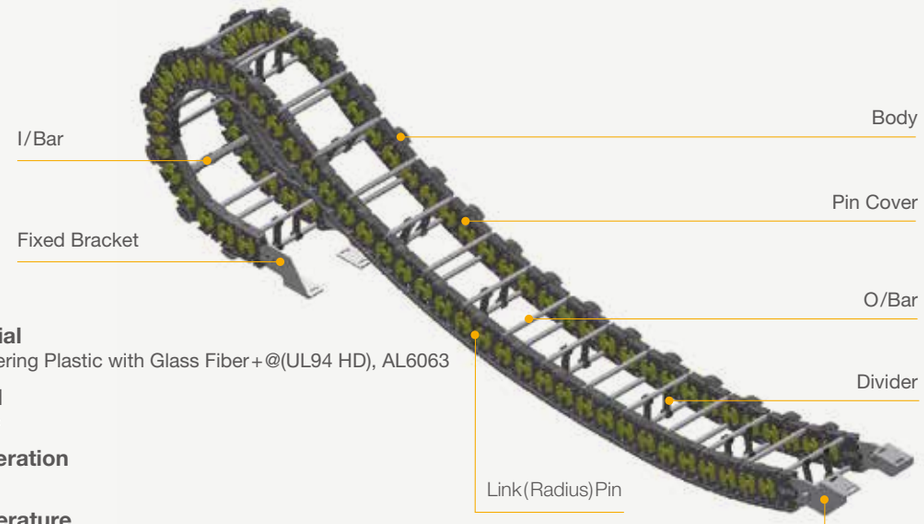
- For smooth straight-line movement of the cable carrier, use guide channel for Hybrid carrier (Special Type)
- Attach the noise prevent Pad to the reverse direction of the cable carrier for noise abatement.
- The material of the guide rail is plastic or steel depending on the use environment.



[가이드 잔넬 내폭 설정]
Guide channel setting inner width



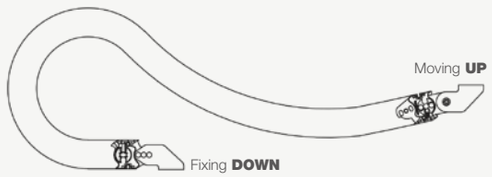
Structure AL Bar - Long Distance



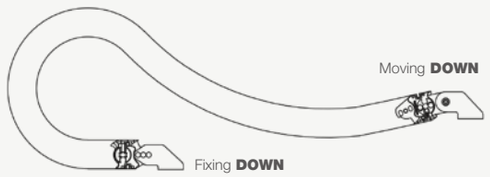
- **Material**
  : Engineering Plastic with Glass Fiber+@(UL94 HD), AL6063
- **Speed**
  : 5m/sec
- **Acceleration**
  : 15m/s^2
- **Temperature**
  : -25~125℃
- **Applications**
  : 크레인, 자동화기계, 공작기계, 겐트리로봇, 일반산업기계 적용
  Crane, Automation machines , Machine tools, Gantry robot and General industrial machinery

End Bracket Setting Example

• **Type 1 :** MU/FD(UD)

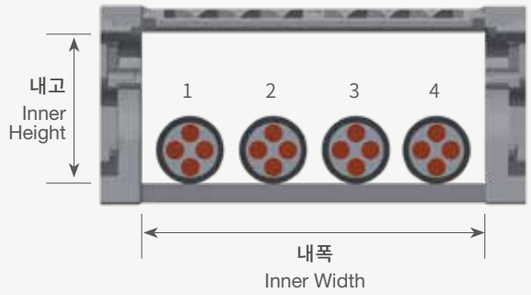


• **Type 3 :** MD/FD(DD)



Cable Carrier Specification Selection

케이블 캐리어 사양 선정



① 케이블 캐리어 내고 설정
Cable Carrier Inner Height Setting

전선, 혹은 호스의 가장 큰 외경을 기준으로 하며 약 20% UP하여 사양에 맞는 내고를 선정한다.

Based on the largest external diameter of a cable or hose, approximately 20% up to select the inner height that meets the specifications.

② 케이블 캐리어 내폭 설정
Cable Carrier Inner Width Setting

전선, 혹은 호스의 외경(1+2+3+4)에 약 25% UP하여 사양에 맞는 내폭을 선정한다.

Select inner width according to the specification by increasing about 25% of cable and hose's outer diameter(1+2+3+4).

③ 케이블 캐리어 곡률반경 설정
Cable Carrier Radius Setting

전선, 혹은 호스의 곡률반경에 맞게 선정한다.
케이블 캐리어의 곡률반경이 전선, 혹은 호스의 곡률반경 사양 대비 큰 설정은 문제가 없지만 작은 설정은 쓸림에 의한 마모나 전선 혹은 호스에 대한 케이블 캐리어의 반작용이 발생할 수 있다.

Select for the radius of a cable or hose.
If the cable carrier radius is bigger than cable or hose, it is not a problem. But if it is smaller setting, it may cause wear due to wiping or the reaction of the cable carrier to the cable or hose.

전선 : **Electronic Cables**	**에어호스 :** **Pneumatic Hoses**	**유압호스 :** **Hydraulic Hoses**
케이블 외경에 6~8배	에어호스 외경에 8~10배	유압호스 외경에 12~15배
R min > 6~8 x Φ	R min > 8~10 x Φ	R min > 12~15 x Φ

④ 케이블 캐리어 길이 설정
Cable Carrier Length Setting (calculation)

장비의 행정거리 1/2 여유길이 N(Safety Length + πr) 값을 더하면 케이블 캐리어 전체 길이가 된다.
("N"값 : PAGE 10 및 각제품의 Specification 참조)

The cable carrier's total length is half of the equipment's total travel length and adding an extra length of N (Safety Length + πr) value. ("N": See PAGE10 and Specifications for each product)

Order Form

(mm)

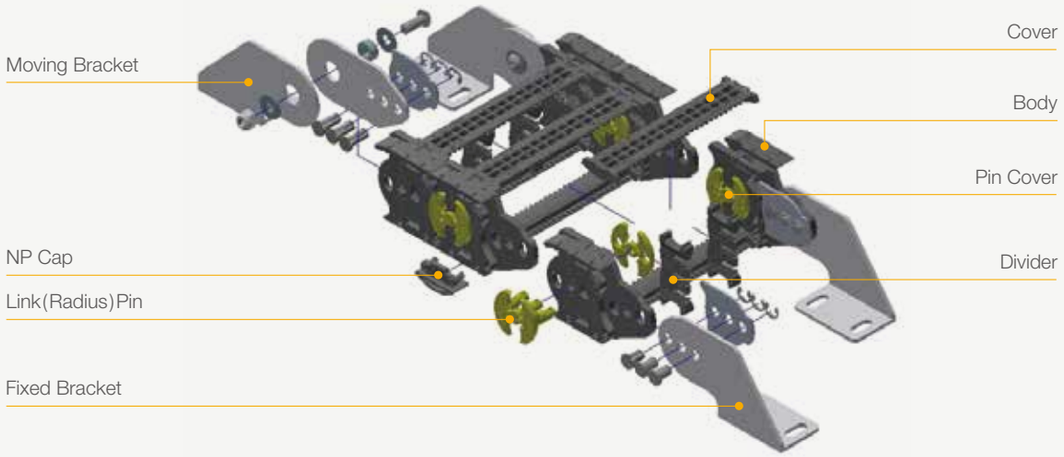
EX) **KHA526/S - W200 - R200 - 4000L - SETUD**

제품타입 Type	내폭 Width	곡률 Radius	길이 Length	브라켓 조립방향 End Bracket Setting

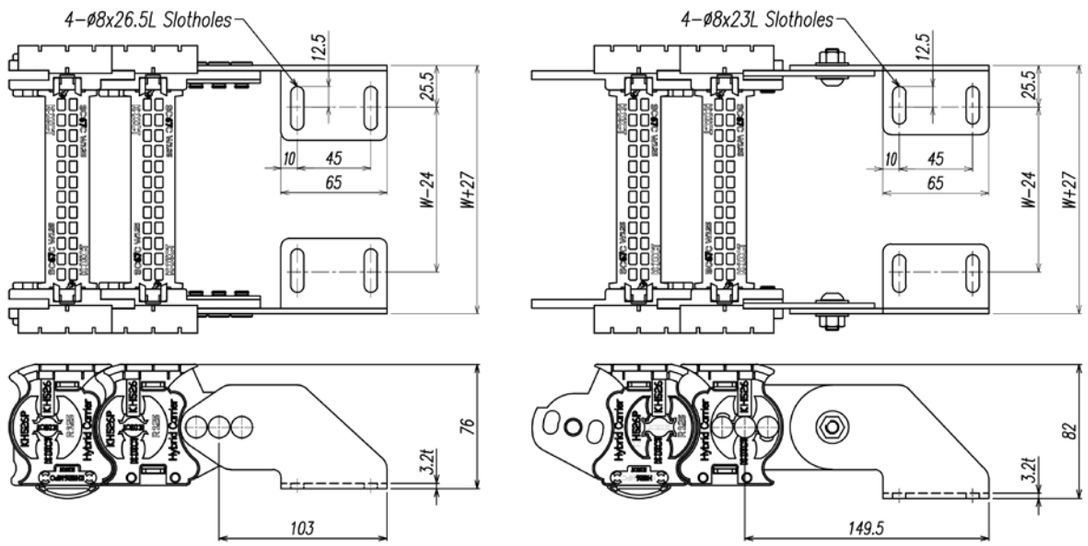
Hybrid Carrier

KH526/S

Structure



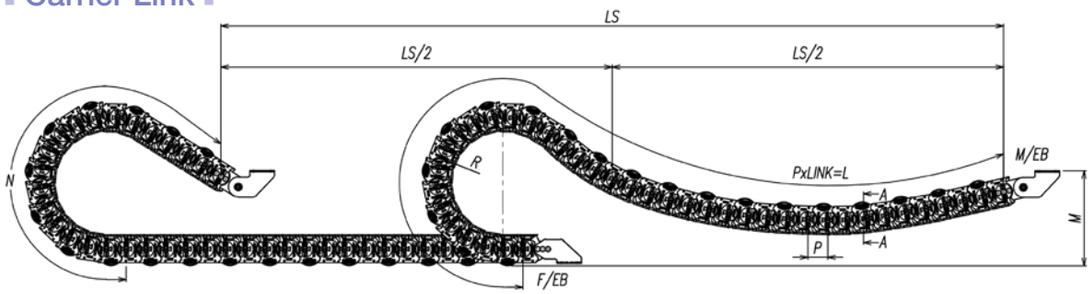
End Bracket



[Fixed Bracket (F/EB)]

[Moving Bracket (M/EB)]

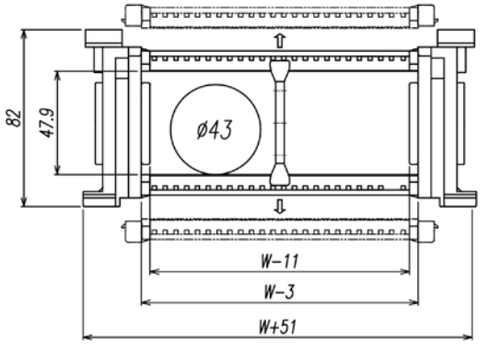
Carrier Link



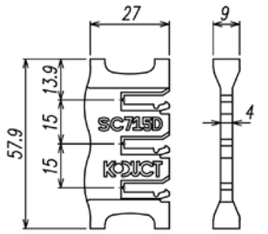
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : 14.5 x 4.4 (Plastic)

Specification

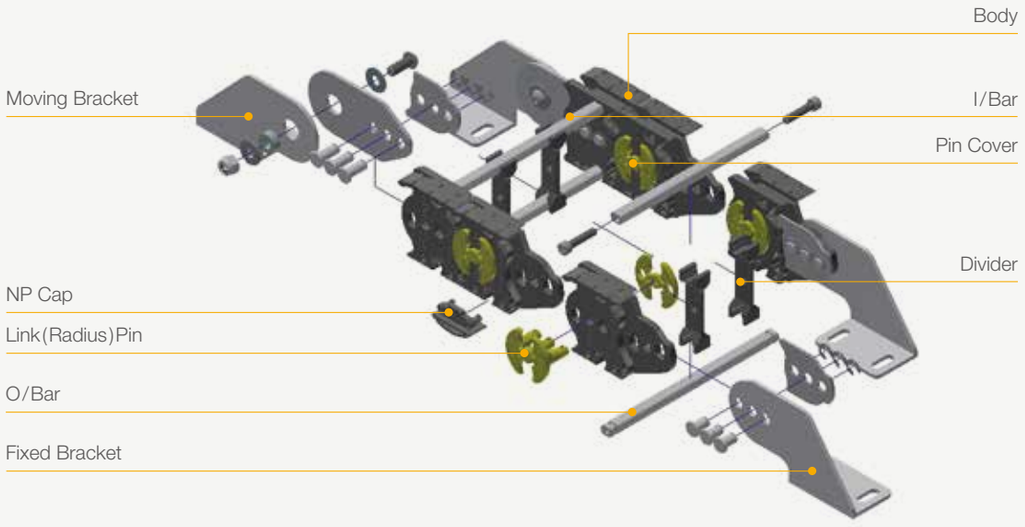
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KH526/S	65 (2.559)	125 (4.921)	52.6 (2.070)	250 (9.842)	1,310 (51.574)	0	3.297	1.279
	80 (3.149)					1	3.417	
	100 (3.937)	175 (6.889)			1,470 (57.874)	1	3.625	
	125 (4.921)					2	3.746	
	150 (5.905)					2	3.831	
	175 (6.889)	225 (8.858)			1,630 (64.173)	2	3.917	
	200 (7.874)					2	4.002	
	225 (8.858)	275 (7.087)			1,790 (70.472)	3	4.123	
	250 (9.842)					3	4.208	

(1inch = 25.4mm)

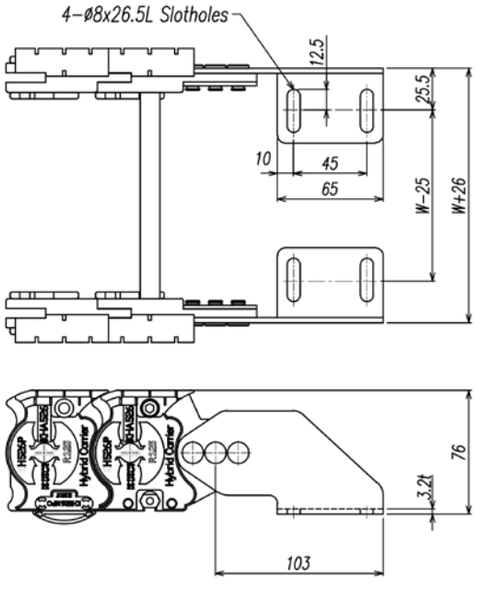
Hybrid Carrier

KHA526/S

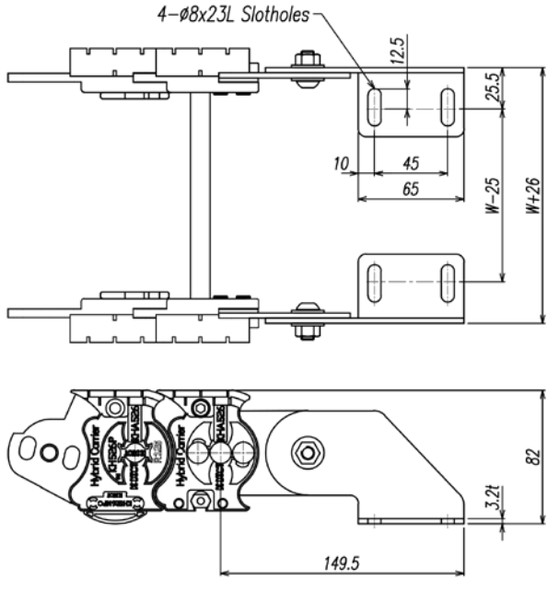
Structure



End Bracket

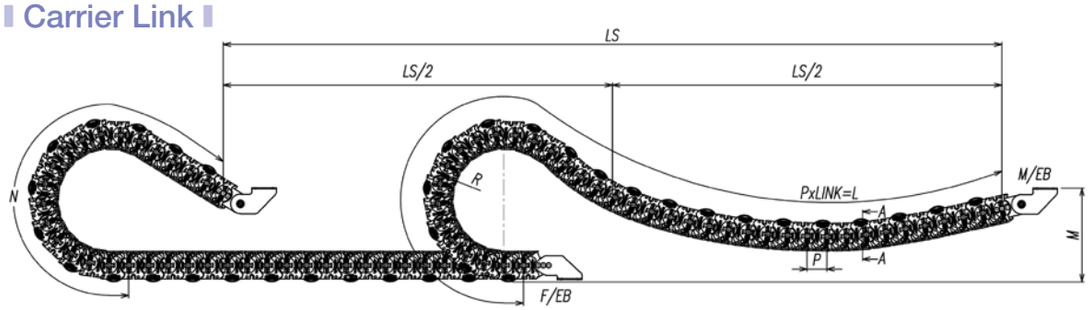


[**Fixed Bracket** (F/EB)]



[**Moving Bracket** (M/EB)]

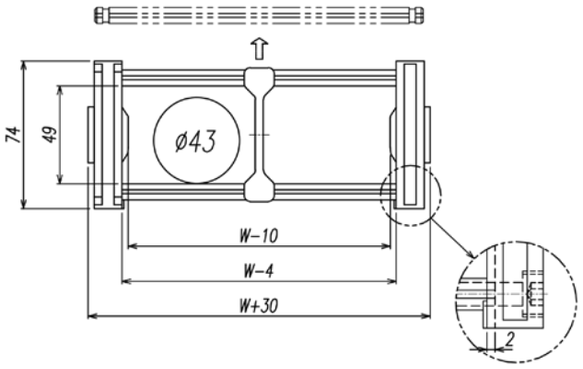
Carrier Link



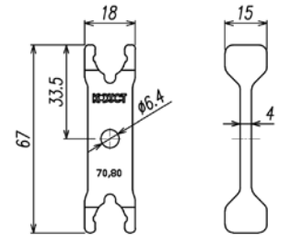
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KHA526/S	80 (3.149)	125 (4.921)	52.6 (2.070)	250 (9.842)	1,310 (51.574)	1	3.503	1.279
	100 (3.937)					1	3.571	
	150 (5.905)	175 (6.889)			1,470 (57.874)	2	3.777	
	200 (7.874)					2	3.746	
	250 (9.842)					3	3.947	
	300 (11.811)	225 (8.858)			1,630 (64.173)	3	4.323	
	350 (13.779)					4	4.530	
	400 (15.748)	275 (7.087)			1,790 (70.472)	4	7.700	

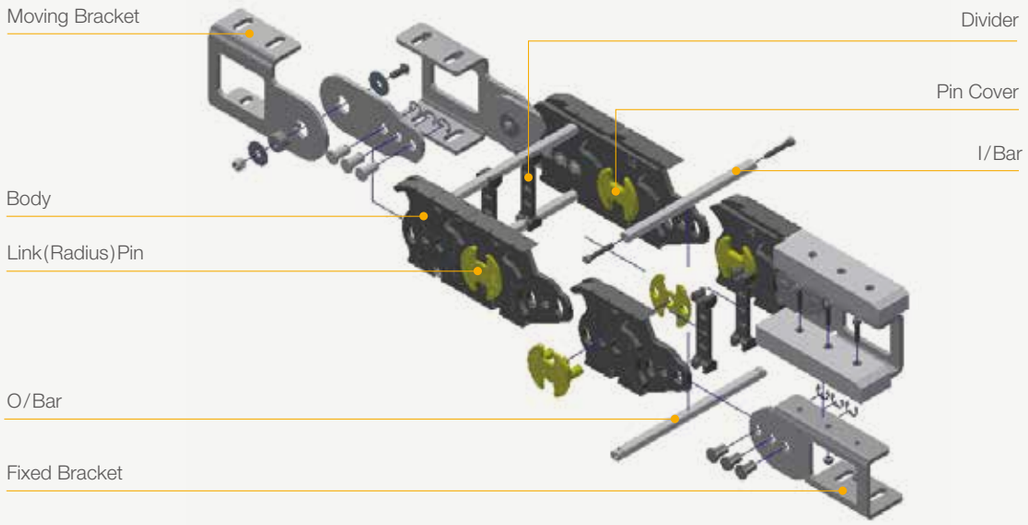
* Width 주문에 따라 제작가능 / Width can make to order

(1inch = 25.4mm)

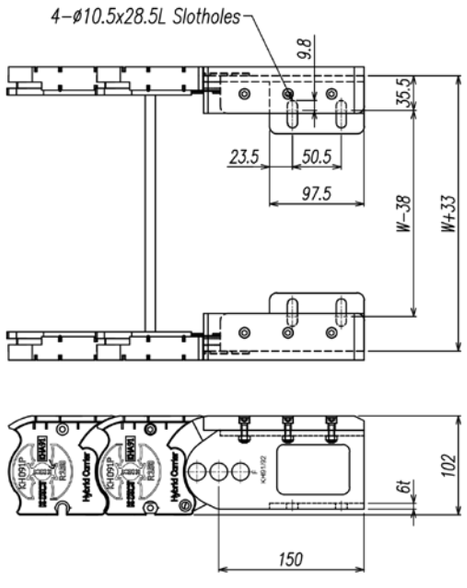
Hybrid Carrier

KHA91/S

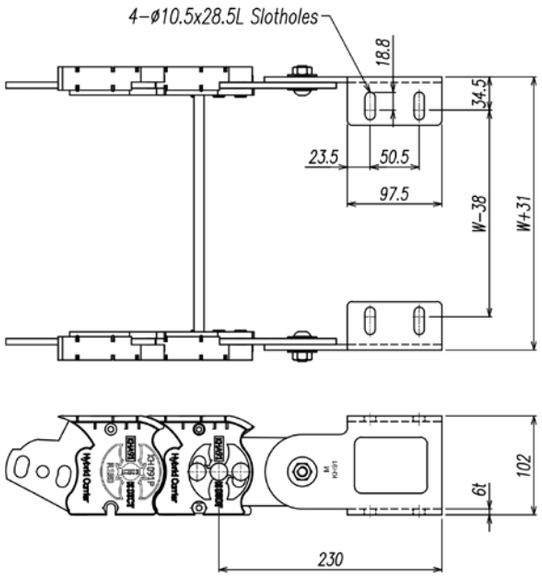
Structure



End Bracket

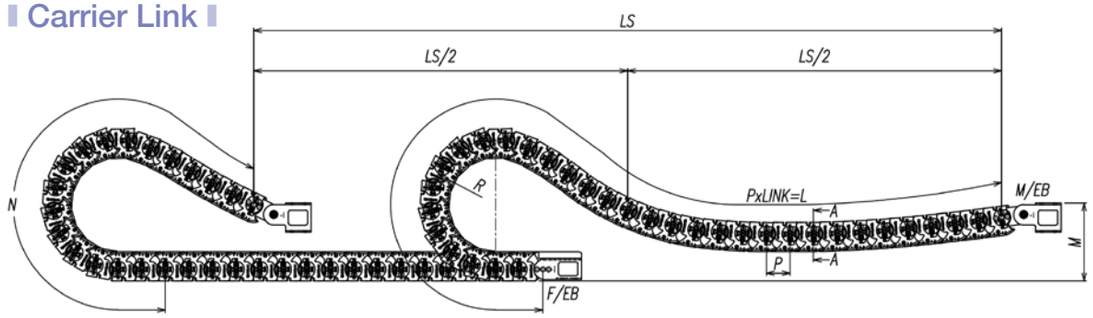


[**Fixed Bracket** (F/EB)]



[**Moving Bracket** (M/EB)]

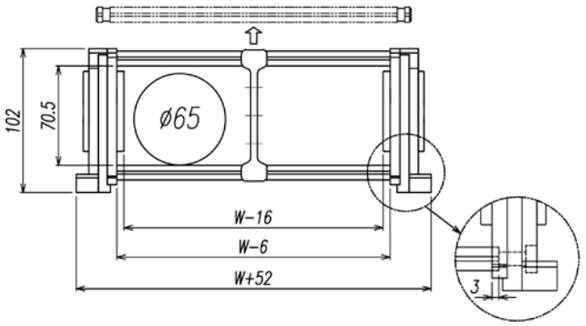
Carrier Link



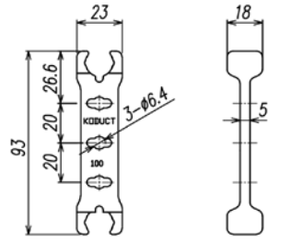
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KHA91/S	100 (3.937)	200 (7.874)	91 (3.582)	300 (11.811)	1,200 (47.244)	1	5.15	3.64
	150 (5.905)	250 (9.842)			1,400 (55.118)	2	5.32	
	200 (7.874)					2	5.49	
	250 (9.842)	300 (11.811)			1,500 (59.055)	3	5.71	
	300 (11.811)	350 (13.779)			2,100 (82.677)	3	5.89	
	350 (13.779)	400 (15.748)			2,500 (98.425)	4	6.11	
	400 (15.748)					4	6.28	
	500 (19.685)	450 (17.716)			3,000 (118.110)	협의	6.68	
	600 (23.622)	500 (19.685)			3,500 (137.795)	협의	7.08	

* Width 주문에 따라 제작가능 / Width can make to order

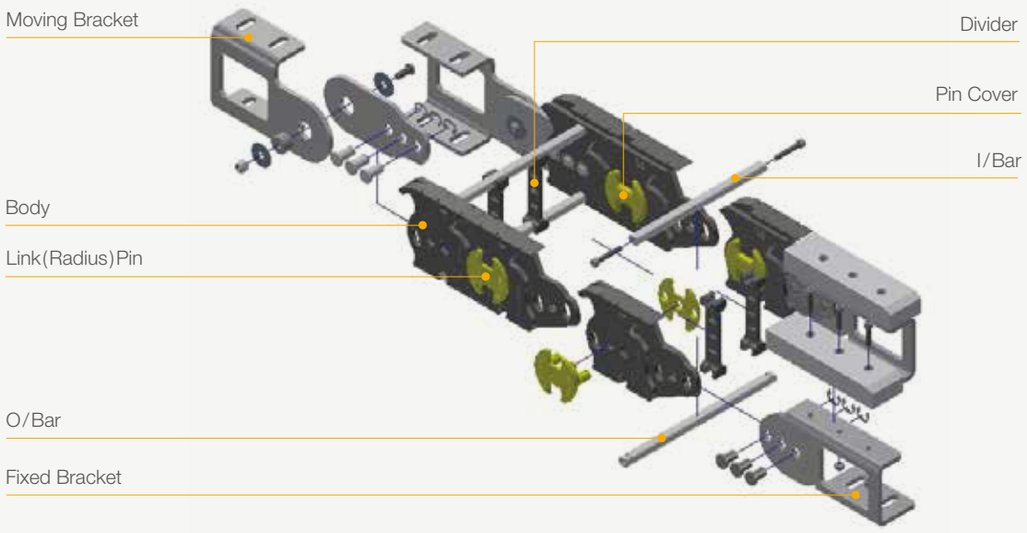
(1inch = 25.4mm)

KHA91/S

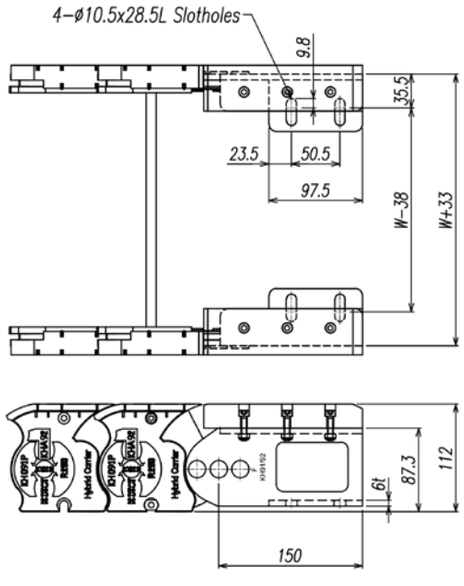
Hybrid Carrier

KHA92/S

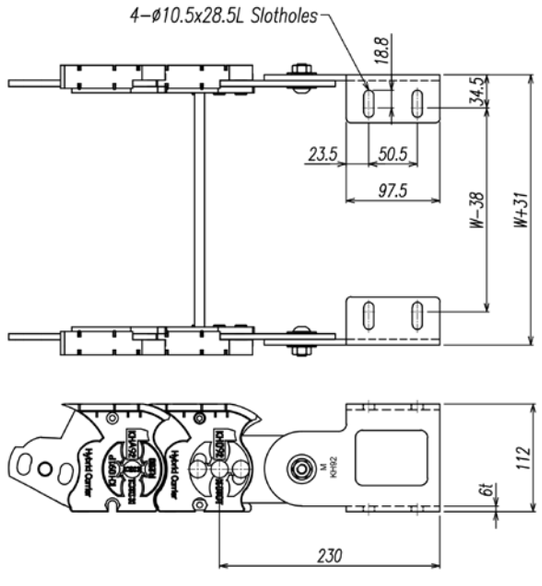
Structure



End Bracket

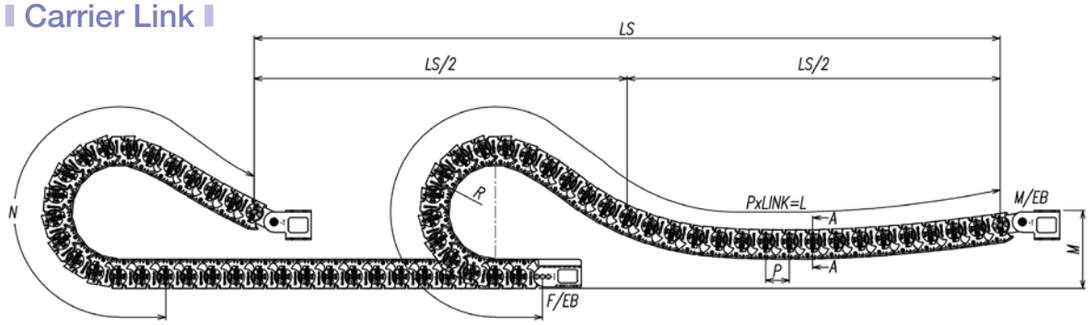


[**Fixed Bracket** (F/EB)]



[**Moving Bracket** (M/EB)]

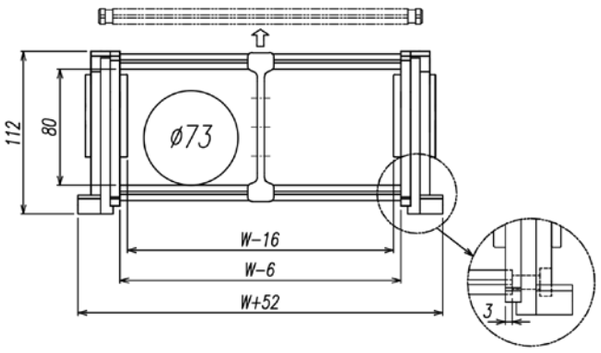
Carrier Link



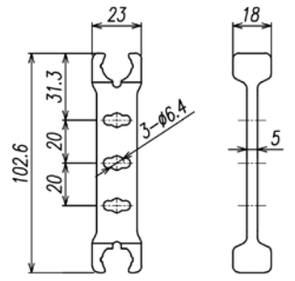
$$\left[L = \frac{LS}{2} + N \right]$$

- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KHA92/S	100 (3.937)	200 (7.874)	91 (3.582)	300 (11.811)	1,200 (47.244)	1	5.37	3.64
	150 (5.905)	250 (9.842)			1,400 (55.118)	2	5.54	
	200 (7.874)					2	5.71	
	250 (9.842)	300 (11.811)			1,500 (59.055)	3	5.93	
	300 (11.811)	350 (13.779)			2,100 (82.677)	3	6.11	
	350 (13.779)	400 (15.748)			2,500 (98.425)	4	6.33	
	400 (15.748)					4	6.50	
	500 (19.685)	450 (17.716)			3,000 (118.110)	협의	6.90	
	600 (23.622)	500 (19.685)			3,500 (137.795)	협의	7.30	

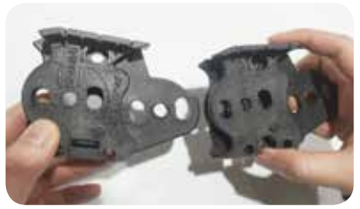
* Width 주문에 따라 제작가능 / Width can make to order

(1inch = 25.4mm)

KHA92/S

Hybrid Carrier - KHA526/S, KHA92/S

Assembly and Disassembly 조립·해체 방법



❶ 바디를 바디포켓에 삽입해 링크를 연결한다.

Insert the body into the body pocket to connect the link.

❷ 연결된 바디에 링크핀을 체결한다.

Assemble the link pin on the connected body.

❸ 바디뒷면에 링크핀 커버를 링크핀과 조립한다.

Assemble the link pin cover with the link pin on the back side of the body.

❹ 바디전면에 NP CAP을 고무망치를 이용해 체결한다.

Insert the NP CAP on the front of the body with a rubber hammer.

❺ 좌, 우 바디를 하측 BAR를 이용 연결하고 렌치볼트로 체결한다.

Tighten the left and right body using the BAR and wrench bolts.

❻ 하측 BAR 조립 후 디바이더를 체결한다.

After assembling the inner BAR, insert the divider.

❼ 디바이더 체결후 상측 오픈 BAR를 스패너를이용 회전 체결한다.

After inserting the divider, rotate the upper outer BAR using a spanner.

❽ 고정브라켓과 플레이트를 엔드 링크핀과 E링으로 함께 체결한다.

Tighten the fixing bracket and plate together with the End link pin and E-ring.

❾ 무빙브라켓과 무빙 플레이트를 바디홈에 끼운다.

Insert the moving bracket and the moving plate into the body groove.

❿ 무빙브라켓과 플레이트를 엔드 링크핀과 E링으로 함께 체결한다.

Tighten the moving bracket and plate together with the End link pin and E-ring.

❶ 상측 BAR 해체시 12mm 스패너를 이용 90° 회전시켜 상측 BAR를 해체한다.

When disassembling the outer BAR, use the 12mm spanner to rotate the upper BAR by 90°.

❷ 바디 해체시 링크핀을 "ㅡ"드라이버를 링크핀 커버 홈에 넣어 망치를 이용해 해체한다.

When the body is disassembled, insert the flat-head driver into the link pin cover groove and use a hammer to disassemble it.

Memo

ECO-E Carrier

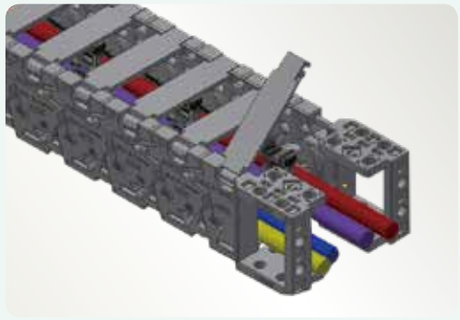
KE20 KE30 KE35 KE45

ECO-E Carrier

저분진(ECO-E) 케이블 캐리어는 소음발생이 30db 이하이며 청정도 등급 또한 1등급으로 분진 발생 및 소음이 거의 없다. 탄성 재질의 링크핀으로 소음 및 분진을 최소화 하는 바디 및 링크핀 구조로 설계되어 있어 반도체 장비에 적합하다. 링크 및 커버결합이 좌, 우 비틀림에도 링크 이탈이 거의 없고 조립·분해가 용이하다. 링크 결합구조가 처짐을 최대한 보완한 구조로 피치대비 일반 링크 결합방식과 동일한 FreeSpan을 유지한다.

Low dust (ECO-E) cable carriers make less than 30dB of noise and have a clean class of 1 with minimize dust and noise. It is suitable for semiconductor equipment as it is designed with body and link pin is elastic material that minimize noise and dust. Link and cover assembly is durable, so even left and right torsion rarely fall out link and is easy to assemble and disassemble. The link assembly structure maximum compensates sagging and maintains the same FreeSpan as the normal link assembly method compared to the pitch.

- **주요 사용장비 :** 반도체 공장의 Clean Room, 저분진 저소음 케이블 캐리어가 필요한 장비 등
- **Applications :** Clean room at a semiconductor plant & Equipment, Required for low-dust, low-noise cable carrier etc.

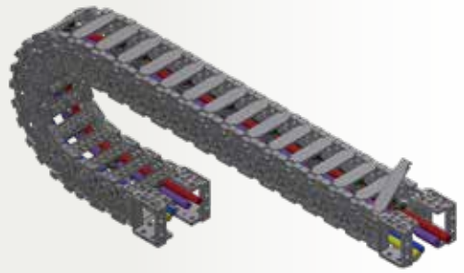


Clean Room Type

ECO-E Carrier

ECO-E Carrier Features

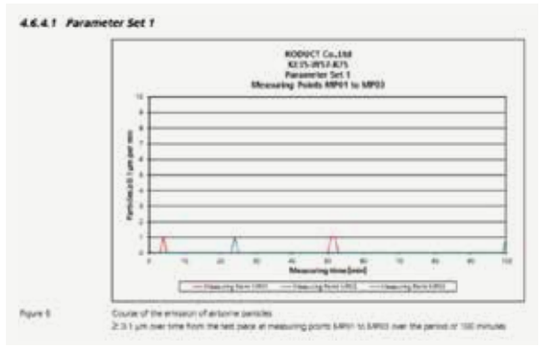
ECO-E Carrier 특징

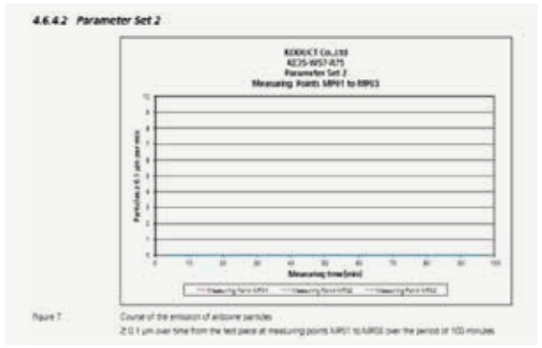


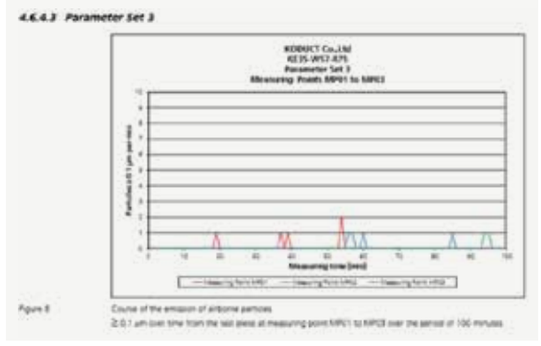
Minimize Dust Structure 분진을 최소화한 제품구조

ECO-E Carrier는 링크간 마찰이 없는 구조로 설계되어 분진을 최소화 함으로 클린룸 환경에 적합하다.
독일 IPA DIN EN ISO14644-1 Class 1(1등급) 인증서 획득! (클린룸 반도체 분진발생 허용기준 충족)

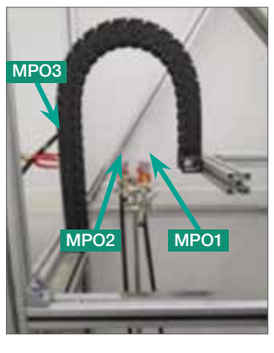
ECO-E Carrier is designed with a non-friction structure between links, minimizing dust and making it suitable for clean room.
Germany's IPA DIN EN ISO14644-1 Class 1 Certificated! (Satisfy dust generate criteria for semiconductors cleanroom)

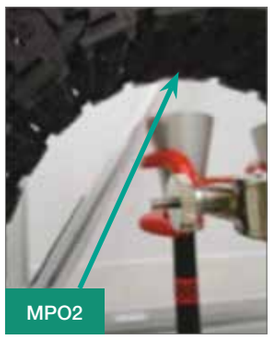






KE35-W57-R75 manufactured by KODUCT Co., Ltd.			
Parameter Set 1			
Measuring Point	MP01	MP02	MP03
Air Cleanliness Class (acc. to ISO 14644-1)	1	1	1
Parameter Set 2			
Measuring Point	MP01	MP02	MP03
Air Cleanliness Class (acc. to ISO 14644-1)	1	1	1
Parameter Set 3			
Measuring Point	MP01	MP02	MP03
Air Cleanliness Class (acc. to ISO 14644-1)	1	1	1

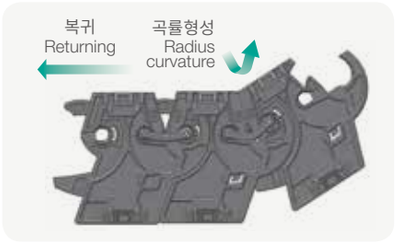




Minimize Noise Structure 소음을 최소화한 제품구조

ECO-E Carrier는 링크간 마찰이 없고 탄성재질의 곡률핀 사용으로 곡률형성 복귀 후에도 캐리어 자체에서는 소음이 발생하지 않는 구조로 되어있다.

The **ECO-E carrier** has a structure in which no noise is generated by the carrier itself even after making Radius curvature and returning to radius curvature due to the use of elastic radius pins without friction between the links.



Reduce Sagging Due to Self-Load and Load

자중 및 하중에 의한 처짐완화

ECO-E Carrier는 링크 연결후 처짐 보완면 4EA의 요소와 링크 이탈방지면 전후, 좌우 각 2EA의 요소로 최대한 지지할 수 있도록 설계 되어있어, 동일 사양 대비 FreeSpan이 50% 이상 향상되었다. 캐리어의 내구성이 증가되어 파손률이 감소되고 케이블 및 호스의 수명이 최대한 증가된다.

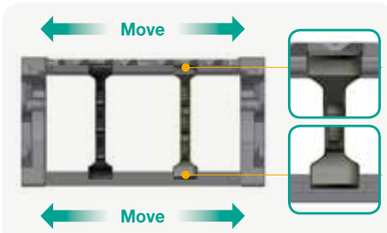
ECO-E Carrier is designed to support as much as possible with 4 EA of sagging support side and 2EA of preventing link breakaway side per front and the rear, left and right each. FreeSpan has been improved by more than 50% compared to the same specification. The durability of the carrier increases, reducing the breakage rate and increasing the lifespan of cables and hoses as maximized.

Divider Structure for Easy Cable Installation

케이블 포설이 용이한 디바이더 구조

ECO-E Carrier 디바이더는 고정식이 아닌 유동형으로 레일형식의(Cover) 구조에 디바이더를 체결한다. 디바이더가 좌, 우 이동이되는 방식으로 케이블 및 호스의 포설에 용이하며 또한 케이블의 움직임에 디바이더 이탈이 없는 구조이다.

The divider is movable, not fixed. Put divider in the rail-type(cover) structure. Divider structure is easy to moves left and right, it make not deviate from the divider due to the movement of the cable and easy to install cables.



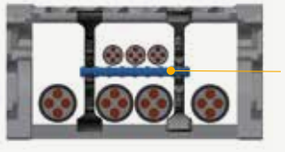
Expansion of Cable Installation Space by Separator 세퍼레이터에 의한 케이블 입선공간 범위확대

디바이더에서 입선공간 범위 확대 필요시 세퍼레이터를 적용해 입선공간을 확대 할 수 있으며, 기존 설치되어 있는 공간에서 케이블 추가시 세퍼레이터 체결이 용이하여 현장적용이 편리하다.

If it is necessary to expand installation space in the divider, you can expand the installation space by applying a separator. When add more cables from the existing installed space, it is easy to attach the separator to the field.

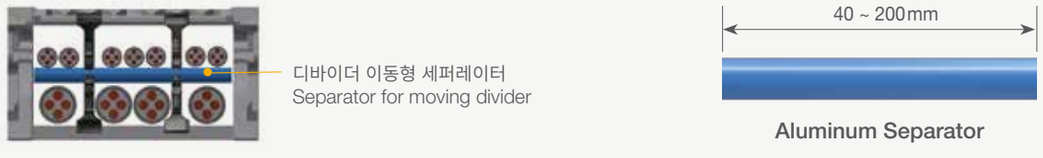
[Fixed Separator / 고정형 세퍼레이터]

- 길이는 최소 50~200mm이며 3mm 간격으로 절단 사용가능. / Length is 50 to 200mm and can cut every 3mm.
- 내폭의 전체가 아닌 부분 입선공간 활용시 사용. / Used to utilize partial standing spaces, not the inner width. (Plastic Separator)
- 플라스틱 커버 타입만 적용가능. / Only Plastic Cover Type can be applied.



[Moving Separator / 이동형 세퍼레이터]

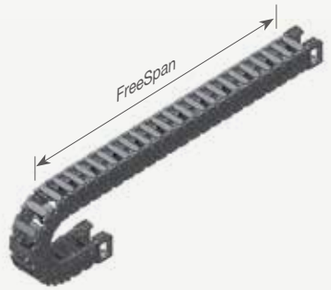
- 길이는 최소 40~200mm이며 캐리어 내폭치수 -1mm를 적용해서 사용. (Aluminum Separator)
- Length is 40 to 200mm and width is -1mm of cable carrier inner width. (Aluminum Separator)



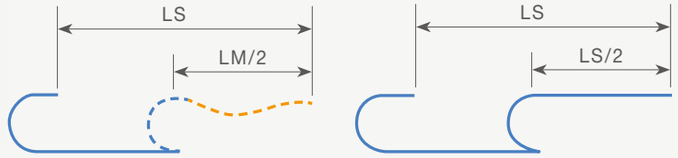
FreeSpan

케이블 캐리어의 **Self-Load**에 의한 처짐이 없는 길이를 **FreeSpan** 이라 하고, 케이블 하중에 따라 지지 하중의 길이가 달라진다.
케이블 캐리어는 처짐이 있으나 허용 가능한 길이(LM/2)와 처짐이 없이 허용가능한 길이(LS/2)가 있다.

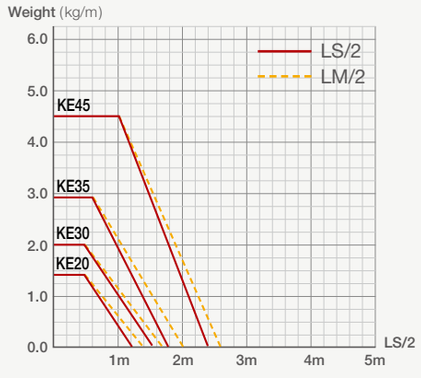
The length of the carrier without sagging by **Self-Load** is called **FreeSpan**, and the length of the support load varies according to the cable load. There are two kinds of length.



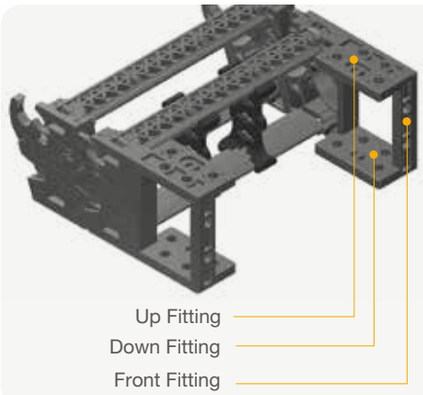
- **LS :** Travel length
- **LS / 2 :** 처짐이 없으며 허용 가능한 케이블 캐리어 길이
  No Sagging and acceptable length
- **LM / 2 :** 처짐이 있으나 허용 가능한 케이블 캐리어 길이
  Sagging but acceptable length



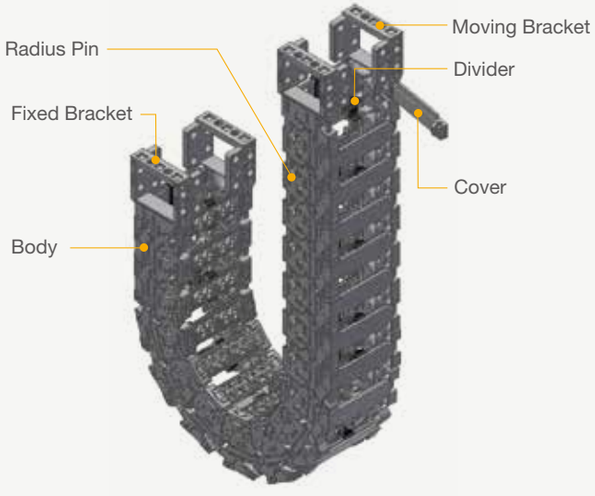
Load Diagrams Self-Supporting Length



End Bracket Setting



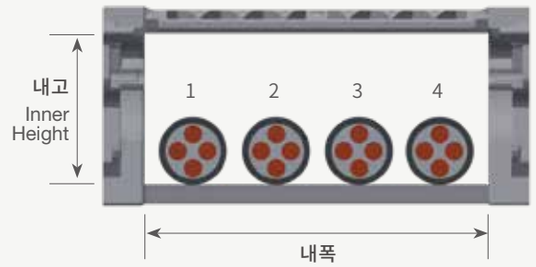
Structure



- **Low Dust**
  : IPA Test DIN EN ISO CLASS1
- **Material**
  : Engineering Plastic with
  Glass Fiber+@(UL94 HD)
- **Speed**
  : 3m/sec
- **Acceleration**
  : 10m/s^2
- **Temperature**
  : -25~125℃
- **Applications**
  : 반도체 공장의 Clean Room,
  저분진 저소음 케이블 캐리어가 필요한 장비 등
  Clean room at a semiconductor plant & Equipment, Required for low-dust, low-noise cable carrier etc.

Cable Carrier Specification Selection

케이블 캐리어 사양 선정



① 케이블 캐리어 내고 설정
Cable Carrier Inner Height Setting

전선, 혹은 호스의 가장 큰 외경을 기준으로 하며
약 20% UP하여 사양에 맞는 내고를 선정한다.

Based on the largest external diameter of a cable or hose, approximately 20% up to select the inner height that meets the specifications.

② 케이블 캐리어 내폭 설정
Cable Carrier Inner Width Setting

전선, 혹은 호스의 외경(1+2+3+4)에 약 25% UP하여 사양에 맞는 내폭을 선정한다.

Select inner width according to the specification by increasing about 25% of cable and hose's outer diameter(1+2+3+4).

③ 케이블 캐리어 곡률반경 설정
Cable Carrier Radius Setting

전선, 혹은 호스의 곡률반경에 맞게 선정한다.
케이블 캐리어의 곡률반경이 전선, 혹은 호스의 곡률반경 사양 대비 큰 설정은 문제가 없지만 작은 설정은 쓸림에 의한 마모나 전선 혹은 호스에 대한 케이블 캐리어의 반작용이 발생할 수 있다.

Select for the radius of a cable or hose.
If the cable carrier radius is bigger than cable or hose, it is not a problem. But if it is smaller setting, it may cause wear due to wiping or the reaction of the cable carrier to the cable or hose.

전선 : Electronic Cables	에어호스 : Pneumatic Hoses	유압호스 : Hydraulic Hoses
케이블 외경에 6~8배 R min > 6~8 x Φ	에어호스 외경에 8~10배 R min > 8~10 x Φ	유압호스 외경에 12~15배 R min > 12~15 x Φ

④ 케이블 캐리어 길이 설정
Cable Carrier Length Setting (calculation)

장비의 행정거리 1/2 여유길이 N(Safety Length + πr) 값을 더하면 케이블 캐리어 전체 길이가 된다.
("N"값 : PAGE 10 및 각제품의 Specification 참조)

The cable carrier's total length is half of the equipment's total travel length and adding an extra length of N (Safety Length + πr) value. ("N": See PAGE10 and Specifications for each product)

Order Form

(mm)

EX) **KE45 - W100 - R100 - 1980L - SET**

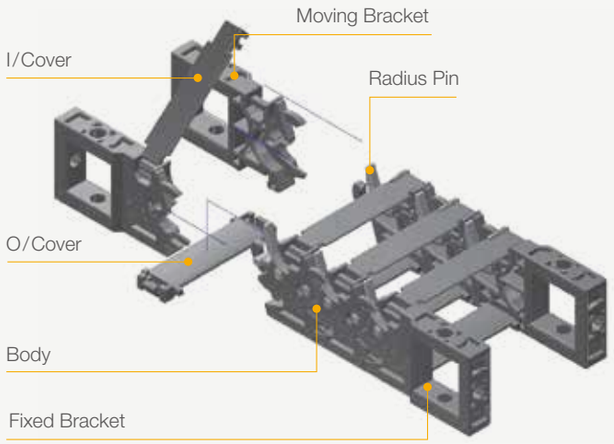
제품타입 Type	내폭 Width	곡률 Radius	길이 Length

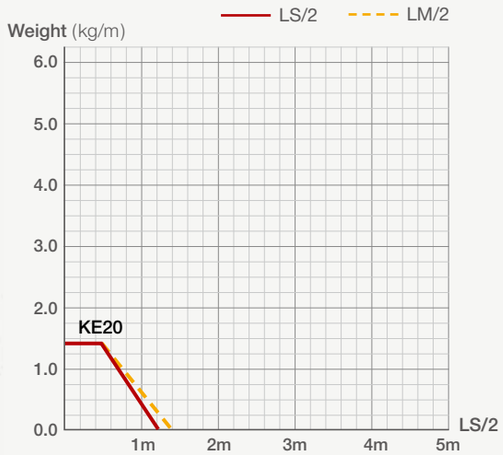
ECO-E Carrier

KE20

출시예정 / COMING SOON

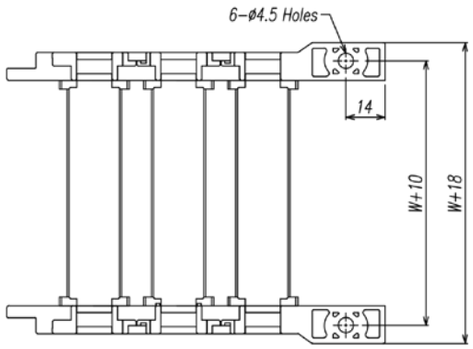
Structure

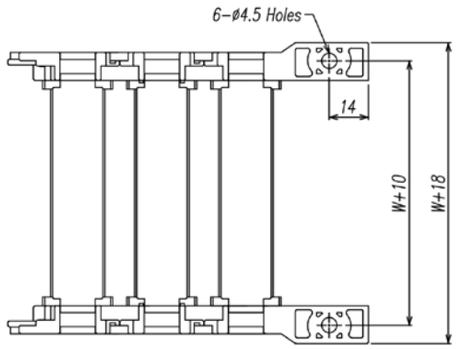


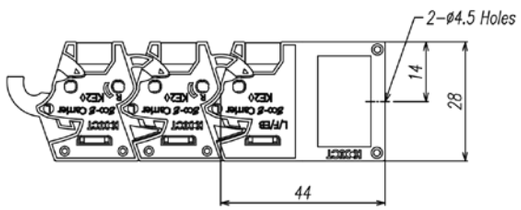


[Load Diagrams Self-Supporting Length]

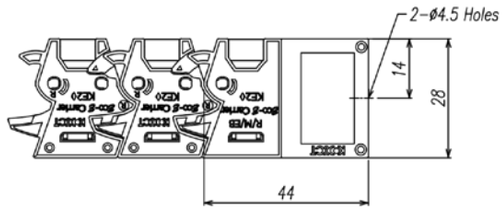
End Bracket





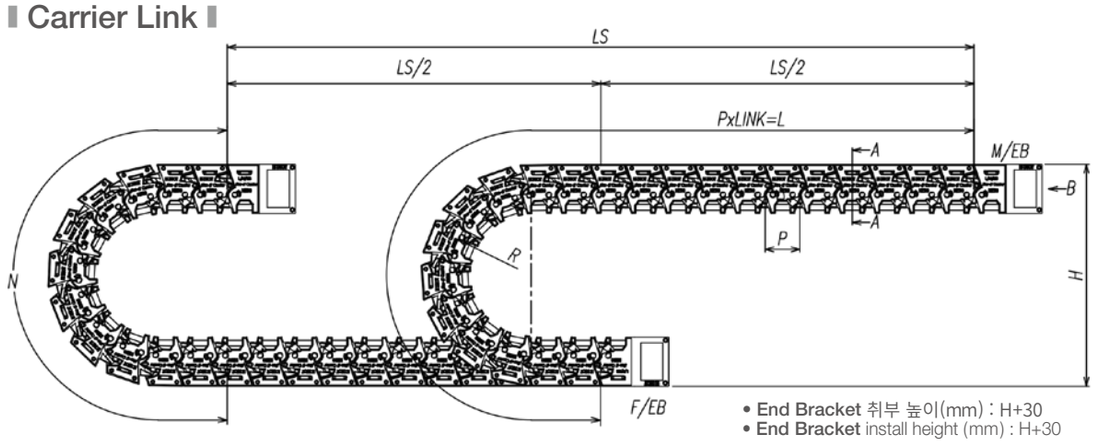


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

Carrier Link



• **End Bracket** 취부 높이(mm) : H+30
• **End Bracket** install height (mm) : H+30

$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A

View B

Specification

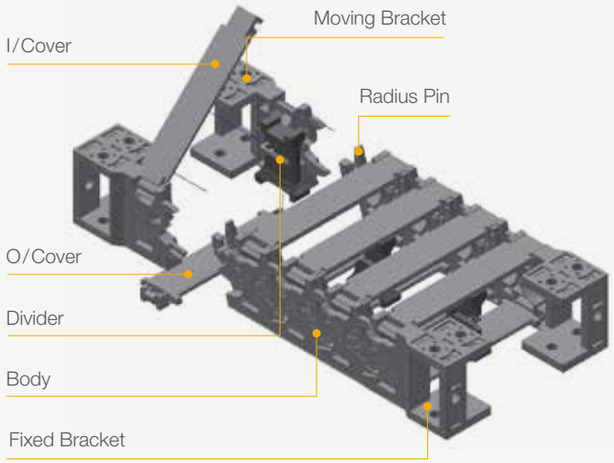
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KE20	18 (0.708)	27 (1.063)	20 (0.787)	87 (3.425)	165 (6.496)	0	-	-
	38 (1.496)	35 (1.378)		103 (4.055)	190 (7.476)	0	-	-
	58 (2.283)	45 (1.772)		123 (4.843)	221 (8.701)	0	-	-

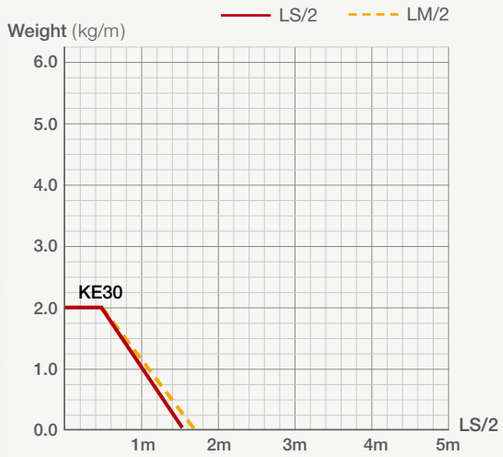
(1inch = 25.4mm)

ECO-E Carrier

KE30

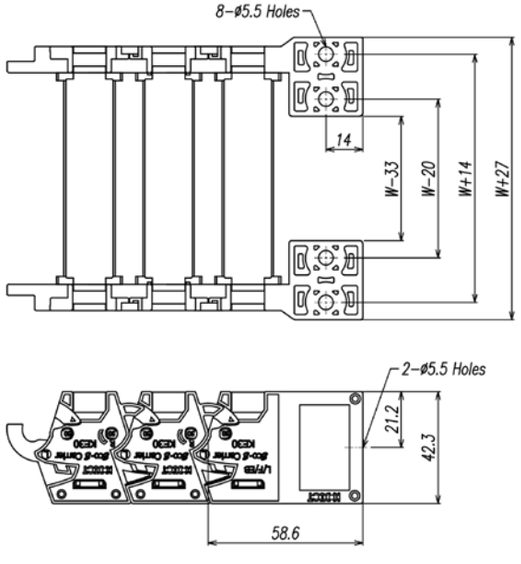
Structure



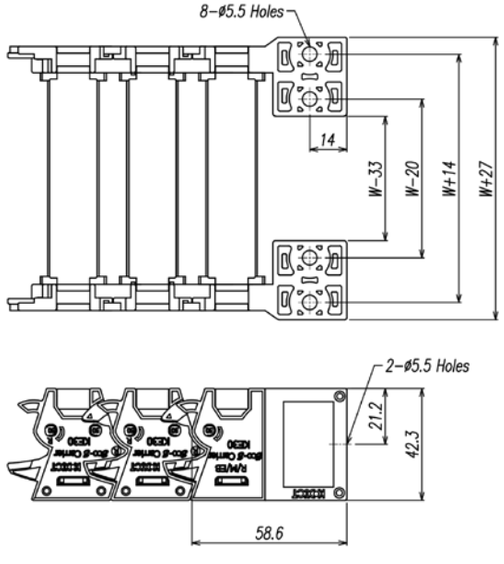


[Load Diagrams Self-Supporting Length]

End Bracket

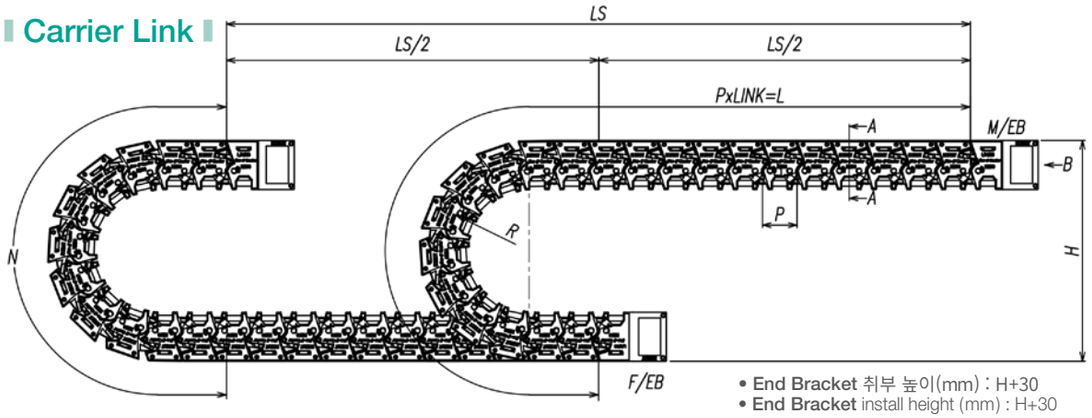


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

Carrier Link

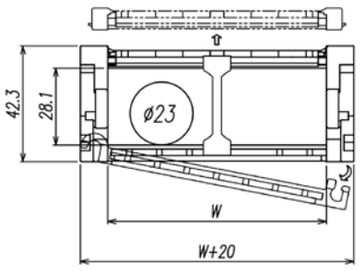


• **End Bracket** 취부 높이(mm) : H+30
• **End Bracket** install height (mm) : H+30

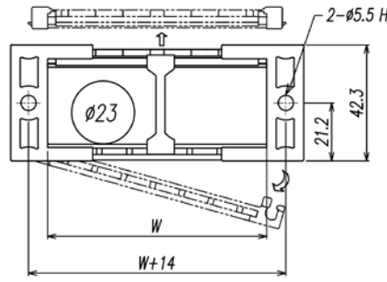
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

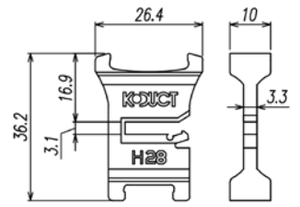
Section A-A



View B



Divider



Specification

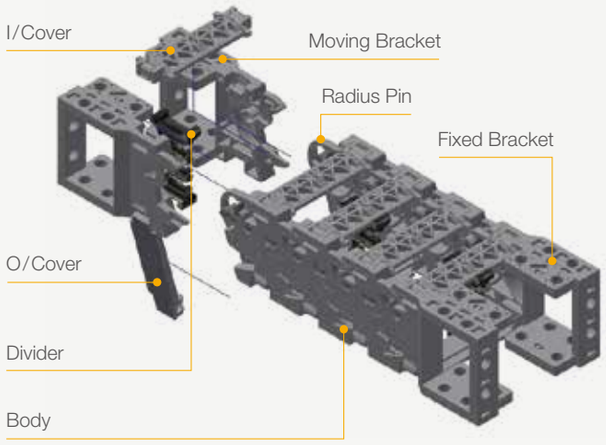
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KE30	40 (1.575)	50 (1.968)	30 (1.181)	151 (5.945)	277 (10.905)	0	0.749	0.0967
	57 (2.244)	70 (2.756)		191 (7.519)	340 (13.386)	0	0.795	0.102
	80 (3.15)	90 (3.543)		231 (9.094)	403 (15.866)	1	0.929	0.118
	100 (3.937)	110 (4.331)		271 (10.669)	465 (18.307)	1	0.980	0.121

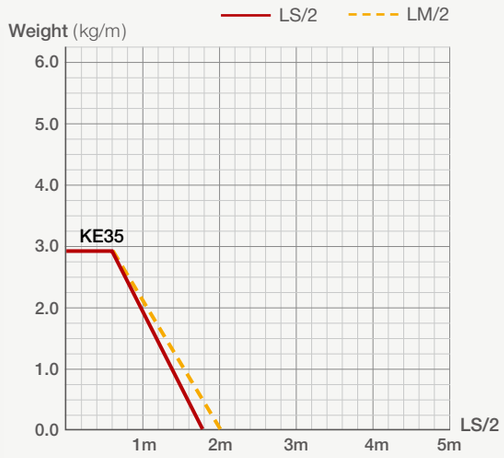
(1inch = 25.4mm)

ECO-E Carrier

KE35

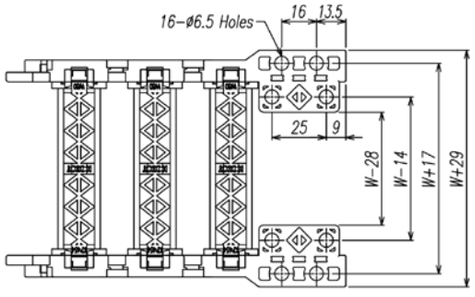
Structure

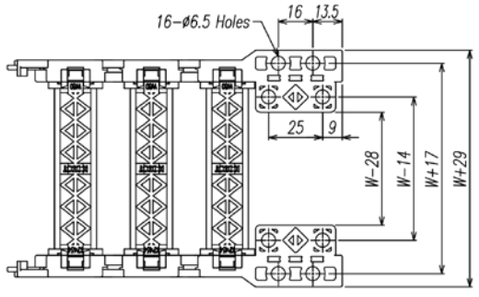


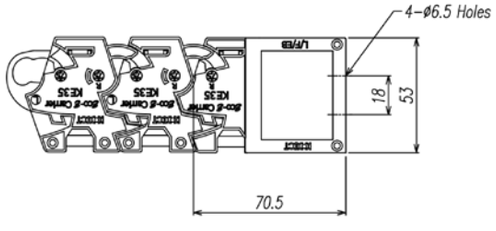


[Load Diagrams Self-Supporting Length]

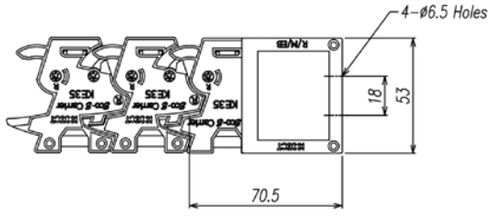
End Bracket





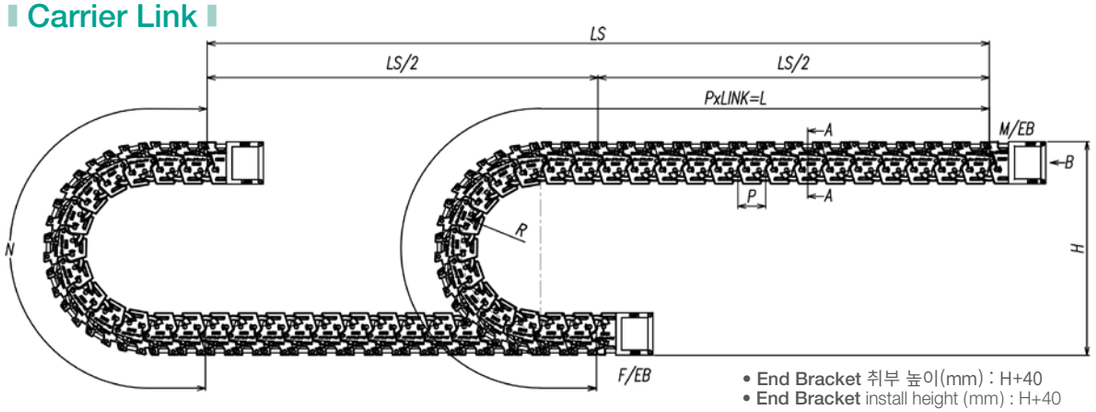


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

Carrier Link

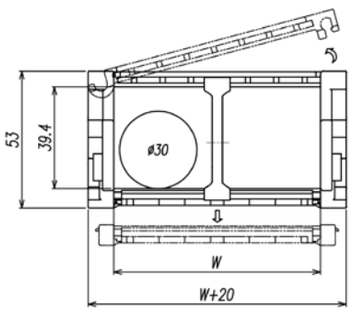


• **End Bracket** 취부 높이(mm) : H+40
• **End Bracket** install height (mm) : H+40

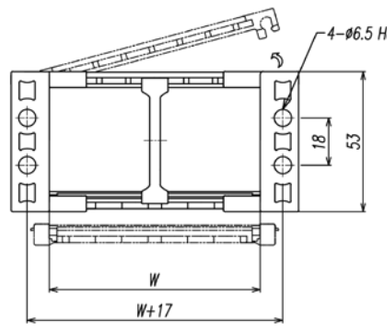
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

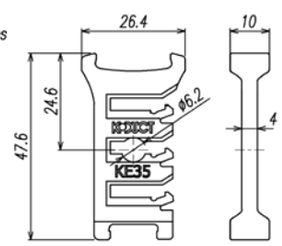
Section A-A



View B



Divider



Separator : Ø6 (Aluminum)
Separator : 14.5 x 4.4 (Plastic)

Specification

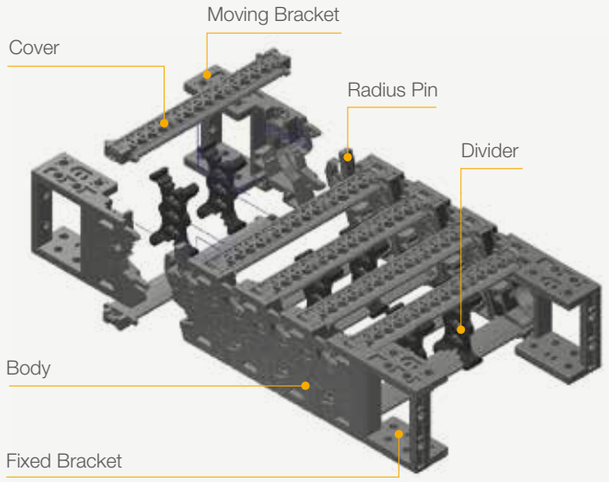
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KE35	40 (1.575)	75 (2.953)	35 (1.378)	217.5 (8.563)	375.5 (14.783)	0	0.820	0.125
	57 (2.244)	100 (3.937)		267.5 (10.531)	454 (17.874)	0	0.860	0.131
	80 (3.15)	125 (4.921)		317.5 (12.5)	532.5 (20.966)	1	0.973	0.146
	100 (3.937)	150 (5.906)		367.5 (14.469)	611 (24.055)	1	1.016	0.150

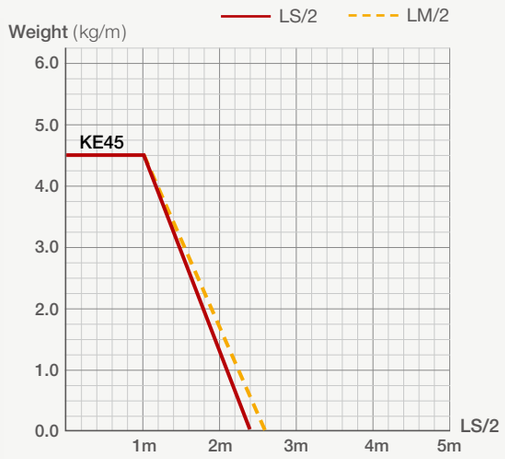
(1inch = 25.4mm)

ECO-E Carrier

KE45

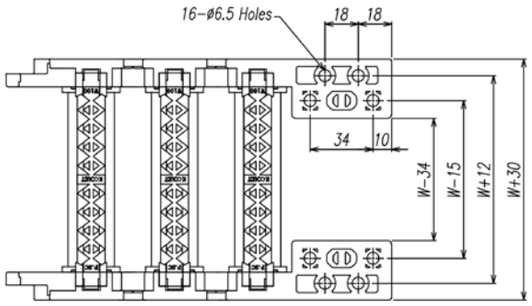
Structure

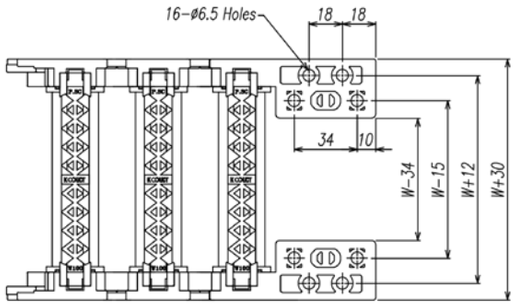


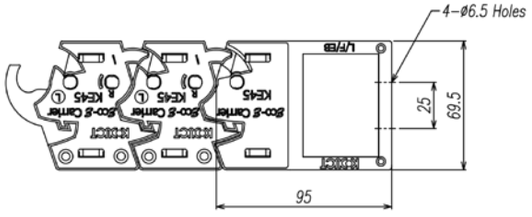


[Load Diagrams Self-Supporting Length]

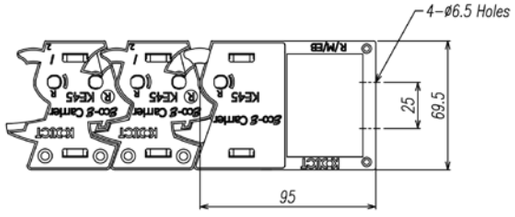
End Bracket





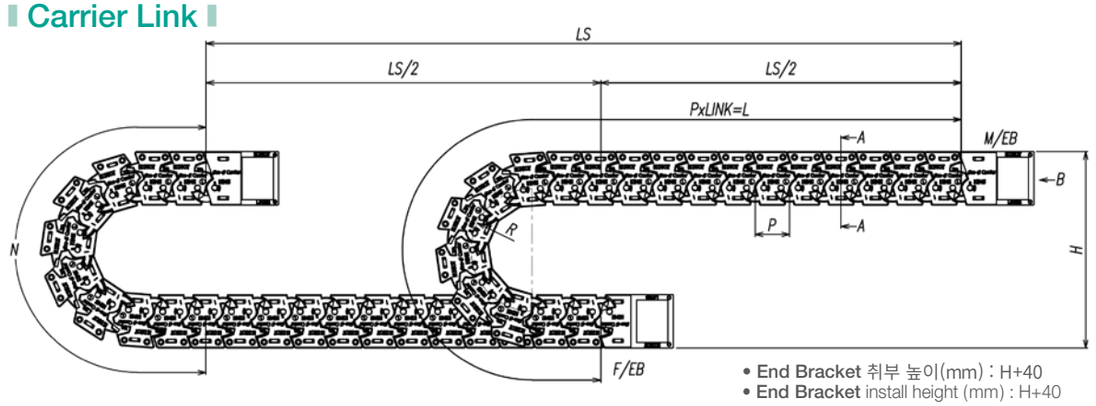


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

Carrier Link

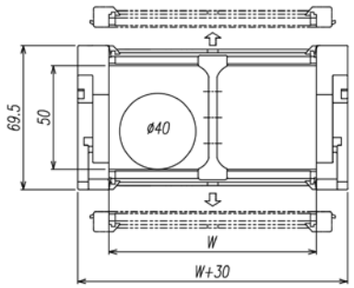


• **End Bracket** 취부 높이(mm) : H+40
• **End Bracket** install height (mm) : H+40

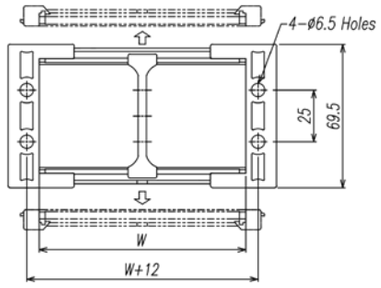
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

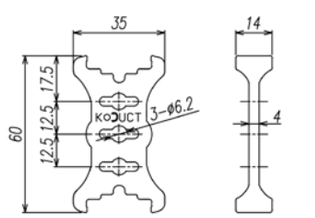
Section A-A



View B



Divider



Separator : Ø6 (Aluminum)
Separator : 14.5 x 4.4 (Plastic)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KE45	40 (1.575)	75 (2.953)	45 (1.771)	246 (9.685)	415.5 (16.358)	0	1.435	0.177
	50 (1.969)					0	1.478	0.217
	65 (2.559)					0	1.522	0.261
	*75 (2.952)	100 (3.937)		296 (11.653)	494 (19.297)	0	1.562	0.268
	80 (3.149)					1	1.692	0.292
	*87 (3.425)					1	1.729	0.298
	100 (3.937)					2	1.758	0.304
	120 (4.724)	125 (5.905)		346 (13.621)	572.5 (22.539)	2	1.921	0.333
	*150 (5.905)					2	2.031	0.353
	160 (6.299)					2	2.053	0.357
	*175 (6.889)	150 (4.921)		396 (15.591)	621 (25.629)	2	2.097	0.365
	*187 (7.362)					2	2.163	0.377
	200 (7.874)					2	2.200	0.384

* 주문 제작 가능 / Can make to order

(1inch = 25.4mm)

KE45

ECO-E Carrier - KE35 / KE30

Assembly and Disassembly 조립·해체 방법

❶ 바디링크 연결시
바디를 45° 꺾어서 링크를 연결한다.

When connecting the body link, twist the body 45° to connect the link.

❷ 곡률핀을 조립시
바디를 수평으로 한 상태에서 조립한다.

Assemble the Radius pin with the body horizontal

❸ 고정, 무빙브라켓을 바디링크에
45° 꺾어서 링크핀을 조립한다.

Assemble the link pin by bending the moving bracket and Fixed bracket 45° to the body link.

❹ 좌, 우 바디열을 하측커버로
바디 좌측 하측부를 우선 조립한다.

First, assemble the lower left side of the body with the lower side cover of the left and right side body link.

❺ 좌, 우 바디열 하측에 커버를 조립 후
디바이더를 체결한다.

Attach the cover to the left and right body link, and then attach the divider.

❻ 디바이더 체결 후 상측커버를 조립한다.

After assemble the divider, assemble the upper cover.

❼ 조립완료.

Assembly Completed.

❶ 커버 해체시 우측바디 커버 고리부에
"—"드라이버를 이용해 하측커버를 해체한다.

When disassembling the cover, use a flat-head screwdriver on the right side of the body to remove the lower cover.

❷ 좌측바디 힌지부에
커버를 회전시켜 해체한다.

Rotate the cover on the left body hinge and disassemble it.

❸ 상측커버 해체시 커버 고리부에
"—"드라이버를 이용해 커버를 해체한다.

When disassembling the upper cover, use a flat-head screwdriver to remove the cover.

❹ 바디 해체시 커버 해체 후
"—" 드라이버를 링크 연결부 사이에 넣어
45° 곡률방향으로 회전 시켜서 해체한다.

When disassembling the body, After disassembling the cover, insert a flat-head screwdriver in the link connection point and push 45° to radius direction.

ECO-E Carrier - KE45

Assembly and Disassembly 조립·해체 방법

❶ 바디링크 연결시
바디를 45° 꺾어서 링크를 연결한다.

When connecting the body link, twist the body 45° to connect the link.

❷ 곡률핀을 조립시
바디를 수평으로 한 상태에서 조립한다.

Assemble the Radius pin with the body horizontal

❸ 고정, 무빙브라켓을 바디링크에
45° 꺾어서 링크핀을 조립한다.

Assemble the link pin by bending the moving bracket and Fixed bracket 45° to the body link.

❹ 좌, 우 바디열을 커버로
바디 하측부를 우선 조립한다.

First, assemble the lower left side of the body with the lower side cover of the left and right side body link.

❺ 좌, 우 바디열 하측에 커버를 조립 후
디바이더를 체결한다.

Attach the cover to the left and right body link, and then attach the divider.

❻ 디바이더 체결 후 상측커버를 조립한다.

After assemble the divider, assemble the upper cover.

❼ 조립완료.

Assembly Completed.

❶ 커버 해체시 커버고리부에
"—"드라이버를 이용해 커버를 해체한다.

When disassembling the cover, use a flat-head screwdriver to remove the cover.

❷ 바디 해체시 커버 해체 후
"—" 드라이버를 링크 연결부 사이에 넣어
45° 곡률방향으로 회전 시켜서 해체한다.

When disassembling the body, After disassembling the cover, insert a flat-head screwdriver in the link connection point and push 45° to radius direction.

Steel Carrier

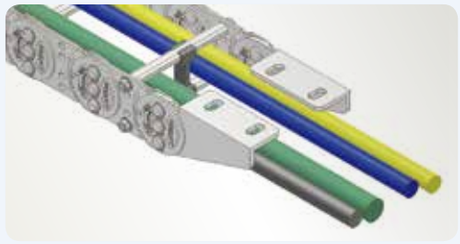
CDKS070 | CDKS095 | CDKS125 | CDKS130 | CDKS180 | CDKS250 | CDKH070 | CDKH095 | CDKH125 | CDKH130 | CDKH180 | CDKH250 | CDKSL095 | CDKHL095 | CDKSL130 | CDKHL130

Steel Carrier

Steel Carrier는 바디의 중요부에 엠보싱을 주어 중량당 휨강도를 증가시켰다. 처짐을 보완하기 위해 바디에 스토퍼 구조를 적용해서 FreeSpan을 1m이상 증가시켰다. 사용환경에 따라 재질 변경 주문제작이 가능하다. 고하중지지/역회전/수직·수평전환 등 고객이 요구하는 맞춤형 제작이 가능하다.

Steel Carrier increased bending strength for weight by embossing important parts of the body.
To compensate for the sagging, apply the stopper structure to the body, FreeSpan was increased by more than 1m.
Depending on the environment of use, it is possible to customizing manufacture for different materials.
Customizing manufacture by customer requirement is possible such as high load support/reverse rotation/vertical & horizontal conversion.

- **주요 사용장비 :** 크레인, 조선설비, 제철, 제강 철강설비, 산업용 플랜트, 냉연·압연 설비, 산업기계, 공작기계 등 모든기계에 적용 가능하며 특히 고하중용 장비에 적합.
- **Applications :** Crane, Heavy industry, Iron and steel mill facility, Cold stripping and rolling facility, Machining center etc. Especially heavy loaded machine.



AL Bar Type

Steel Carrier
(Short Distance)

AL Hole Type

Steel Carrier
(Short Distance)

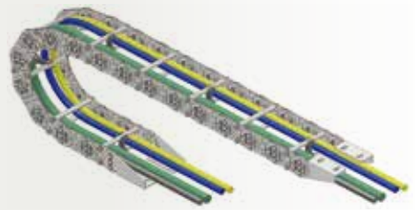
AL Bar & AL Hole Type

Steel Carrier
(Long Distance)

Steel Carrier

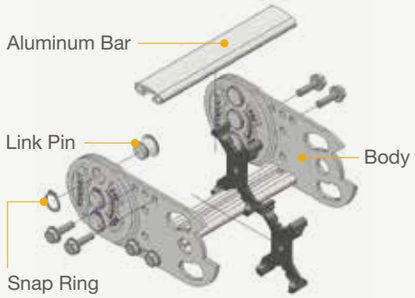
Steel Carrier Features

Steel Carrier 특징



Excellent Durability 뛰어난 내구성

Steel Carrier는 진행 방향인 수평에서 수직으로 하중 및 진동이 가해지면 휨이나 변형 혹은 체결된 스냅링이 이탈될 수 있다.
이러한 문제점을 해결하기 위해 바디를 RIB 및 경량화 구조로 설계하여 중량을 20% 감소시켜 휨 및 변형에 대한 강도를 증대시켰으며 핀구조를 스냅링 이탈이 없는 치수로 설계하였다. 또한 도막두께를 최대치로 적용해 표면 부식을 최소화 하였으며, AL/BAR 너비를 타제품 대비 2배 이상 넓혀 좌, 우 바디링크 지지력이 향상되었다.



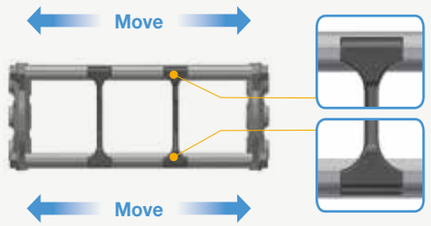
Steel carriers may be bended, deformed, or detached snap ring when loads and vibrations are applied vertically and horizontally in the direction of movement.
To solve this problem, the body structure was designed with RIB and lightening structure, reducing the weight by 20% to increase the strength of bending and deformation, and the pin structure was designed with a dimension that does not deviate from the snap ring. In addition, the maximum coating thickness was applied to minimize surface corrosion, and the left and right body link support was improved by more than twice the width of AL / Bar compared to other products.

Divider Structure for Easy Cable Installation

케이블 포설이 용이한 디바이더 구조

Steel Carrier 디바이더는 고정식이 아닌 유동형으로 레일형식의 (Bar) 구조에 디바이더를 체결한다. 디바이더가 좌, 우 이동이되는 방식으로 케이블 및 호스의 포설에 용이하며 또한 케이블의 움직임에 디바이더 이탈이 없는 구조이다.

The divider is movable, not fixed. Put divider in the rail-type(bar) structure. Divider structure is easy to moves left and right, it make not deviate from the divider due to the movement of the cable and easy to install cables.



Expansion of Cable Installation Space by Separator

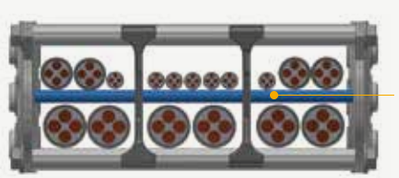
세퍼레이터에 의한 케이블 입선공간 범위확대

디바이더에서 입선공간 범위 확대 필요시 세퍼레이터를 적용해 입선공간을 확대 할 수 있으며, 기존 설치되어 있는 공간에서 케이블 추가시 세퍼레이터 체결이 용이하여 현장적용이 편리하다.

If it is necessary to expand installation space in the divider, you can expand the installation space by applying a separator. When add more cables from the existing installed space, it is easy to attach the separator to the field.

[Moving Separator / 이동형 세퍼레이터]

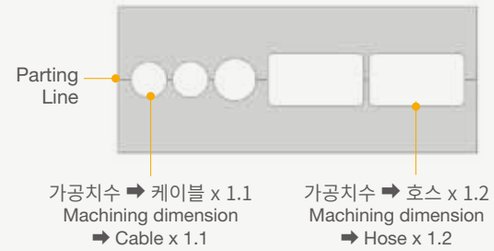
- 길이는 최소 100~700 mm이며 캐리어 내폭치수 -1~2mm를 적용해서 사용. (Aluminum Separator)
- Length is 100 to 700mm and width is -1~2mm of cable carrier inner width. (Aluminum Separator)



Support for Hydraulic Hoses and Cables

유압호스 및 케이블에 지지 Support

유압호스 등 압력이 최소 10Bar 이상 작용하는 호스 등을 지지 할 수 있는 Aluminum Hole Type(Support Hole Bar)을 적용 할 수 있고 호스 및 케이블 좌우 상하 유동에 대한 케이블 움직임이 없으며 유압호스 및 케이블 등에 적합한 Hole, Slot Hole, Square Hole 등 여러 형상을 주문에 따라 가공할 수 있어 편리하고 케이블 인입시 Parting Line에 따라 분리하여 케이블 포설을 할 수 있다.



Aluminum Hole Type (Support Hole Bar) can be applied to support hydraulic hoses at least 10 Bar and air Hose etc. There is no cable movement for swing of hoses and cables, and various shapes such as Hole, Slot Hole, Square Hole, etc. suitable for hydraulic hoses and It is convenient to customizing machining various shapes such as Hole, Slot Hole, Square Hole, etc. suitable for hydraulic hoses and cables according to order, and you can separate cables according to the Parting Line when entering the cable.

Reduce Sagging Due to Self-Load and Load

자중 및 하중에 의한 처짐완화

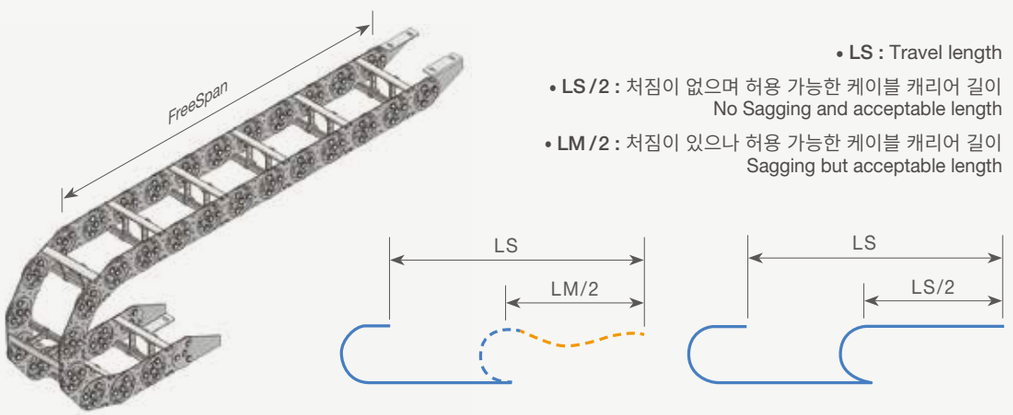
Steel Carrier는 링크 연결후 처짐을 보완하는 스토퍼를 2~3point 적용해 처짐과 뒤틀림을 최대한 방지 할 수 있도록 설계되어 있으며, 동일피치 대비 FreeSpan이 20% 이상 향상되어 캐리어의 내구성이 증가되고 파손율은 감소되어 케이블 및 호스의 수명을 최대한 증가시켰다.

Steel Carrier is designed to prevent sagging and twisting applying 2~3 point stopper to reduce sagging after link connection. FreeSpan has been improved by more than 20% compared to the same specification. The durability of the carrier increases, reducing the breakage rate and increasing the lifespan of cables and hoses as maximized.

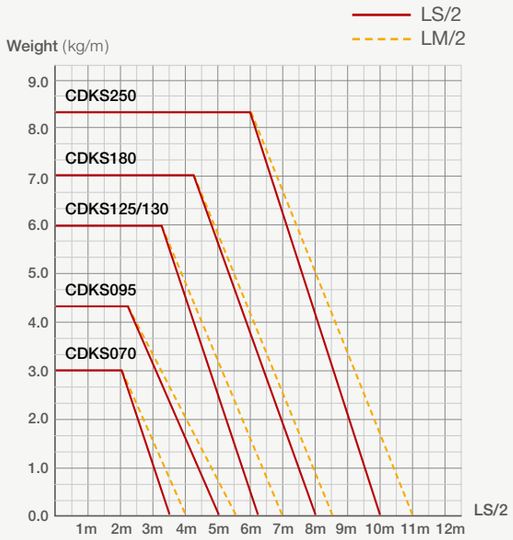
FreeSpan

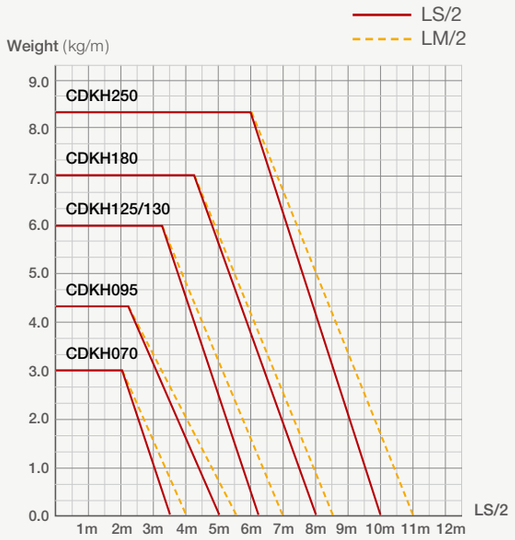
케이블 캐리어의 **Self-Load**에 의한 처짐이 없는 길이를 **FreeSpan** 이라 하고, 케이블 하중에 따라 지지 하중의 길이가 달라진다.
케이블 캐리어는 처짐이 있으나 허용 가능한 길이(LM/2)와 처짐이 없이 허용가능한 길이(LS/2)가 있다.

The length of the carrier without sagging by **Self-Load** is called **FreeSpan**, and the length of the support load varies according to the cable load. There are two kinds of length.

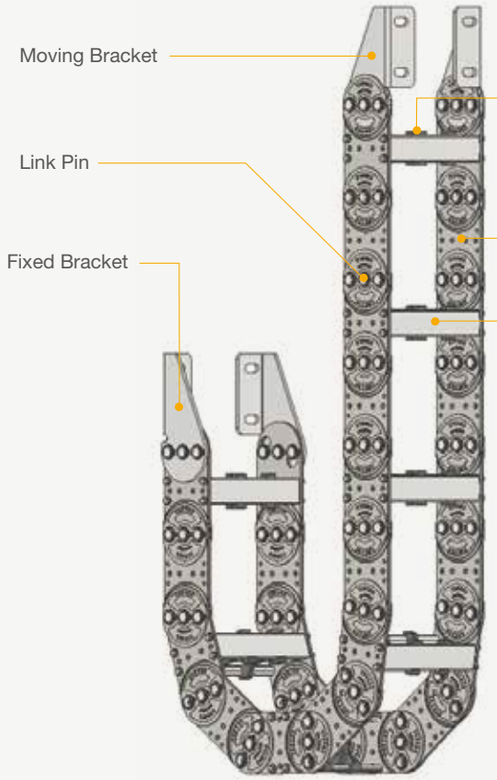


Load Diagrams Self-Supporting Length





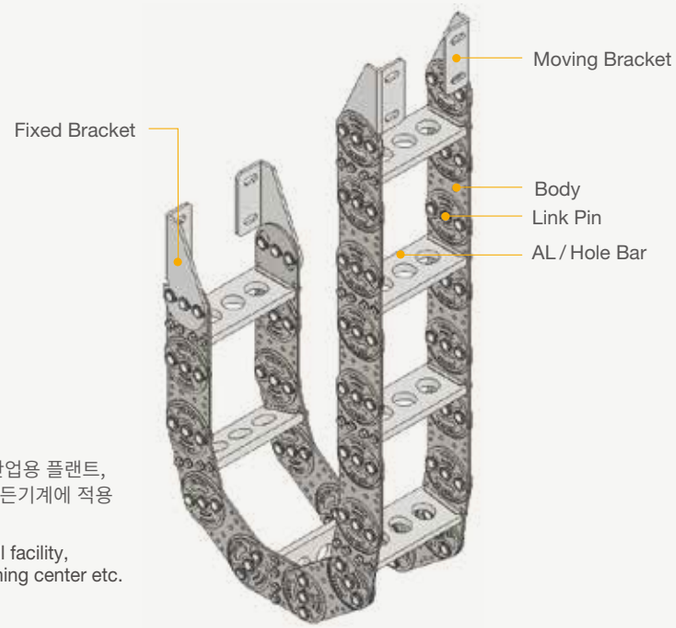
Structure AL Bar Type-Short Distance



- **Material**
  : SPHC, AL6063, PA6, SS400, SK5
- **Speed**
  : 2m/sec
- **Acceleration**
  : 5m/s^2
- **Temperature**
  : -25~125°C
- **Applications**
  : 크레인, 조선설비, 제철, 제강 철강설비, 산업용 플랜트, 냉연·압연 설비, 산업기계, 공장기계 등 모든기계에 적용 가능하며 특히 고하중용 장비에 적합

  Crane, Heavy industry, Iron and steel mill facility, Cold stripping and rolling facility, Machining center etc. Especially heavy loaded machine.

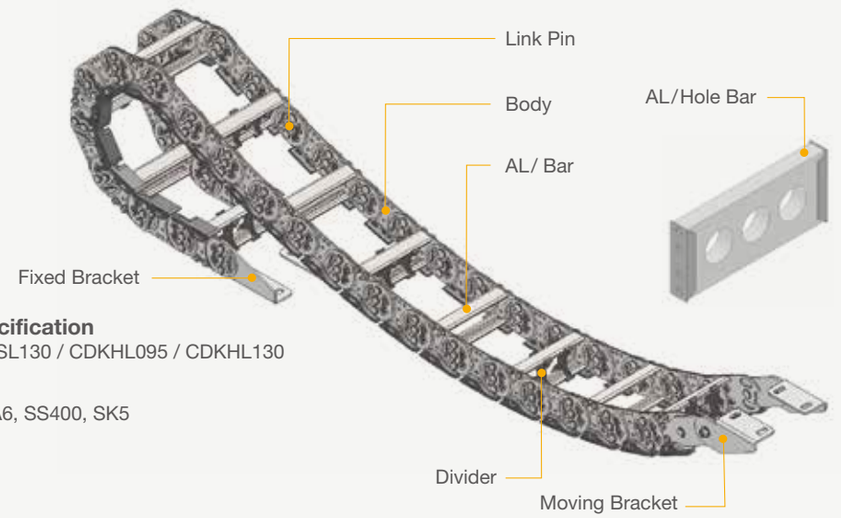
Structure AL Hole Type-Short Distance



- **Material**
  : SPHC, AL6063, SS400, SK5
- **Speed**
  : 2m/sec
- **Acceleration**
  : 5m/s^2
- **Temperature**
  : -25~125°C
- **Applications**
  : 크레인, 조선설비, 제철, 제강 철강설비, 산업용 플랜트, 냉연·압연 설비, 산업기계, 공장기계 등 모든기계에 적용 가능하며 특히 고하중용 장비에 적합

  Crane, Heavy industry, Iron and steel mill facility, Cold stripping and rolling facility, Machining center etc. Especially heavy loaded machine.

Structure AL Bar & Hole Type-Long Distance

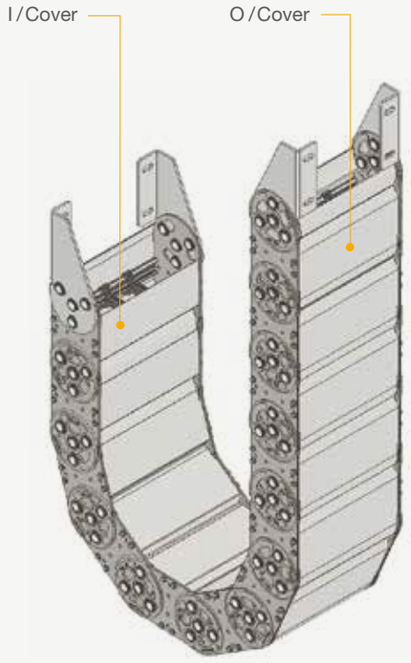


- **Production Specification**
  : CDKSL095 / CDKSL130 / CDKHL095 / CDKHL130
- **Material**
  : SPHC, AL6063, PA6, SS400, SK5
- **Speed**
  : 2m/sec
- **Acceleration**
  : 5m/s^2
- **Temperature**
  : -25~125°C
- **Applications**
  : 크레인, 조선설비, 제철, 제강 철강설비, 산업용 플랜트, 냉연·압연 설비, 산업기계, 공장기계 등 모든기계에 적용 가능하며 특히 고하중용 장비에 적합

  Crane, Heavy industry, Iron and steel mill facility, Cold stripping and rolling facility, Machining center etc. Especially heavy loaded machine.

Steel Carrier

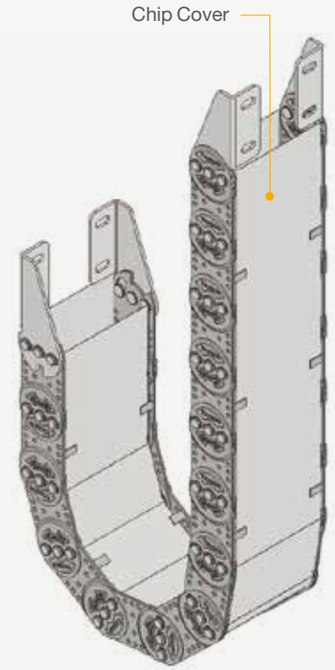
Structure Enclosed-Short Distance



[AL Cover Type]

- **Production Specification**
  : CDKSM095 / CDKHM095
  CDKSM180 / CDKHM180
- **Material**
  : SPHC, AL6063, PA6, SS400, SK5
- **Speed**
  : 2m/sec
- **Acceleration**
  : 5m/s^2
- **Temperature**
  : -25~125°C
- **Applications**
  : 크레인, 조선설비, 제철, 제강 철강설비,
  산업용 플랜트, 냉연·압연 설비, 산업기계,
  공장기계 등 모든기계에 적용 가능하며
  특히 고하중용 장비에 적합

  Crane, Heavy industry, Iron and steel mill facility,
  Cold stripping and rolling facility,
  Machining center etc.
  Especially heavy loaded machine.



[Chip Cover Type]

- **Production Specification**
  : CDKS_ _ _ / TARP
  CDKH_ _ _ / TARP
- **Application Wide**
  : Max400
- **Material**
  : SPHC, AL6063, PA6, STS304, SS400, SK5
- **Speed**
  : 2m/sec
- **Acceleration**
  : 5m/s^2
- **Temperature**
  : -25~125°C
- **Applications**
  : 크레인, 조선설비, 제철, 제강 철강설비,
  산업용 플랜트, 냉연·압연 설비, 산업기계,
  공장기계 등 모든기계에 적용 가능하며
  특히 고하중용 장비에 적합

  Crane, Heavy industry, Iron and steel mill facility,
  Cold stripping and rolling facility,
  Machining center etc.
  Especially heavy loaded machine.

* 주문 제작 가능 (상세치수 필요시 도면 요청) / Can custom-made (Request drawings if detailed dimensions are required)

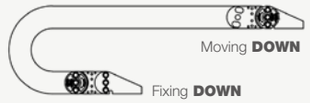
End Bracket Setting Example

- **Short Distance Type 1 :** MU/FD(UD)

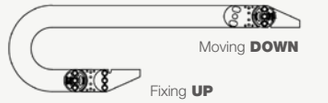
- **Short Distance Type 2 :** MU/FU(UU)

- **Long Distance Type 1 :** MU/FD(UD)

- **Short Distance Type 3 :** MD/FD(DD)



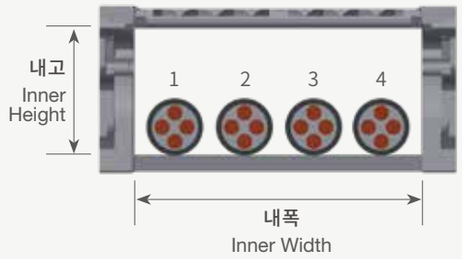
- **Short Distance Type 4 :** MD/FU(DU)



- **Long Distance Type 3 :** MD/FD(DD)

Cable Carrier Specification Selection

케이블 캐리어 사양 선정



① 케이블 캐리어 내고 설정
Cable Carrier Inner Height Setting

전선, 혹은 호스의 가장 큰 외경을 기준으로 하며 약 20% UP 하여 사양에 맞는 내고를 선정한다.

Based on the largest external diameter of a cable or hose, approximately 20% up to select the inner height that meets the specifications.

② 케이블 캐리어 내폭 설정
Cable Carrier Inner Width Setting

전선, 혹은 호스의 외경(1+2+3+4)에 약 25% UP하여 사양에 맞는 내폭을 선정한다.

Select inner width according to the specification by increasing about 25% of cable and hose's outer diameter(1+2+3+4).

③ 케이블 캐리어 곡률반경 설정
Cable Carrier Radius Setting

전선, 혹은 호스의 곡률반경에 맞게 선정한다. 케이블 캐리어의 곡률반경이 전선, 혹은 호스의 곡률반경 사양 대비 큰 설정은 문제가 없지만 작은 설정은 쓸림에 의한 마모나 전선 혹은 호스에 대한 케이블 캐리어의 반작용이 발생할 수 있다.

Select for the radius of a cable or hose.
If the cable carrier radius is bigger than cable or hose, it is not a problem. But if it is smaller setting, it may cause wear due to wiping or the reaction of the cable carrier to the cable or hose.

전선 : Electronic Cables	에어호스 : Pneumatic Hoses	유압호스 : Hydraulic Hoses
케이블 외경에 6~8배 R min > 6~8 x Φ	에어호스 외경에 8~10배 R min > 8~10 x Φ	유압호스 외경에 12~15배 R min > 12~15 x Φ

④ 케이블 캐리어 길이 설정
Cable Carrier Length Setting (calculation)

장비의 행정거리 1/2 여유길이 N(Safety Length + πr) 값을 더하면 케이블 캐리어 전체 길이가 된다.
("N"값 : PAGE 10 및 각제품의 Specification 참조)

The cable carrier's total length is half of the equipment's total travel length and adding an extra length of N (Safety Length + πr) value. ("N": See PAGE10 and Specifications for each product)

Order Form

(mm)

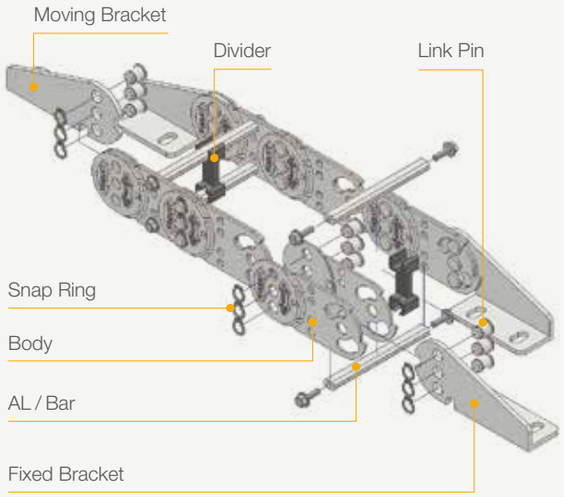
EX) **CDKS095 - W250 - R200 - 3990L - SETUD**

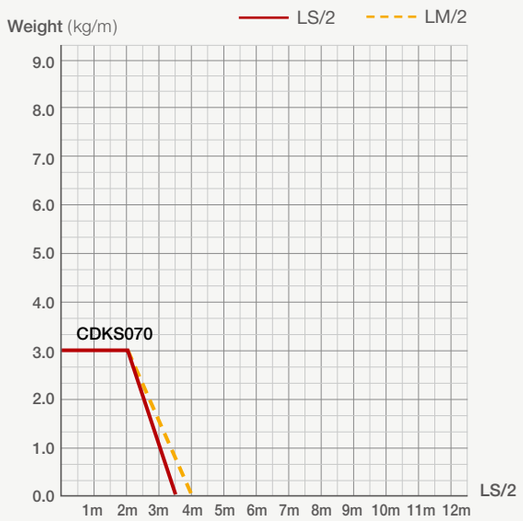
제품타입 Type	내폭 Width	곡률 Radius	길이 Length	브라켓 조립방향 End Bracket Setting

Steel Carrier

CDKS070

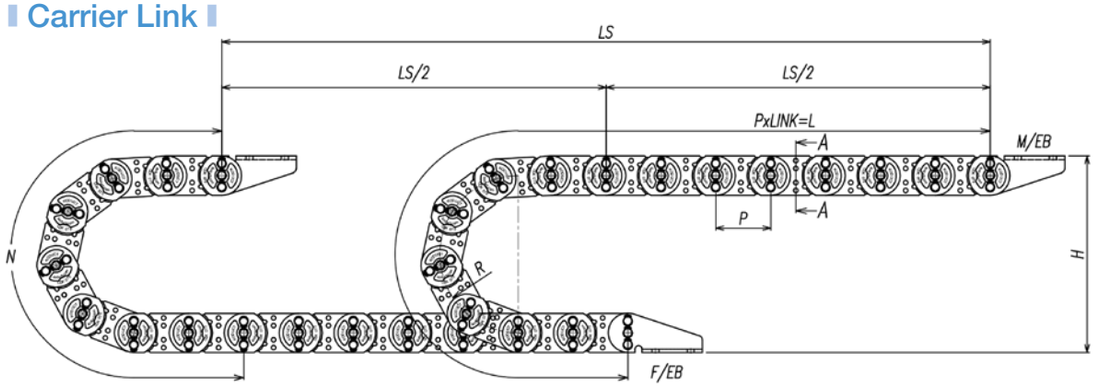
Structure





[Load Diagrams Self-Supporting Length]

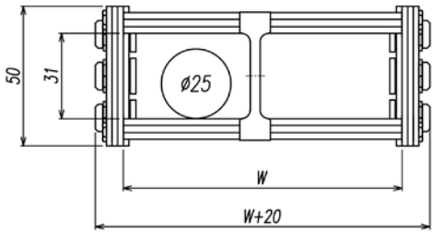
Carrier Link



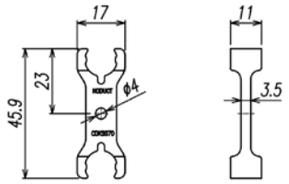
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A

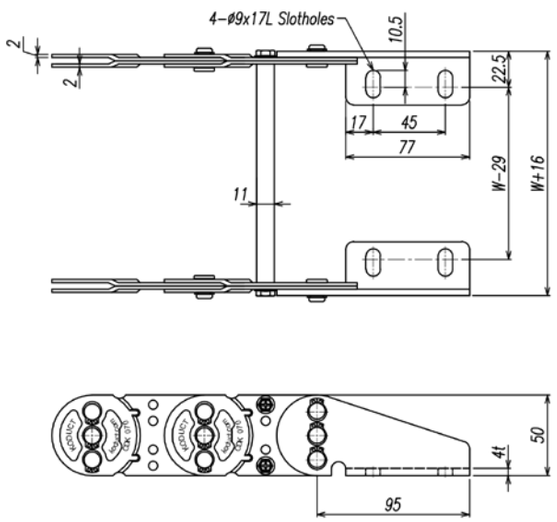


Divider

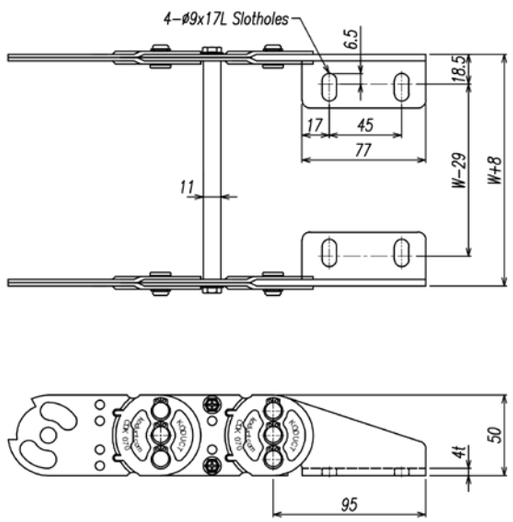


Separator : Ø4 (Aluminum)

End Bracket



[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDKS070	60 (2.362)	75 (2.953)	70 (2.756)	200 (7.874)	446 (17.559)	0	5.291	0.760
	80 (3.150)					1	5.355	
	100 (3.937)	90 (3.543)		230 (9.055)	493 (19.409)	1	5.411	
	125 (4.921)	125 (4.921)		300 (11.811)	603 (23.740)	2	5.486	
	150 (5.905)					2	5.553	
	200 (7.874)	145 (5.709)		340 (13.386)	665 (26.181)	2	5.685	
	250 (9.843)	200 (7.874)		450 (17.716)	838 (32.992)	3	5.838	
	300 (11.811)					3	5.951	

* Width 주문에 따라 제작가능 / Width can make to order

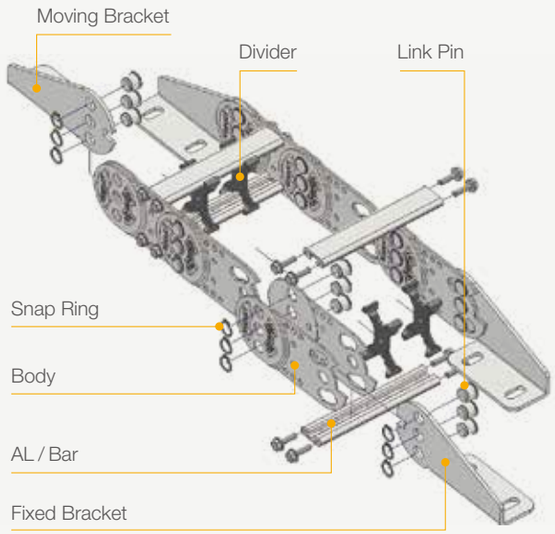
(1inch = 25.4mm)

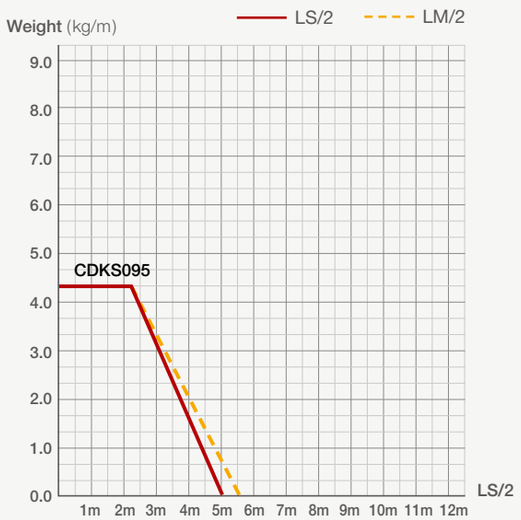
CDKS070

Steel Carrier

CDKS095

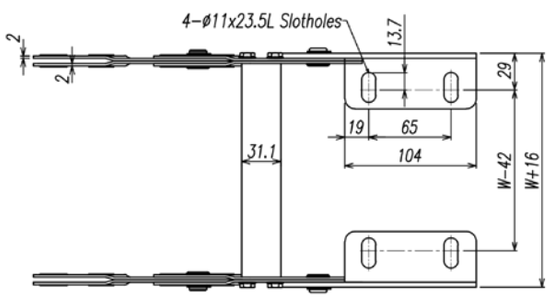
Structure

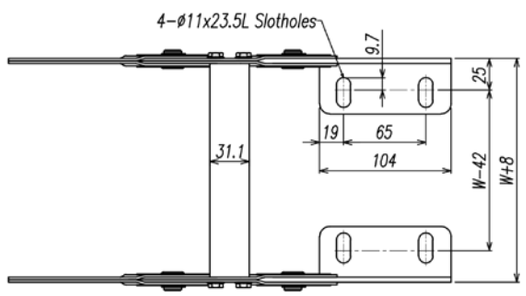


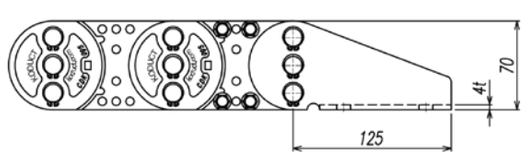


[Load Diagrams Self-Supporting Length]

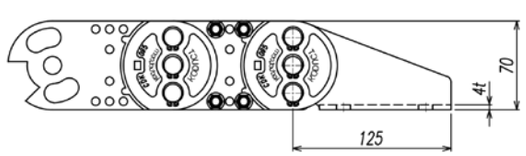
End Bracket





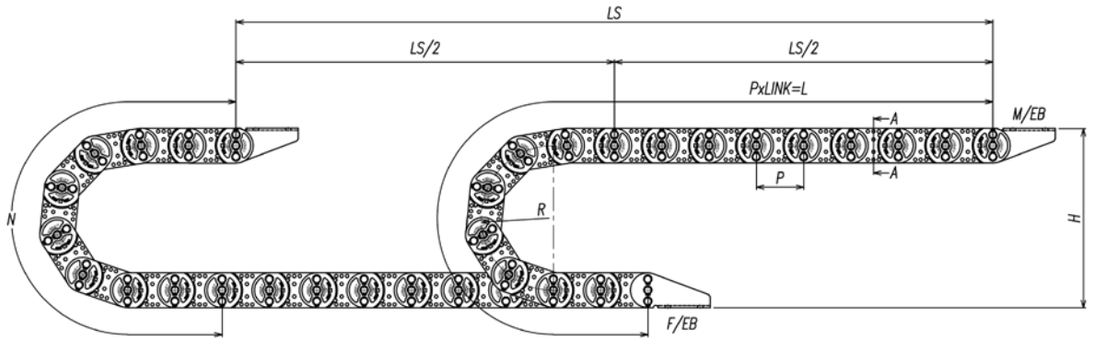


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

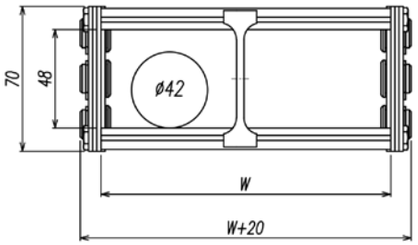
Carrier Link



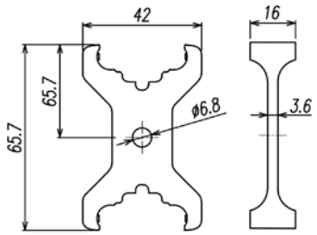
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDKS095	100 (3.937)	125 (4.921)	95 (3.740)	320 (12.598)	678 (26.693)	1	7.90	1.286
	150 (5.905)	145 (5.709)		360 (14.173)	740 (29.134)	2	8.17	
	200 (7.874)	200 (7.874)		470 (18.504)	913 (35.945)	2	8.38	
	250 (9.843)	250 (9.843)		570 (22.441)	1,070 (42.126)	3	8.64	
	300 (11.811)	300 (11.811)		670 (26.378)	1,227 (48.307)	3	8.86	
	350 (13.779)	400 (15.748)		870 (34.252)	1,541 (60.669)	4	9.12	
	400 (15.748)					4	9.33	

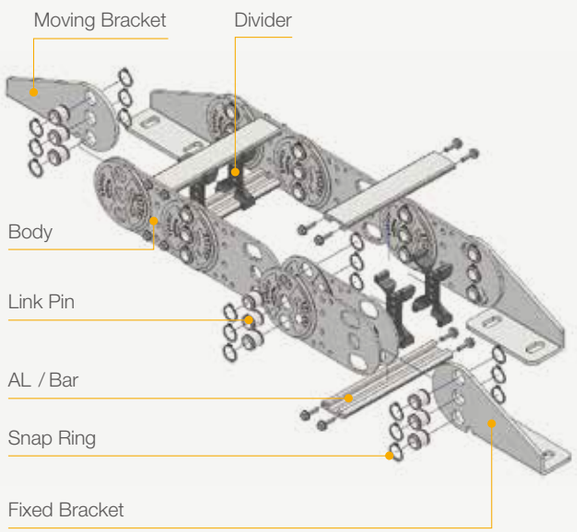
* Width 주문에 따라 제작가능 / Width can make to order

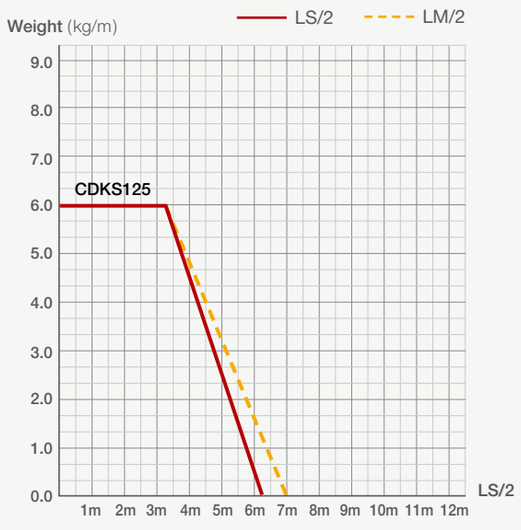
(1inch = 25.4mm)

Steel Carrier

CDKS125

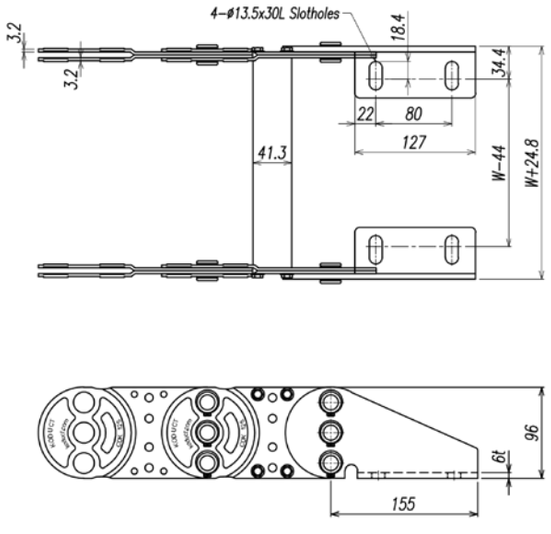
Structure



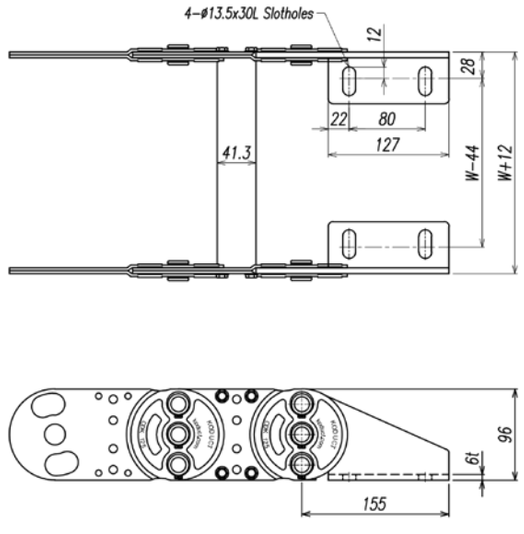


[Load Diagrams Self-Supporting Length]

End Bracket

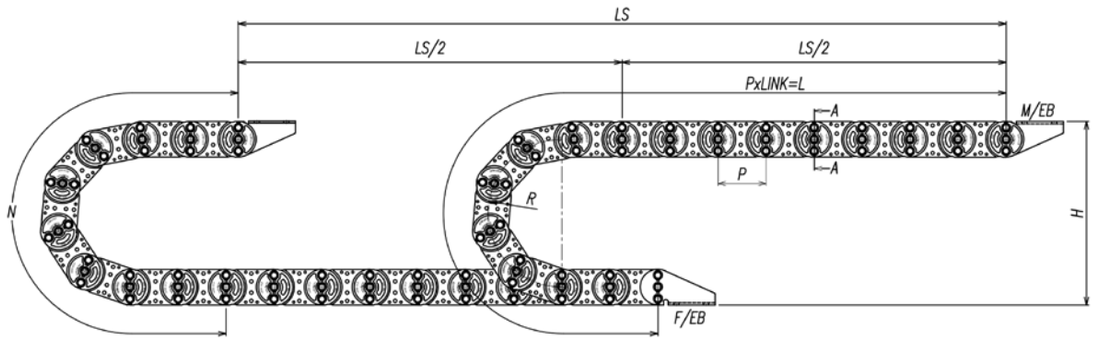


[**Fixed Bracket** (F/EB)]



[**Moving Bracket** (M/EB)]

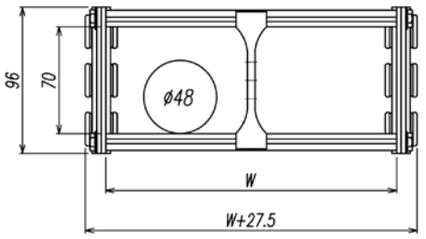
Carrier Link



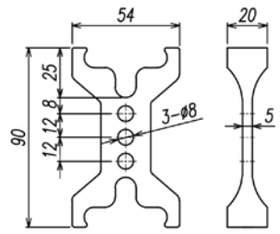
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø8 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDKS125	100 (3.937)	200 (7.874)	125 (4.921)	496 (19.528)	1,003 (39.488)	1	14.97	3.170
	125 (4.921)					2	15.14	
	150 (5.905)	250 (9.843)		596 (23.465)	1,160 (45.669)	2	15.31	
	200 (7.874)					2	15.54	
	250 (9.843)	300 (11.811)		696 (27.402)	1,317 (51.850)	3	15.88	
	300 (11.811)					3	16.11	
	350 (13.779)	400 (15.748)		896 (35.276)	1,631 (64.212)	4	16.45	
	400 (15.748)					4	16.68	

* Width 주문에 따라 제작가능 / Width can make to order

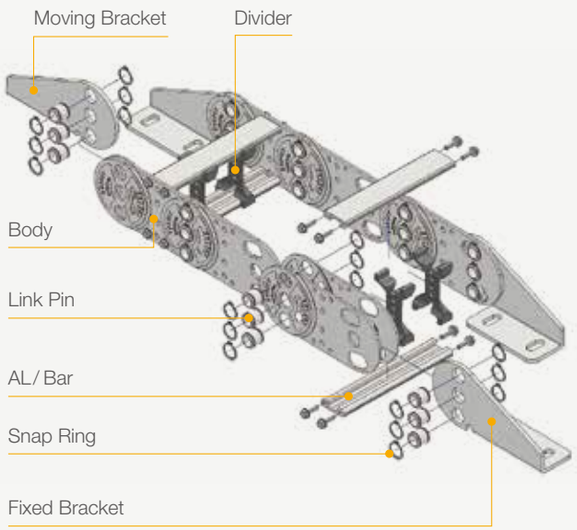
(1inch = 25.4mm)

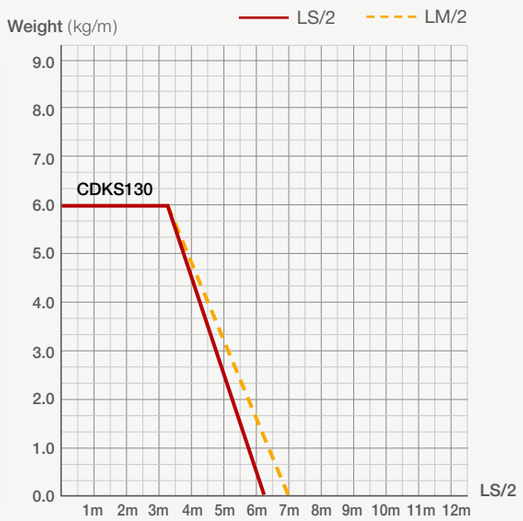
CDKS125

Steel Carrier

CDKS130

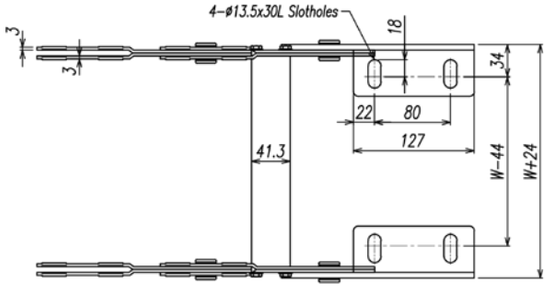
Structure



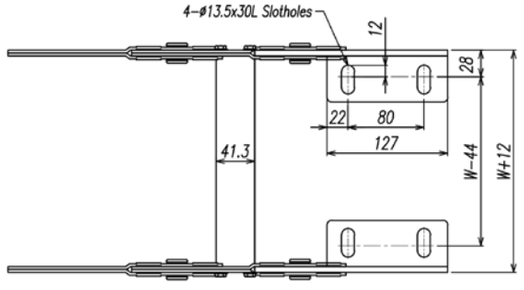


[Load Diagrams Self-Supporting Length]

End Bracket

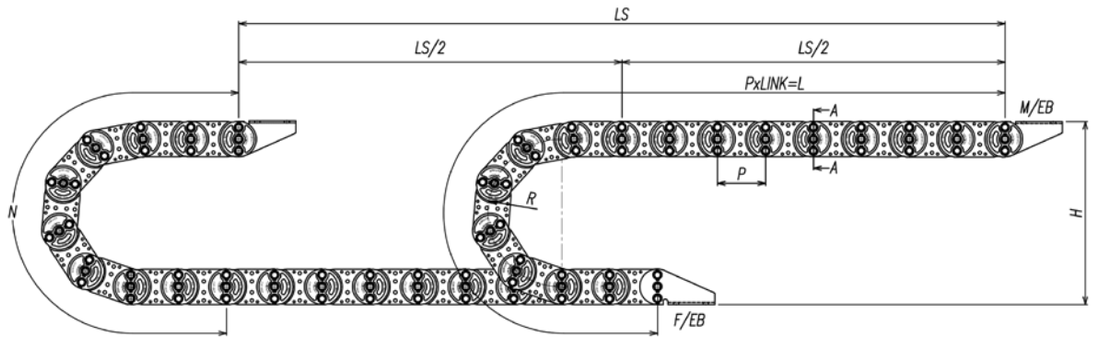


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

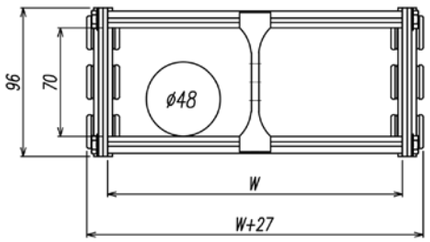
Carrier Link



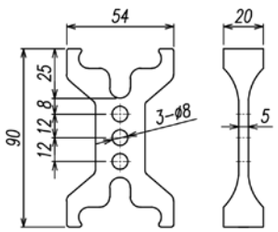
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø8 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDKS130	100 (3.937)	200 (7.874)	130 (5.118)	496 (19.528)	1,018 (40.079)	1	14.4	3.170
	125 (4.921)					2	14.56	
	150 (5.905)	250 (9.843)		596 (23.465)	1,175 (46.260)	2	14.72	
	200 (7.874)	300 (11.811)		696 (27.402)	1,332 (52.441)	2	14.95	
	250 (9.843)					3	15.27	
	300 (11.811)	400 (15.748)		896 (35.276)	1,646 (64.803)	3	15.49	
	350 (13.779)	500 (19.69)		1,096 (43.149)	1,960 (77.17)	4	15.81	
	400 (15.748)					4	16.04	

* Width 주문에 따라 제작가능 / Width can make to order

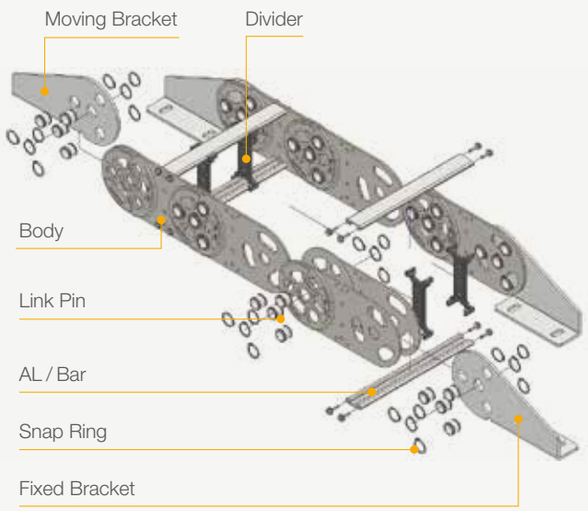
(1inch = 25.4mm)

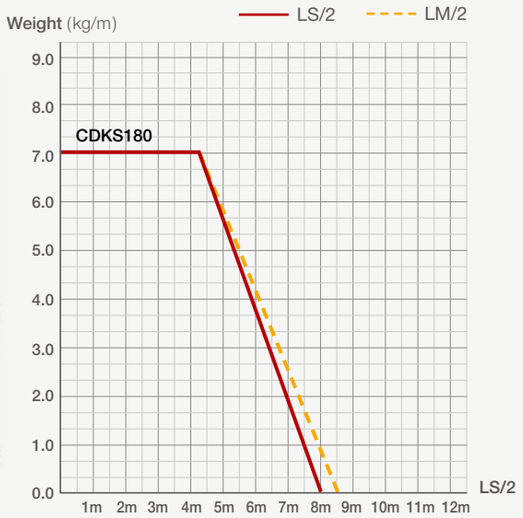
CDKS130

Steel Carrier

CDKS180

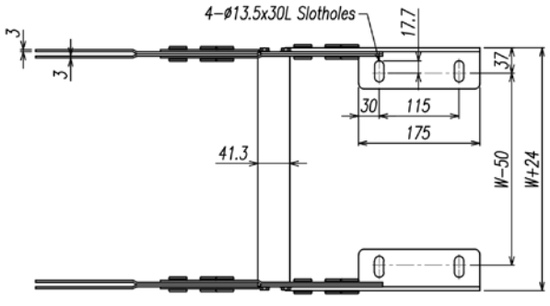
Structure



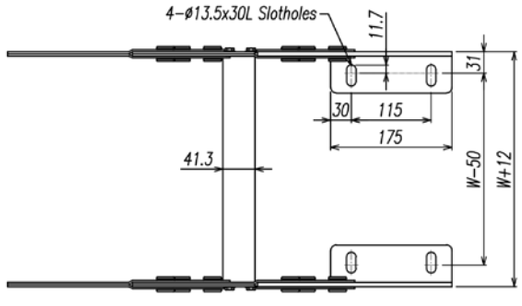


[Load Diagrams Self-Supporting Length]

End Bracket

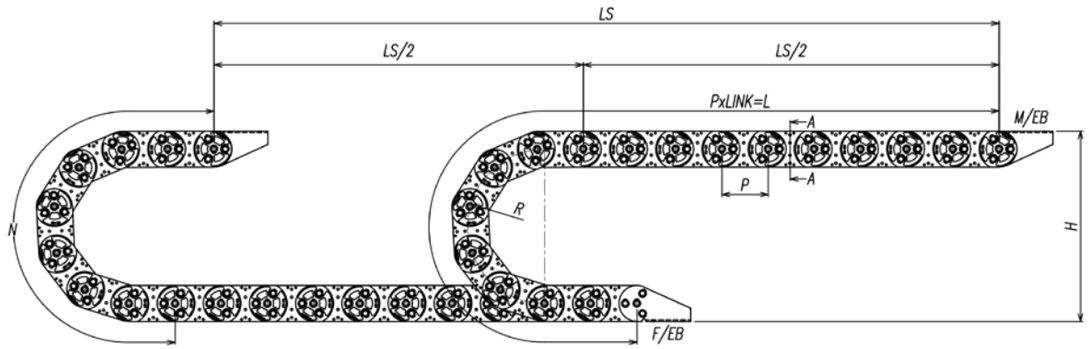


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

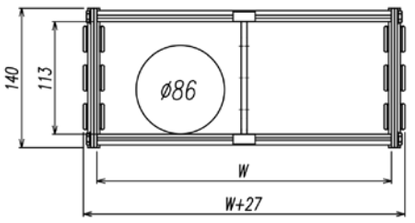
Carrier Link



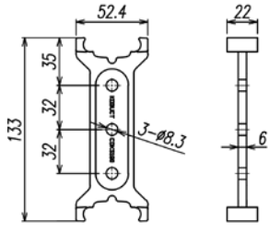
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø8 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDKS180	300 (11.811)	250 (9.842)	180 (7.087)	640 (25.197)	1,325 (52.165)	3	21.721	6.72
	400 (15.748)	300 (11.811)		740 (29.134)	1,482 (58.346)	4	22.212	
	500 (19.685)	400 (15.748)		940 (37.008)	1,796 (70.709)	5	22.622	
		500 (19.685)		1,140 (44.882)	2,110 (83.071)			
	600 (23.622)	600 (23.622)		1,340 (52.756)	2,424 (95.433)	6	23.032	
	700 (27.559)	700 (27.559)		1,540 (60.63)	2,738 (107.795)	7	23.442	

* Width 주문에 따라 제작가능 / Width can make to order

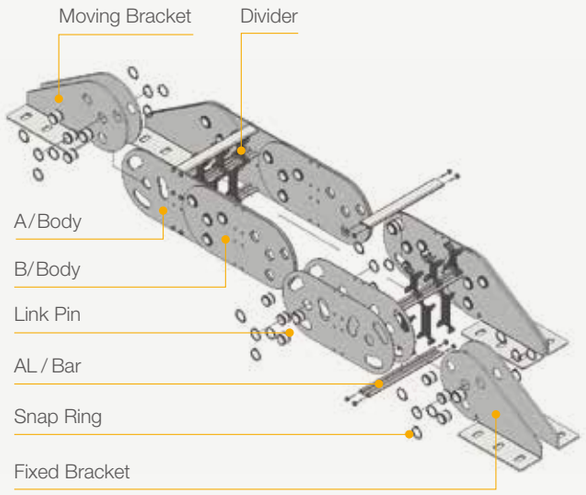
(1inch = 25.4mm)

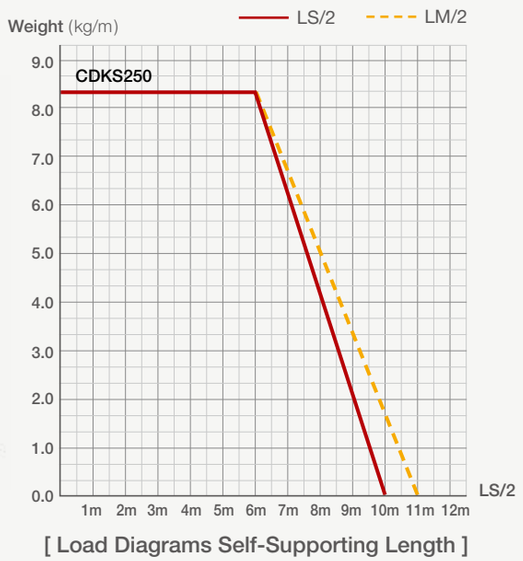
CDKS180

Steel Carrier

CDKS250

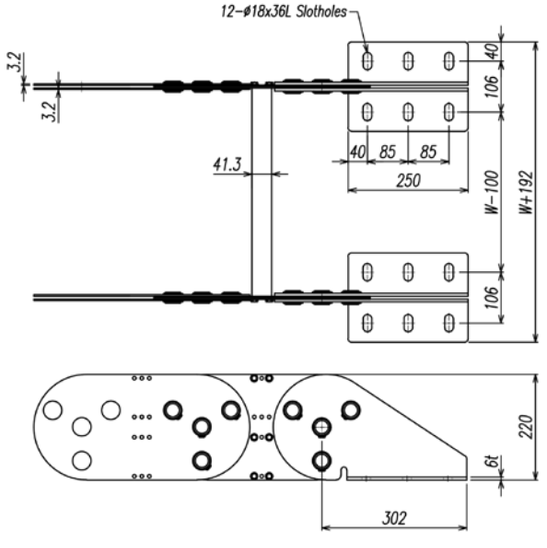
Structure



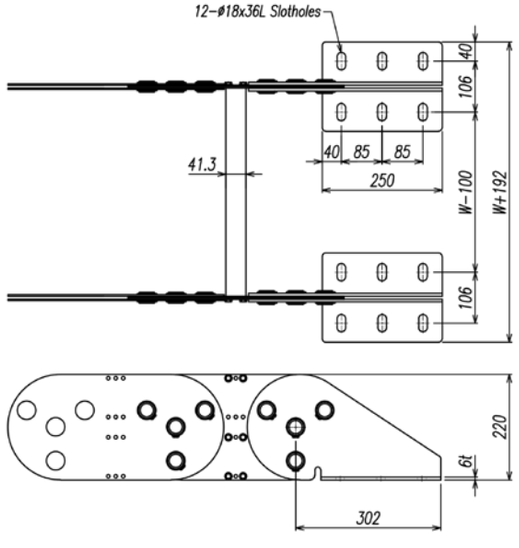


[Load Diagrams Self-Supporting Length]

End Bracket

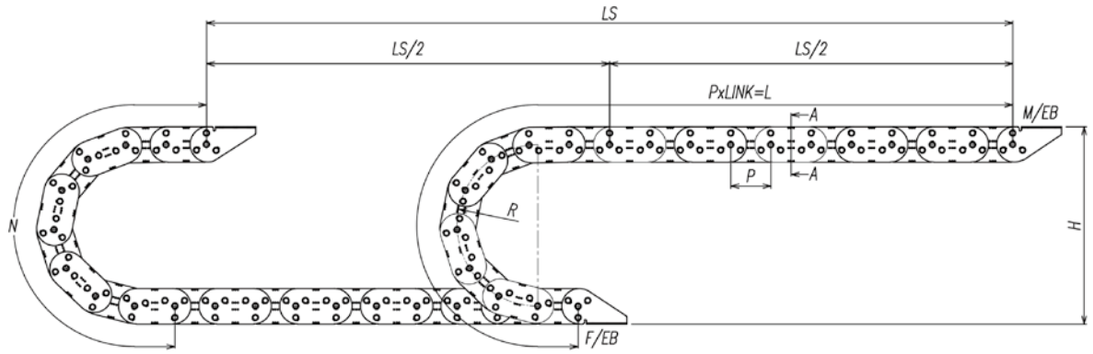


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

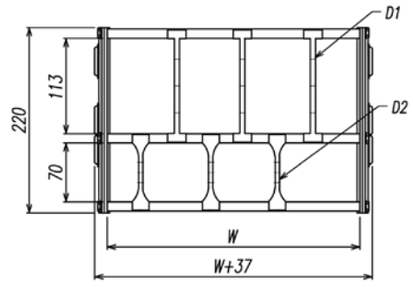
Carrier Link



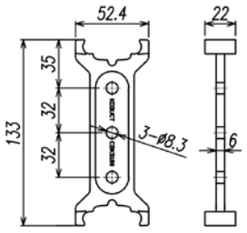
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

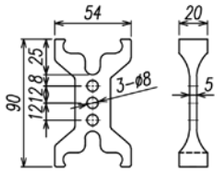
Section A-A



Divider



[D1:CDKS180-DVDR]



[D2:CDKS130-DVDR]

Separator : Ø8 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea) D1/D2	1m (kg)	EB Set (kg)
CDKS250	300 (11.811)	350 (13.780)	250 (9.842)	920 (36.221)	1,325 (52.165)	3/3	34.20	6.72
	400 (15.748)	450 (17.717)		1,120 (44.095)	1,482 (58.346)	4/4	34.66	
	500 (19.685)	600 (23.622)		1,420 (55.906)	1,796 (70.709)	5/5	35.12	
		750 (29.528)		1,720 (67.717)	2,110 (83.071)			
	600 (23.622)	1,000 (39.370)		2,220 (52.756)	2,424 (87.402)	5/5	35.58	
	700 (27.559)	1,250 (49.213)		2,720 (107.087)	2,738 (107.795)	5/5	36.04	

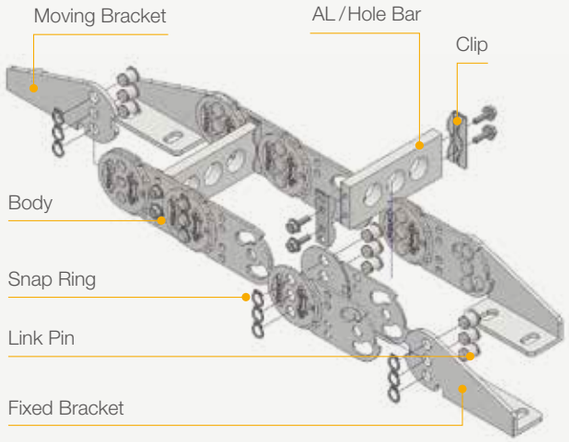
* Width 주문에 따라 제작가능 / Width can make to order

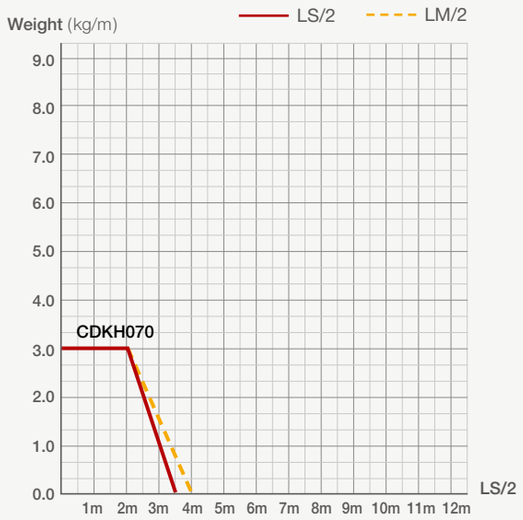
(1inch = 25.4mm)

Steel Carrier

CDKH070

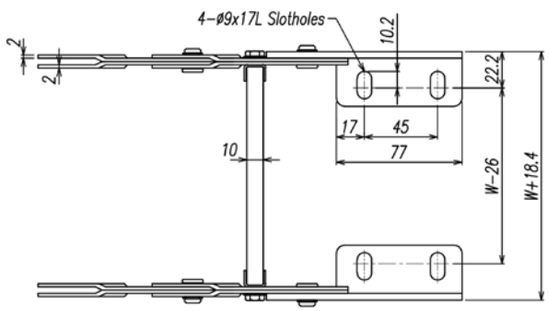
Structure

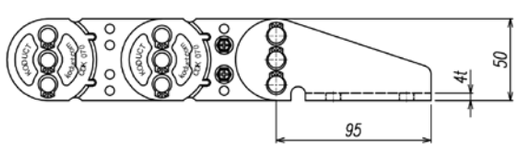




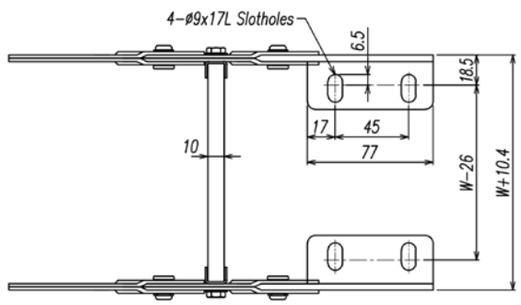
[Load Diagrams Self-Supporting Length]

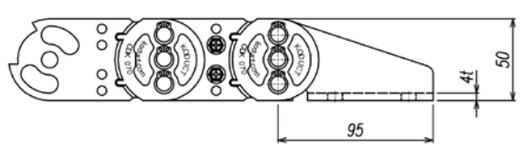
End Bracket





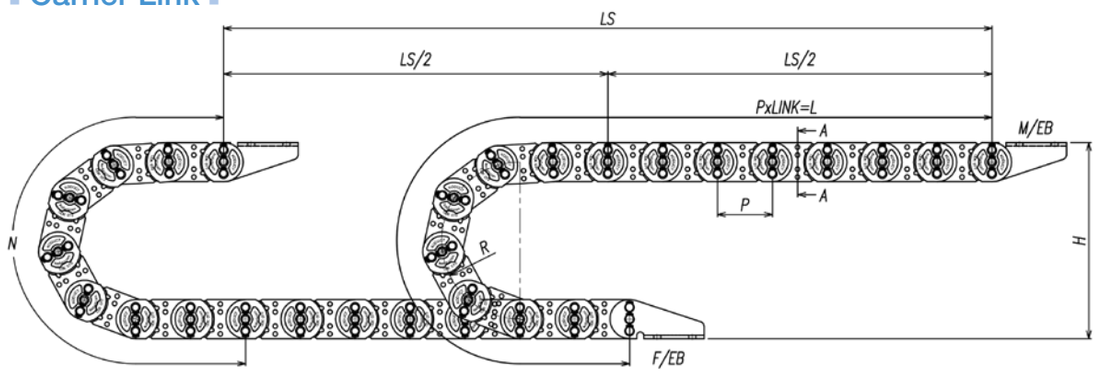
[Fixed Bracket (F/EB)]





[Moving Bracket (M/EB)]

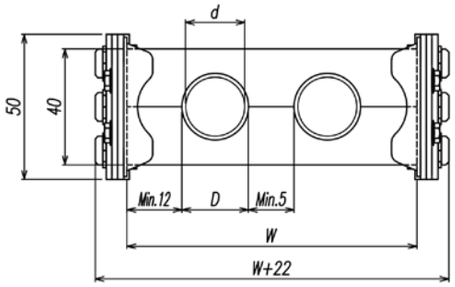
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



* **Cable :** Dd>=x1.1
* **Hose :** Dd>=x1.2

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
CDKH070	80 (3.150)	75 (2.953)	70 (2.756)	200 (7.874)	446 (17.559)	6.13	0.760
	100 (3.937)	90 (3.543)		230 (9.055)	493 (19.409)	6.21	
	125 (4.921)					6.28	
	150 (5.906)	125 (4.921)		300 (11.811)	603 (23.740)	6.67	
	200 (7.874)	145 (5.709)		340 (13.386)	665 (26.181)	7.05	
	250 (9.843)					7.44	
	300 (11.811)	200 (7.874)		450 (17.716)	838 (32.992)	7.82	

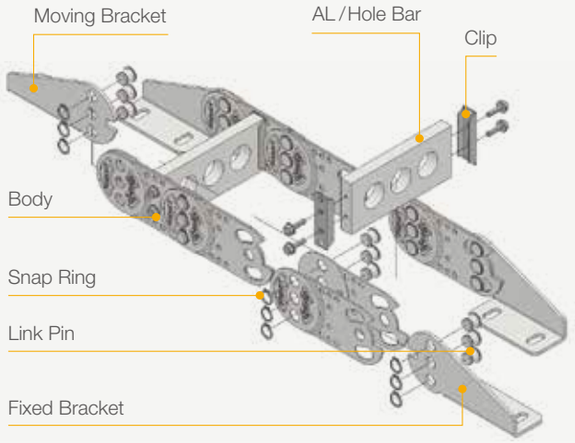
* Width 주문에 따라 제작가능 / Width can make to order

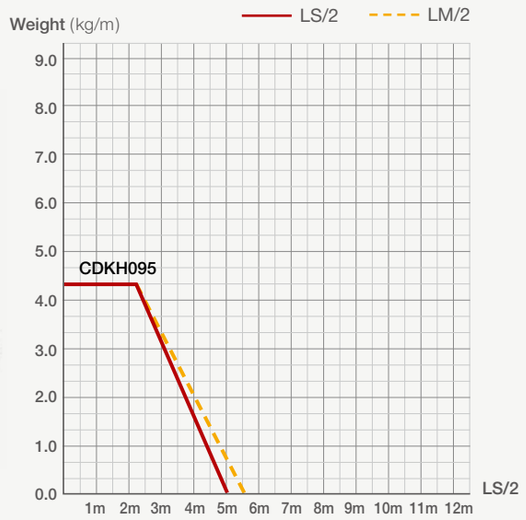
(1inch = 25.4mm)

Steel Carrier

CDKH095

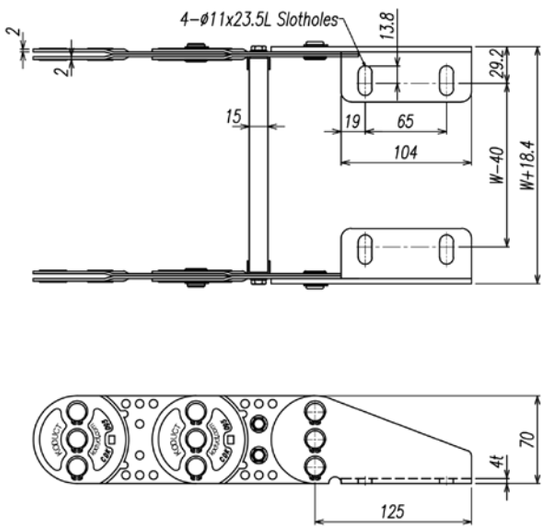
Structure



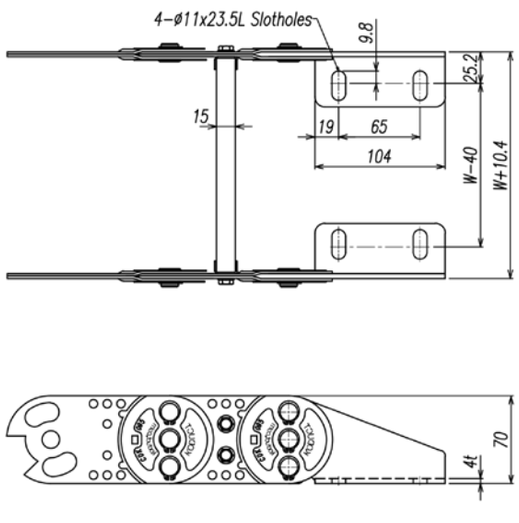


[Load Diagrams Self-Supporting Length]

End Bracket

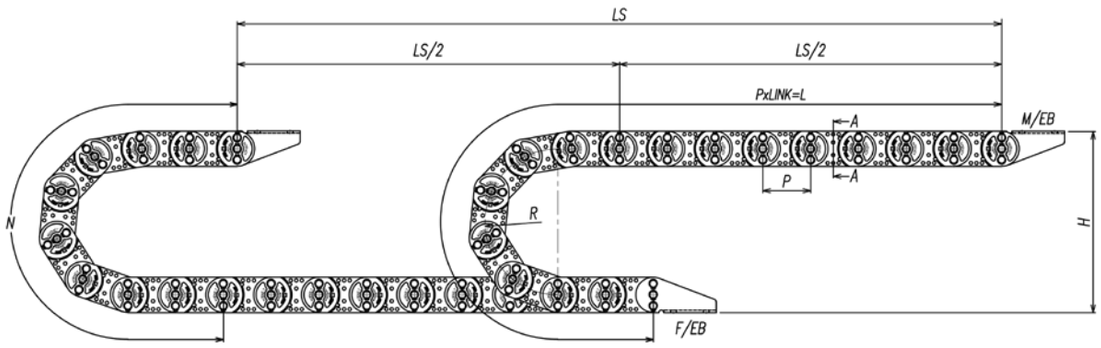


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

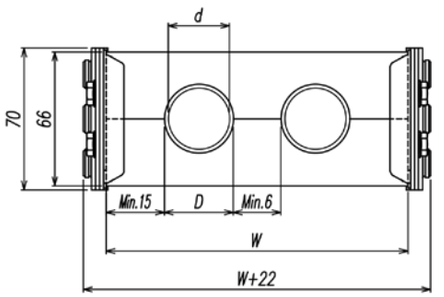
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



* **Cable :** Dd>=x1.1
* **Hose :** Dd>=x1.2

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
CDKH095	100 (3.937)	125 (4.921)	95 (3.740)	320 (12.598)	678 (26.693)	9.050	1.286
	150 (5.905)	145 (5.709)		360 (14.173)	740 (29.134)	9.760	
	200 (7.874)	200 (7.874)		470 (18.504)	913 (35.945)	10.046	
	250 (9.843)	250 (9.843)		570 (22.441)	1,070 (42.126)	11.170	
	300 (11.811)	300 (11.811)		670 (26.378)	1,227 (48.307)	11.880	
	350 (13.779)	400 (15.748)		870 (34.252)	1,541 (60.669)	12.590	
	400 (15.748)					13.300	

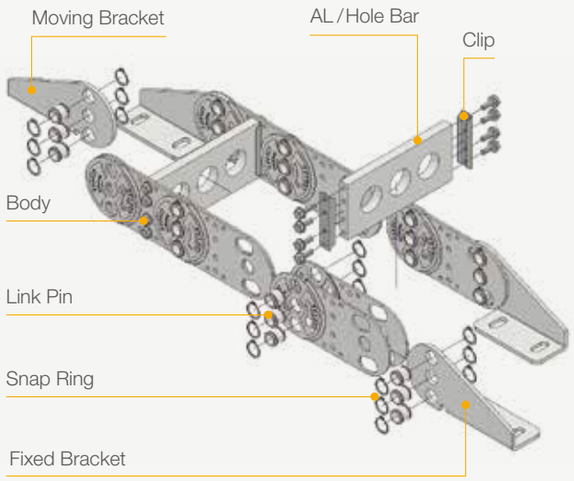
* Width 주문에 따라 제작가능 / Width can make to order

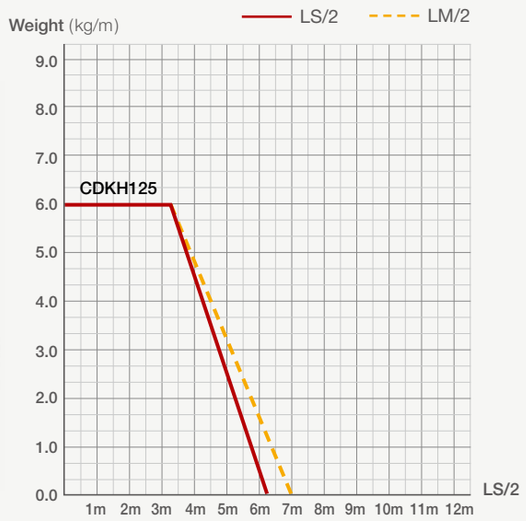
(1inch = 25.4mm)

Steel Carrier

CDKH125

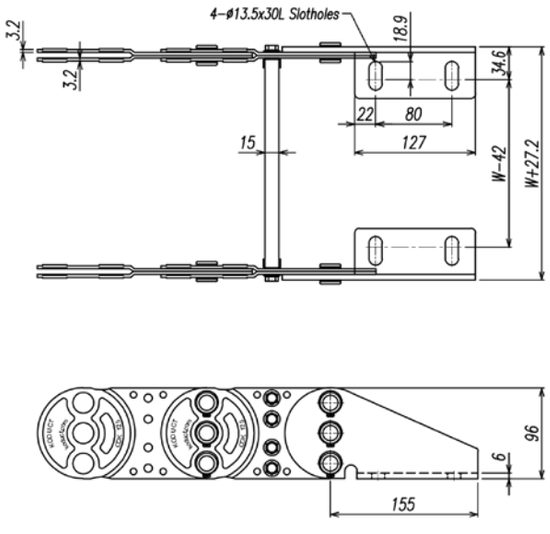
Structure



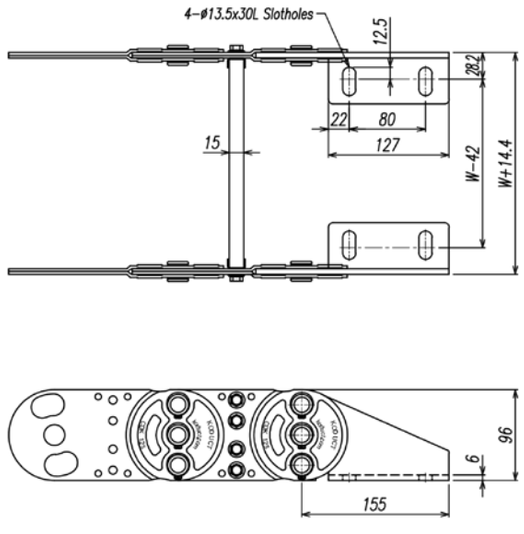


[Load Diagrams Self-Supporting Length]

End Bracket

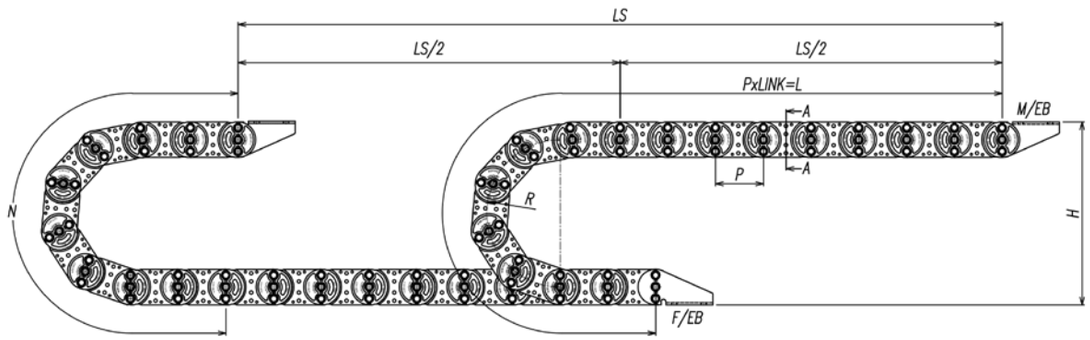


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

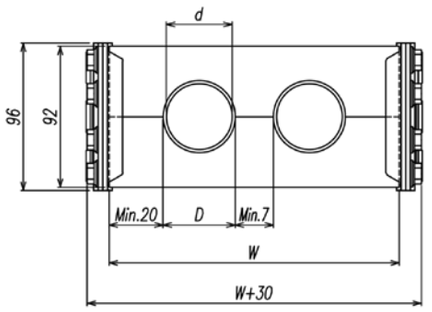
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



* **Cable :** Dd>=x1.1
* **Hose :** Dd>=x1.2

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
CDKH125	100 (3.937)	200 (7.874)	125 (4.921)	496 (19.528)	1,003 (39.488)	16.370	3.170
	125 (4.921)					16.740	
	150 (5.906)	250 (9.843)		596 (23.465)	1,160 (45.669)	17.110	
	200 (7.874)					17.860	
	250 (9.843)	300 (11.811)		696 (27.402)	1,317 (51.850)	18.600	
	300 (11.811)					19.350	
	350 (13.780)	400 (15.748)		896 (35.276)	1,631 (64.212)	20.090	
	400 (15.748)					20.840	

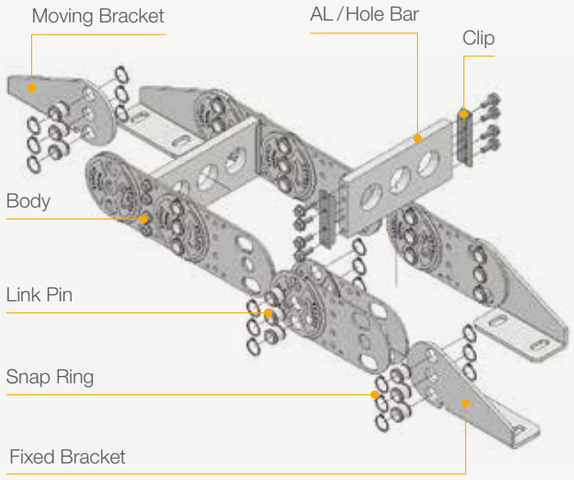
* Width 주문에 따라 제작가능 / Width can make to order

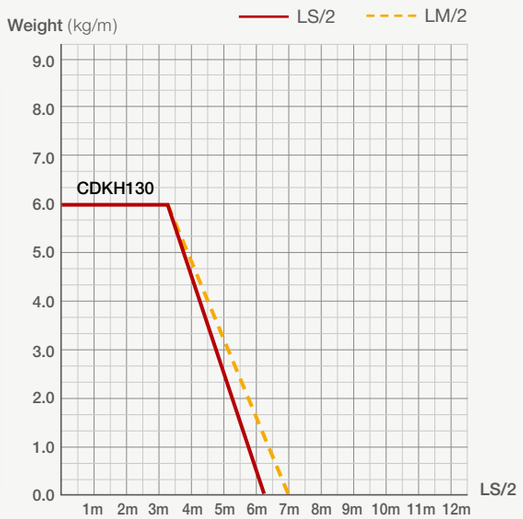
(1inch = 25.4mm)

Steel Carrier

CDKH130

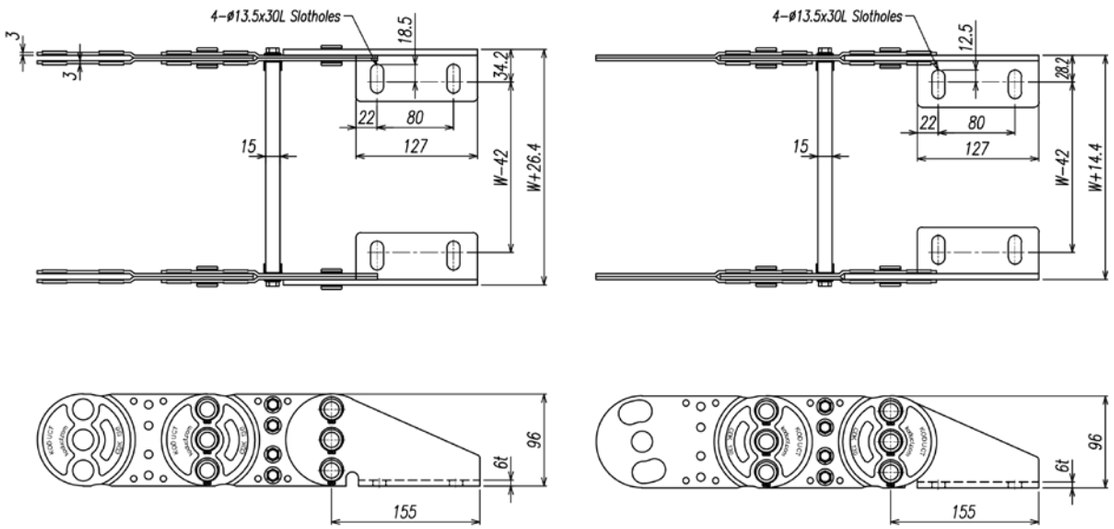
Structure





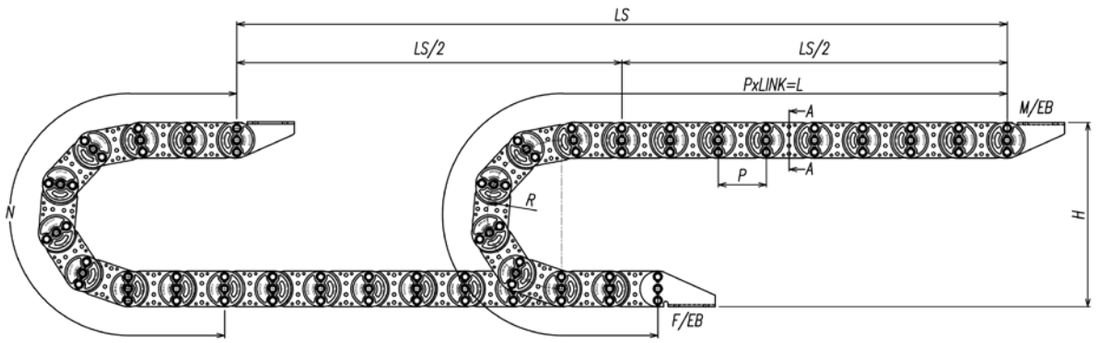
[Load Diagrams Self-Supporting Length]

End Bracket



[**Fixed Bracket** (F/EB)] [**Moving Bracket** (M/EB)]

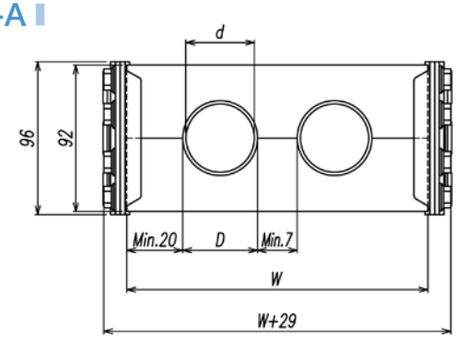
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



* **Cable :** Dd>=x1.1
* **Hose :** Dd>=x1.2

Specification

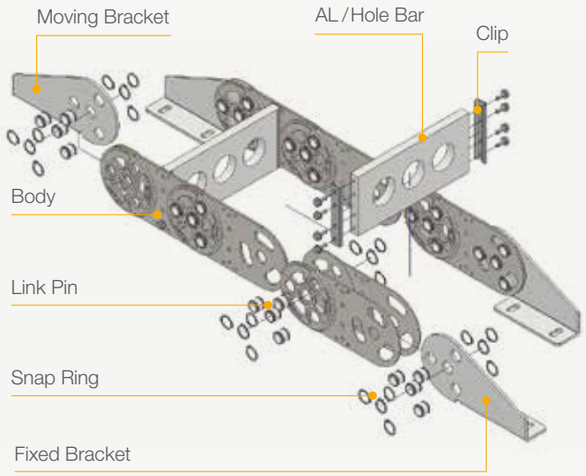
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
CDKH130	100 (3.937)	200 (7.874)	130 (5.118)	496 (19.528)	1,018 (40.079)	15.740	3.170
	125 (4.921)					16.100	
	150 (5.906)	250 (9.843)		596 (23.465)	1,175 (46.260)	16.460	
	200 (7.874)	300 (11.811)		696 (27.402)	1,332 (52.441)	17.170	
	250 (9.843)					17.890	
	300 (11.811)	400 (15.748)		896 (35.276)	1,646 (64.803)	18.610	
	350 (13.780)	500 (19.69)		1,096 (43.149)	1,960 (77.17)	19.330	
	400 (15.748)					20.040	

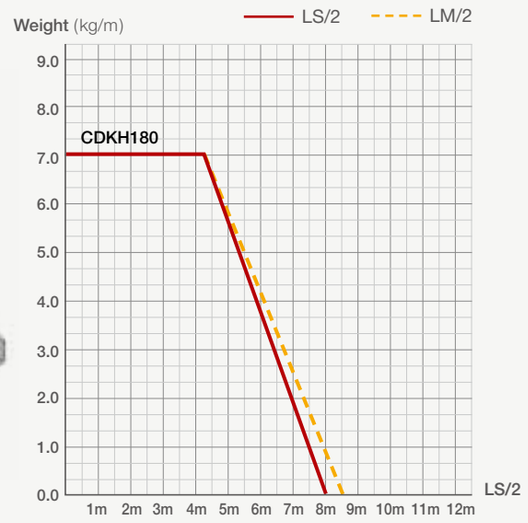
* Width 주문에 따라 제작가능 / Width can make to order (1inch = 25.4mm)

Steel Carrier

CDKH180

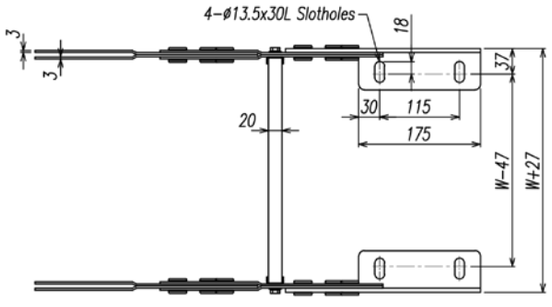
Structure

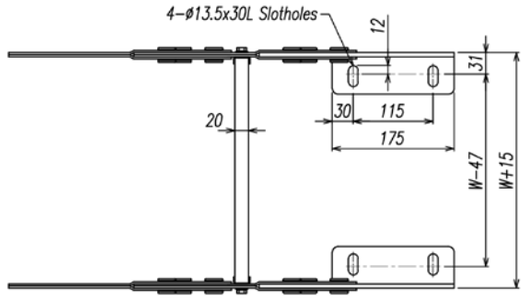


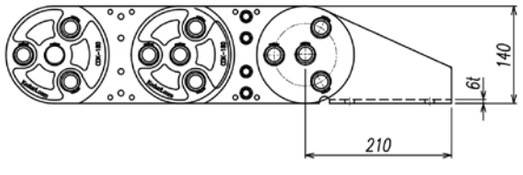


[Load Diagrams Self-Supporting Length]

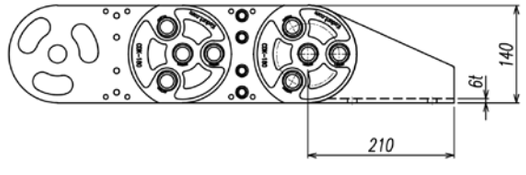
End Bracket





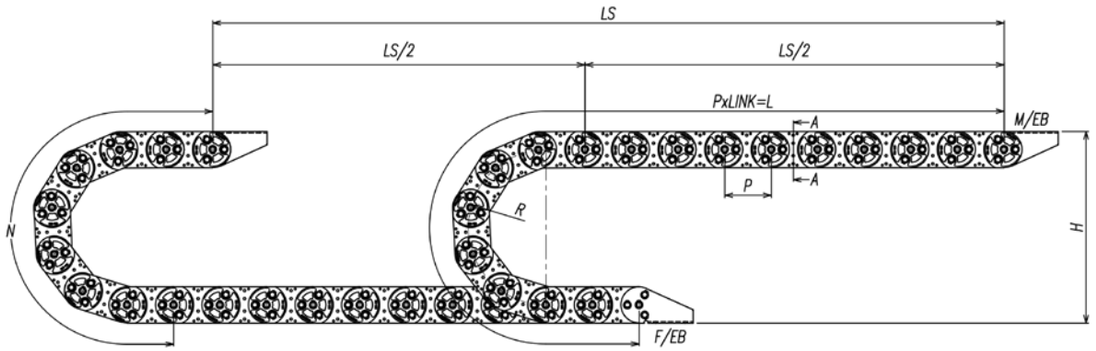


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

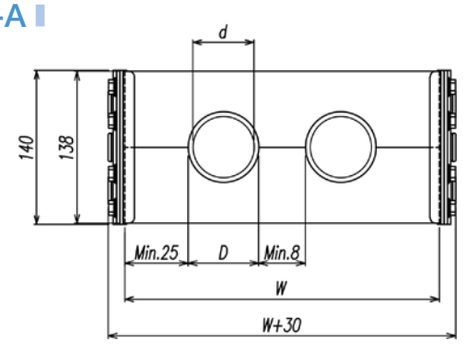
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



* **Cable :** Dd>=x1.1
* **Hose :** Dd>=x1.2

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
CDKH180	300 (11.811)	250 (9.842)	180 (7.087)	640 (25.197)	1,325 (52.165)	24.52	6.72
	400 (15.748)	300 (11.811)		740 (29.134)	1,482 (58.346)	26.59	
	500 (19.685)	400 (15.748)		940 (37.008)	1,796 (70.709)	28.66	
		500 (19.685)		1,140 (44.882)	2,110 (83.071)		
	600 (23.622)	600 (23.622)		1,340 (52.756)	2,424 (95.433)	30.74	
	700 (27.559)	700 (27.559)		1,540 (60.63)	2,738 (107.795)	32.81	

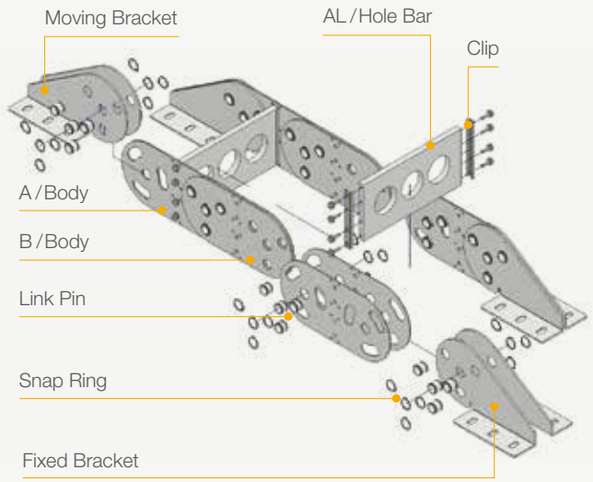
* Width 주문에 따라 제작가능 / Width can make to order

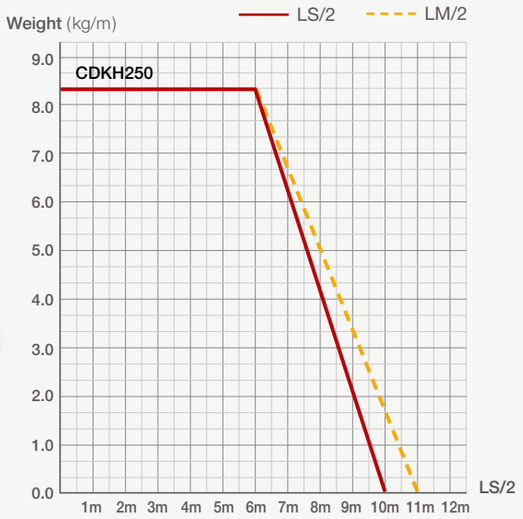
(1inch = 25.4mm)

Steel Carrier

CDKH250

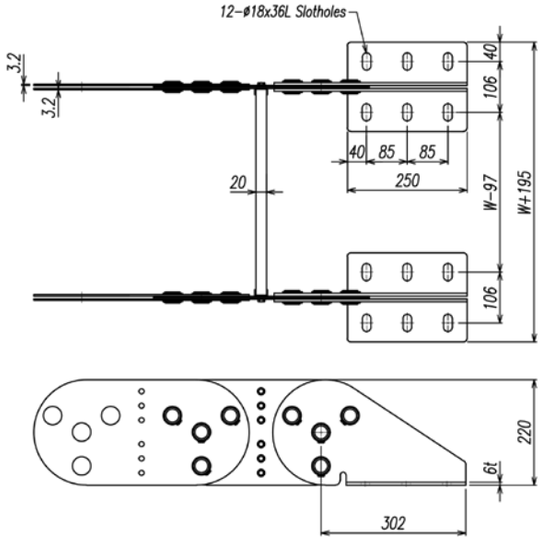
Structure



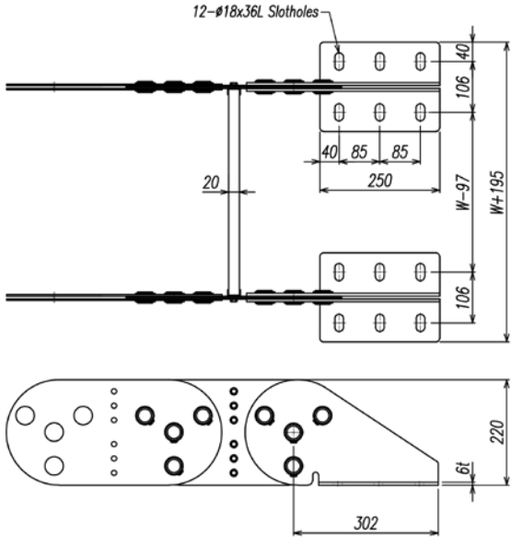


[Load Diagrams Self-Supporting Length]

End Bracket

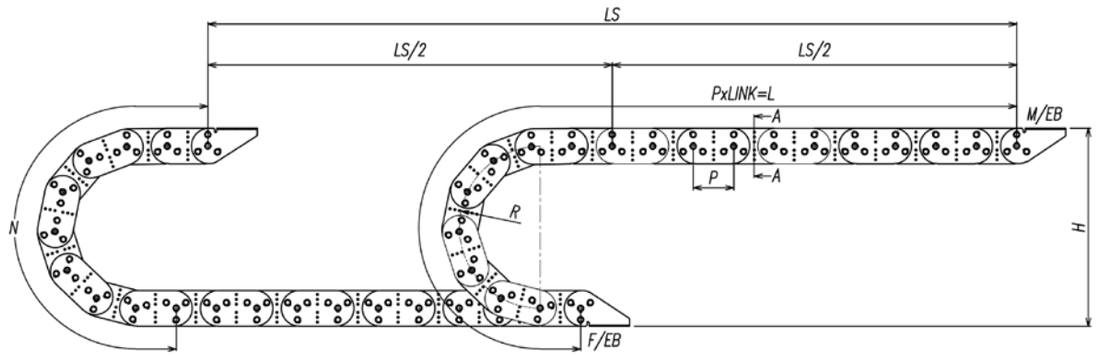


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

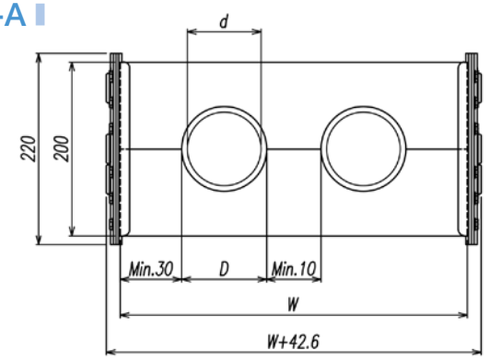
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



* **Cable :** Dd>=x1.1
* **Hose :** Dd>=x1.2

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
CDKH250	300 (11.811)	350 (13.780)	250 (9.842)	920 (36.221)	1,325 (52.165)	53.35	13.25
	400 (15.748)	450 (17.717)		1,120 (44.095)	1,482 (58.346)	55.51	
	500 (19.685)	600 (23.622)		1,420 (55.906)	1,796 (70.709)	57.67	
		750 (29.528)		1,720 (67.717)	2,110 (83.071)		
	600 (23.622)	1,000 (39.370)		2,220 (52.756)	2,424 (87.402)	59.83	
	700 (27.559)	1,250 (49.213)		2,720 (107.087)	2,738 (107.795)	61.99	

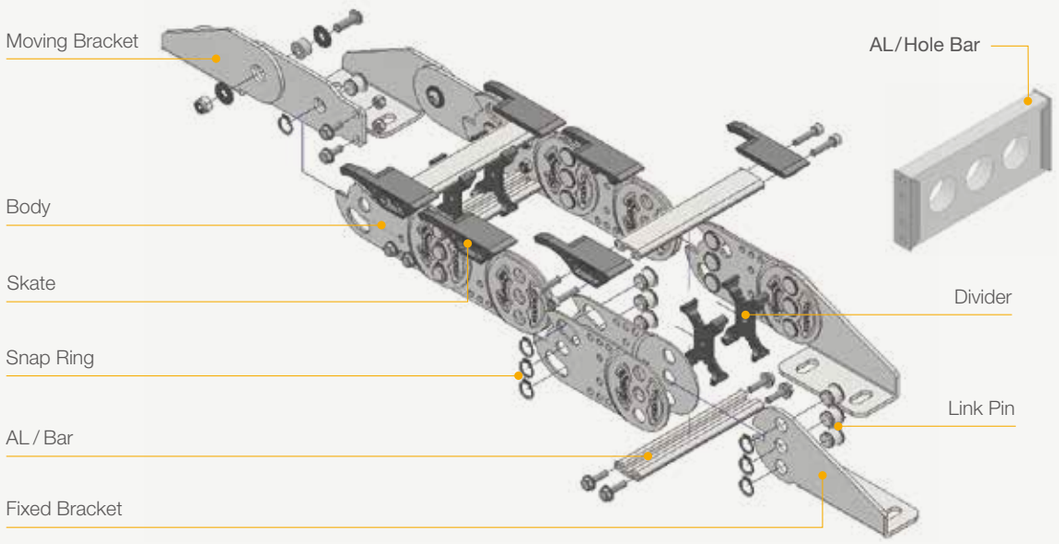
* Width 주문에 따라 제작가능 / Width can make to order

(1inch = 25.4mm)

Steel Carrier

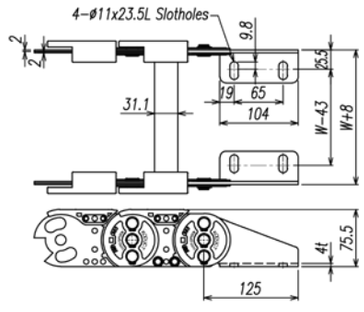
CDKSL095 / CDKHL095

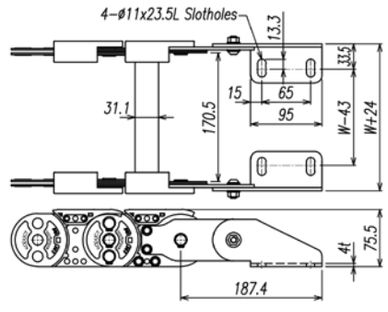
Structure



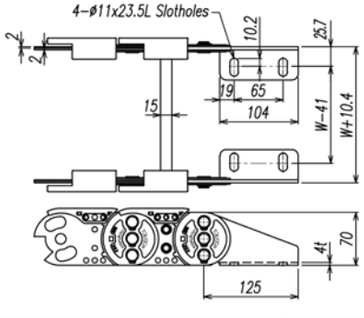
End Bracket

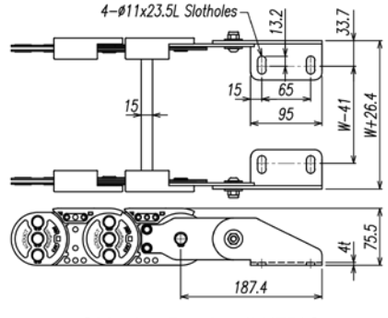
CDKSL095





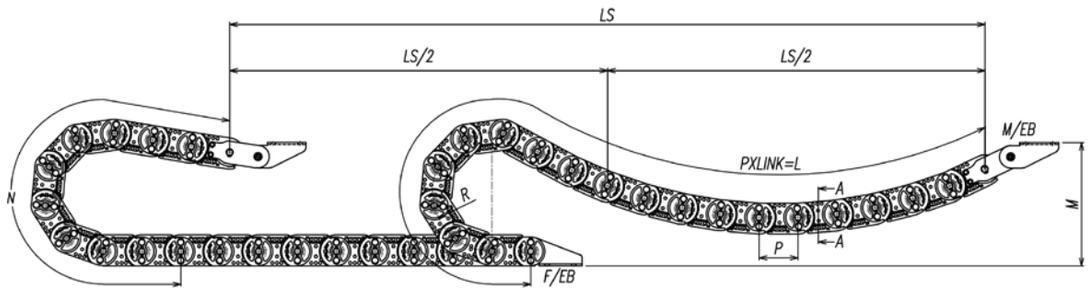
CDKHL095





[**Fixed Bracket** (F/EB)] [**Moving Bracket** (M/EB)]

Carrier Link

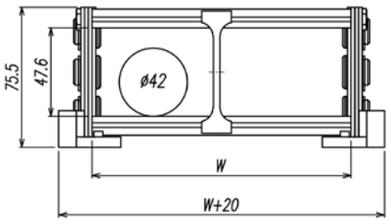


$$\left[L = \frac{LS}{2} + N \right]$$

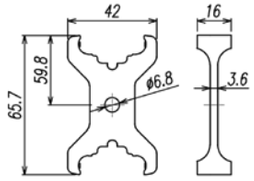
- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

CDKSL095

Section A-A



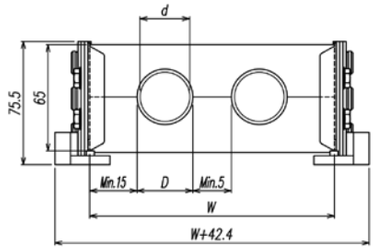
Divider



Separator : Ø6 (Aluminum)

CDKHL095

Section A-A



* **Cable :** Dd>=x1.1
* **Hose :** Dd>=x1.2

Specification

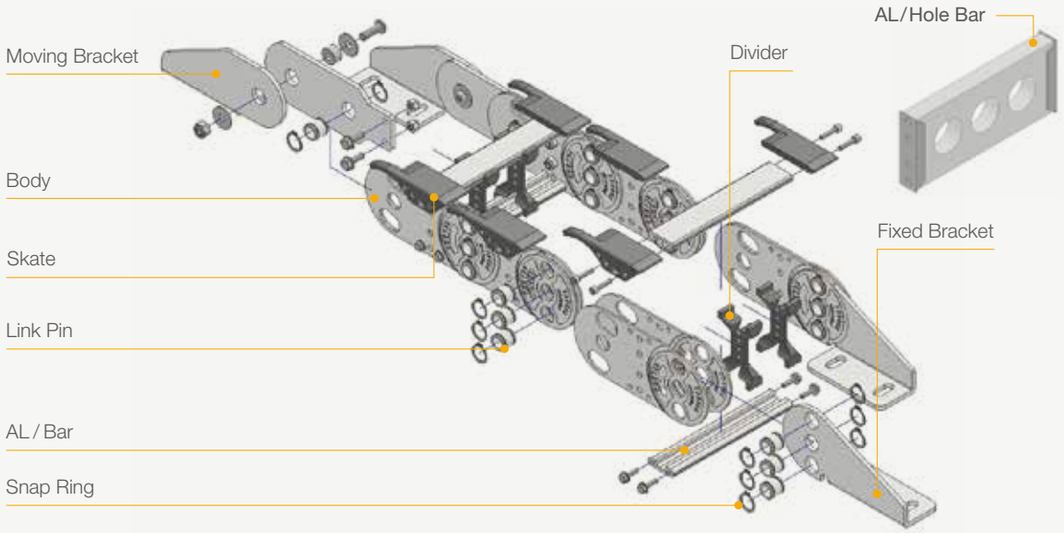
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDKSL095 CDKHL095	100 (3.937)	125 (4.921)	95 (3.740)	300 (11.811)	850 (33.464)	1	8.896	1.875
	150 (5.906)	145 (5.709)			1,000 (39.370)	2	9.273	
	200 (7.874)	200 (7.874)			1,200 (47.244)	2	9.577	
	250 (9.843)	250 (9.843)			1,400 (55.118)	3	9.950	
	300 (11.811)	300 (11.811)			1,500 (59.055)	3	10.253	
	350 (13.779)	400 (15.748)			2,000 (78.740)	4	10.612	
	400 (15.748)					4	10.915	

* Width 주문에 따라 제작가능 / Width can make to order (1inch = 25.4mm)

Steel Carrier

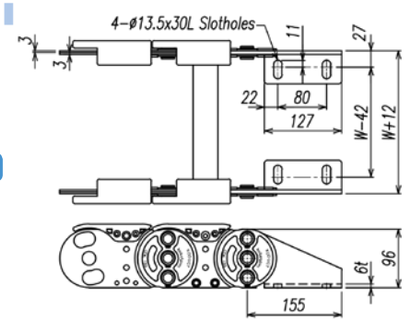
CDKSL130 / CDKHL130

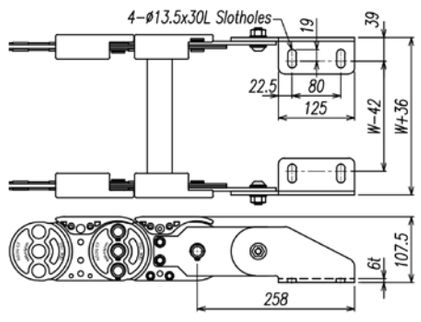
Structure



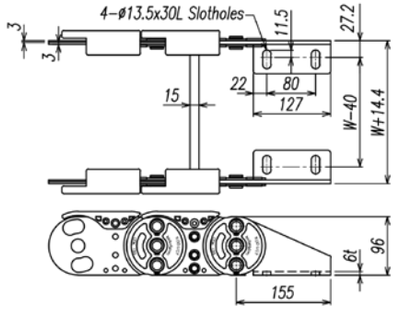
End Bracket

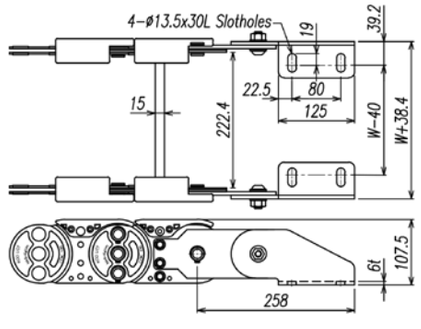
CDKSL130





CDKHL130

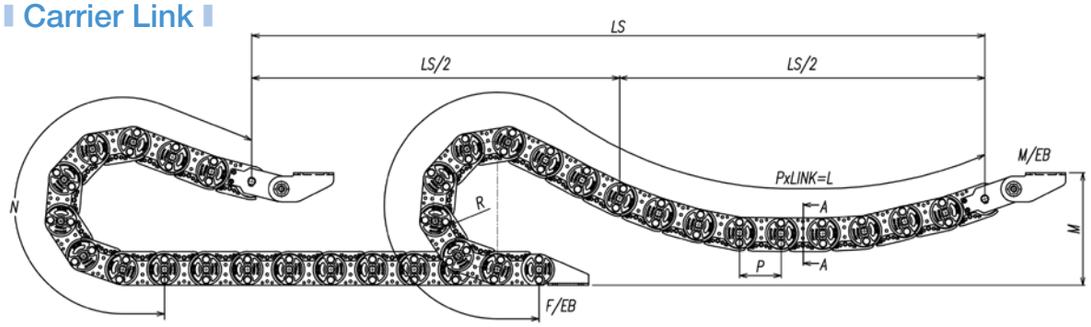




[Fixed Bracket (F/EB)]

[Moving Bracket (M/EB)]

Carrier Link

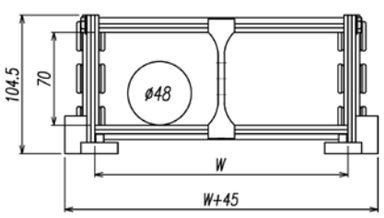


$$\left[L = \frac{LS}{2} + N \right]$$

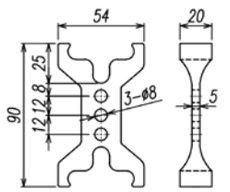
- **LS :** Total Machine Travel
- **L :** Length
- **N :** Safety Length+πr
- **P :** Pitch
- **R :** Radius
- **M :** Moving Bracket Height
- **F/EB :** Fixed Bracket
- **M/EB :** Moving Bracket

CDKSL130

Section A-A



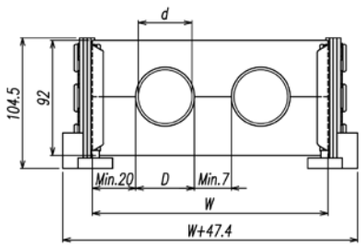
Divider



Separator : Ø8 (Aluminum)

CDKHL130

Section A-A



* **Cable :** Dd>=x1.1
* **Hose :** Dd>=x1.2

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	M mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDKSL130 CDKHL130	100 (3.937)	200 (7.874)	130 (5.118)	350 (13.779)	1,400 (55.118)	1	16.834	4.326
	125 (4.921)					2	17.108	
	150 (5.906)	250 (9.843)			1,600 (62.992)	2	17.149	
	200 (7.874)	300 (11.811)			1,900 (74.803)	2	17.353	
	250 (9.843)					3	17.951	
	300 (11.811)	400 (15.748)			2,300 (90.551)	3	18.261	
	350 (13.780)	500 (19.69)			2,800 (110.236)	4	18.747	
	400 (15.748)					4	19.082	

* Width 주문에 따라 제작가능 / Width can make to order

(1inch = 25.4mm)

Steel Carrier

Assembly and Disassembly 조립·해체 방법

❶ 좌측바디에 링크핀을 결합한다.
(조립자 방향으로 스냅링 체결)

Assemble the link pin to the left side body.
(Snap ring fastening in the direction
of the assembler)

❷ 핀과 바디 체결 후 좌측 바디열을
바닥에 놓고 우측바디를 덮는다.

After tightening the body with the pin,
place the left body on the floor
and cover the right side.

❸ 우측바디를 덮은 후
스냅링을 링크핀에 체결한다.

Cover the right side of the body and
fasten the snap ring to the link pin.

❹ 좌, 우 바디열을
AL/BAR와 Flange Bolt를 이용해 조립한다.

Use AL / BAR and flange bolt to
assemble the left and right body.

❺ 바디와 AL/BAR 조립 후
디바이더를 AL/BAR에 체결한다.

After assembling the body and AL / BAR,
attach the divider to the AL / BAR.

❻ 디바이더 체결 후 상측에 AL/BAR를
망치를 이용해 디바이더와 체결한다.

After assembling the divider,
use a hammer to tighten the AL / BAR
on the upper side.

❼ 상측 AL/BAR를
Flange Bolt를 이용해 조립한다.

Assemble the upper AL / BAR using the
flange bolt.

❽ 고정브라켓을 고정단에
핀과 스냅링을 이용해 조립한다.

Assemble the fixing bracket using pins
and snap rings on the fixing body.

❾ 무빙브라켓을 무빙단에
핀과 스냅링을 이용해 조립한다.

Assemble the moving bracket using pins
and snap rings on the moving body.

❿ 조립완료.

Assembly Completed.

Memo

Steel Carrier

Cable Track System

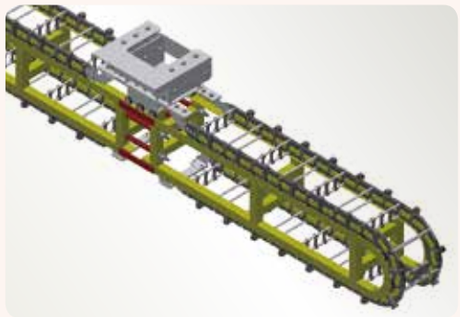
SRST080 | SRST100 | CDKST095 | CDKST130

Cable Track System

저·고속(0.1~5m/sec)운전에 적합하며 무한궤도형으로 이동하기 때문에 진동 및 소음 발생이 적고 케이블 캐리어의 수명이 3~4배 증가한다.
100m 이상의 긴 행정거리가 필요한 경우, 이동방향으로의 고하중에 의한 관성력으로 케이블 캐리어 파손이 우려되는 경우, 이동방향의 진동으로 정밀작업이 어려운 경우에 적합하다.

It is suitable for low- and high-speed (0.1 to 5m/sec) operation and moves in an Caterpillar system so it makes less vibration and noise also it can increases the life span of the cable carrier by three to four times.
It is suitable for long direction of travel more than 100m, and where damage to the cable carrier is occurred due to inertial forces against high loads in the direction of movement, and where precision work is difficult due to vibration of movement.

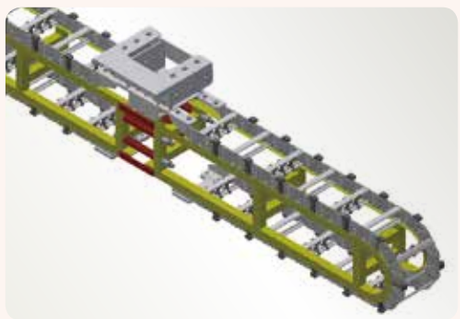
- **주요 사용장비 :** 크레인, 조선설비, 제철, 제강 철강설비, 산업용 플랜트, 냉연·압연 설비, 산업기계, 공작기계 등 모든기계에 적용 가능하며 특히 고하중용 장비에 적합.
- **Applications :** Crane, Heavy industry, iron and steel mill facility, plant facility, cold stripping and rolling facility, machining center and most of industrial applications.



Fork Carrier Type

Cable Track System

- **SRST080** Page : G 09
- **SRST100** Page : G 11

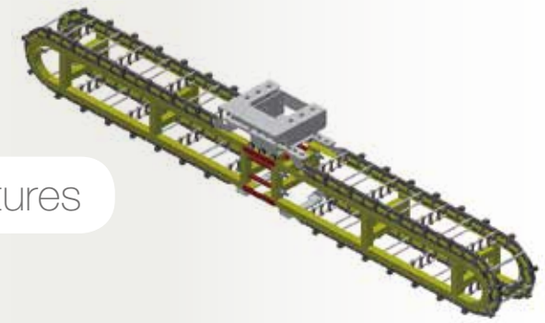


Steel Carrier Type

Cable Track System

- **CDKST095** Page : G 13
- **CDKST130** Page : G 15

Cable Track System



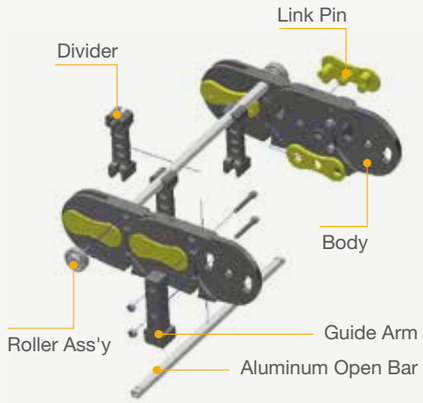
Cable Track System Features

Cable Track System 특징

Excellent Durability 뛰어난 내구성

Cable Track System은 무한궤도형으로 진행방향 작동시 관성력 작용에 의한 무빙단 끝단부에 응력집중에 의한 파손이 없다. 무게를 최소화 한 프레임의 연결부에 텐션스프링을 사용해 완충작용을 한다. 자중 및 하중에 의한 처짐이 없어 내구성이 뛰어나고 케이블 또한 슬라이딩 혹은 처짐이 없어 케이블 수명도 연장된다.
구동방식이 회전롤러의 평면구동으로 내마모가 없으며 마찰계수가 적어 고하중 혹은 고속 구동에도 원활히 구동된다. 또한 무빙단에 장비측으로 전달되는 전체하중과 진동을 흡수하기 위해 무빙장치를 사용하여 진행방향의 충격에 의한 파손이 거의 없다.

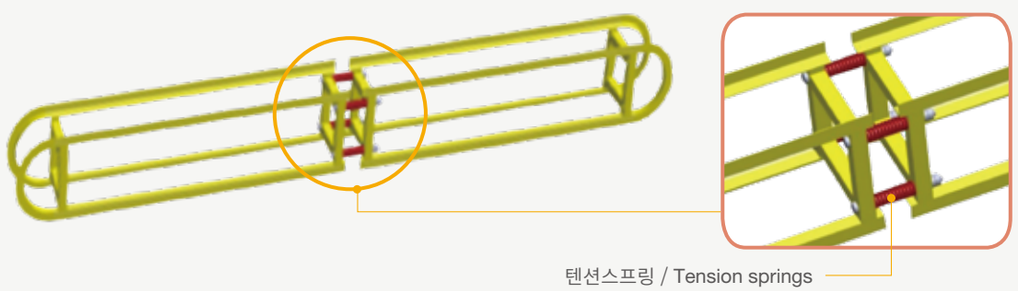
The **cable track system** is an infinite track type, and there is no stress-intensive damage at the end of the moving body end due to inertial force action when operating in the direction of progress. Use tension springs to apply buffering to connections in the frame with minimal weight. The cable life cycle has been extended because there is no deflection due to Self-Load and load, and the cable also has excellent durability and no sliding or sagging. The driving method does not wear out due to the flat movement of the swivel roller and has a low coefficient of friction, so it can be operated smoothly for high load or high speed driving. In addition, there is little damage caused by impact in the direction of progress by using a moving device to absorb the entire load and vibration transmitted to the equipment to the moving body.



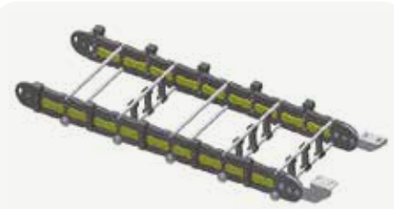
Apply Track Frame to Drive Without Sagging 처짐없는 구동을 위한 프레임 적용

Cable Track System은 무한궤도형으로 사용되기 위해 프레임을 적용하여 처짐이 없이 최대 1,000m까지 구동가능하며 진행방향에 대한 작용힘을 최소화 하기 위해 텐션스프링을 적용해 완충작용을 할 수 있다. 또한 프레임은 케이블 캐리어가 장거리 사용에도 이탈되지 않게 가이드 역할을 한다.

The **Cable Track System** can be operated up to 1,000 meters without sagging by applying a frame for infinite track type, and it can be buffered by applying tension springs to minimize force in the direction of progress. The frame also serves as a guide to ensure that the cable carrier does not deviate from long-distance use.



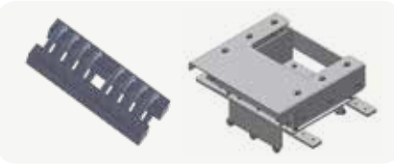
Apply Swivel Rollers to Reduce Vibration and Noise 회전롤러의 적용으로 진동 및 소음완화



Cable Track System은 무한궤도형으로 케이블 캐리어에 롤러를 적용해 평면구동으로 마찰에 의한 소음 및 분진 발생이 거의 없다. 접촉부가 일반 바디 혹은 스케이트가 아닌 롤러 사용으로 정밀 절단이나 측정장비에 사용해도 진동이 거의 없다.

The **Cable Track System** is an infinite track and applies a roller to the cable carrier, which produces little noise and dust due to friction in flat movement. With the use of rollers rather than body or skates, the contact area has little vibration even when used for precision cutting or measuring equipment.

Vibration Absorption Using a Moving Device 무빙장치를 활용한 진동흡수



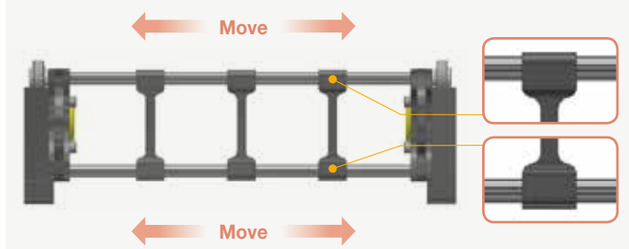
Cable Track System은 전체하중이 장비측으로 전달될 때 무빙장치에 의한 진동과 충격을 흡수한다.

The **Cable Track System** is an infinite track and applies a roller to the cable carrier, which produces little noise and dust due to friction in flat movement. With the use of rollers rather than body or skates, the contact area has little vibration even when used for precision cutting or measuring equipment.

Divider Structure for Easy Cable Installation 케이블 포설이 용이한 디바이더 구조

Cable Track System 디바이더는 고정식이 아닌 유동형으로 레일형식의 (Bar)구조에 디바이더를 체결한다. 디바이더가 좌, 우 이동이 되는 방식으로 케이블 및 호스의 포설에 용이하며 또한 케이블의 움직임에 디바이더 이탈이 없는 구조이다.

The divider is movable, not fixed. Put divider in the rail-type(bar) structure. Divider structure is easy to moves left and right, it make not deviate from the divider due to the movement of the cable and easy to install cables.



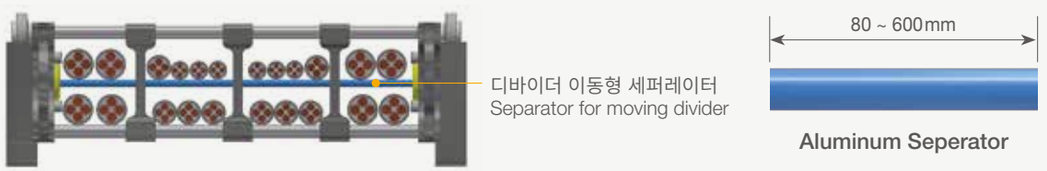
Expansion of Cable Installation Space by Separator 세퍼레이터에 의한 케이블 입선공간 범위확대

디바이더에서 입선공간 범위 확대 필요시 세퍼레이터를 적용해 입선공간을 확대 할 수 있으며, 기존 설치되어 있는 공간에서 케이블 추가시 세퍼레이터 체결이 용이하여 현장적용이 편리하다.

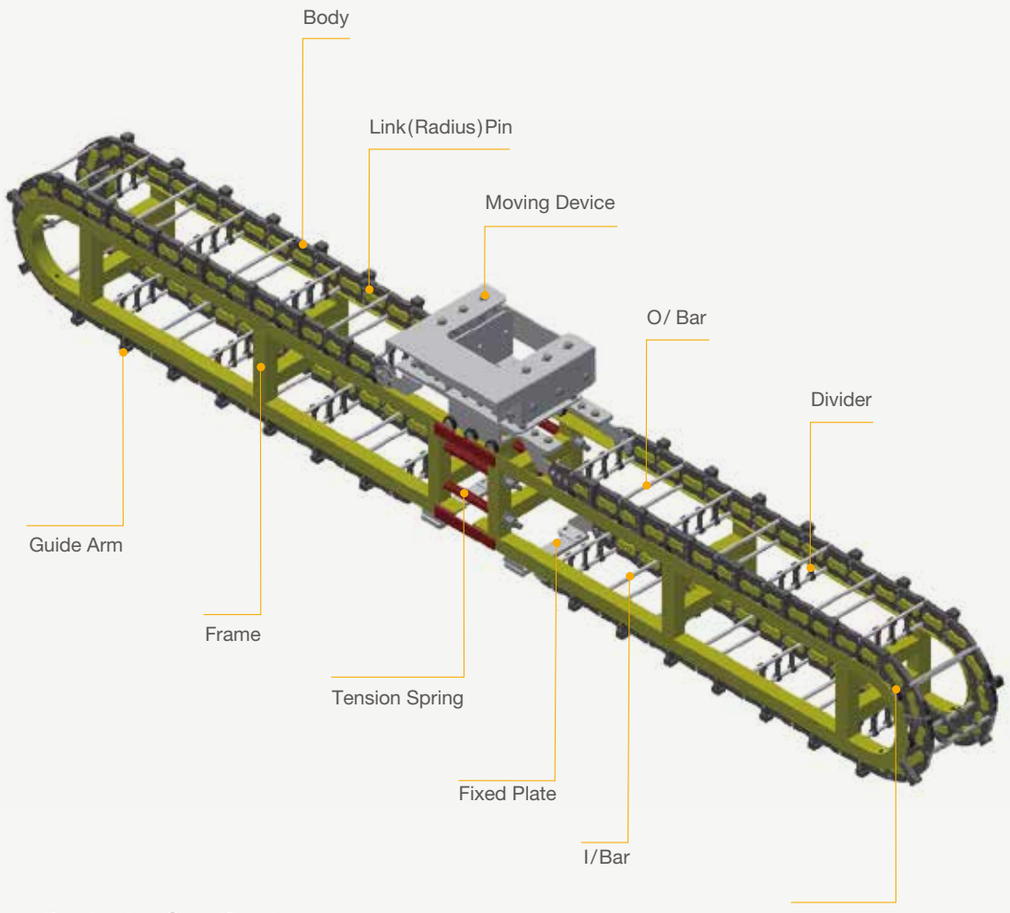
If it is necessary to expand installation space in the divider, you can expand the installation space by applying a separator. When add more cables from the existing installed space, it is easy to attach the separator to the field.

[Moving Separator / 이동형 세퍼레이터]

- 길이는 최소 80~600mm이며 캐리어 내폭치수 -1mm를 적용해서 사용. (Aluminum Seperator)
- Used with a minimum length of 80 to 600 mm and a carrier width dimension of -1 mm. (Aluminum Separator)

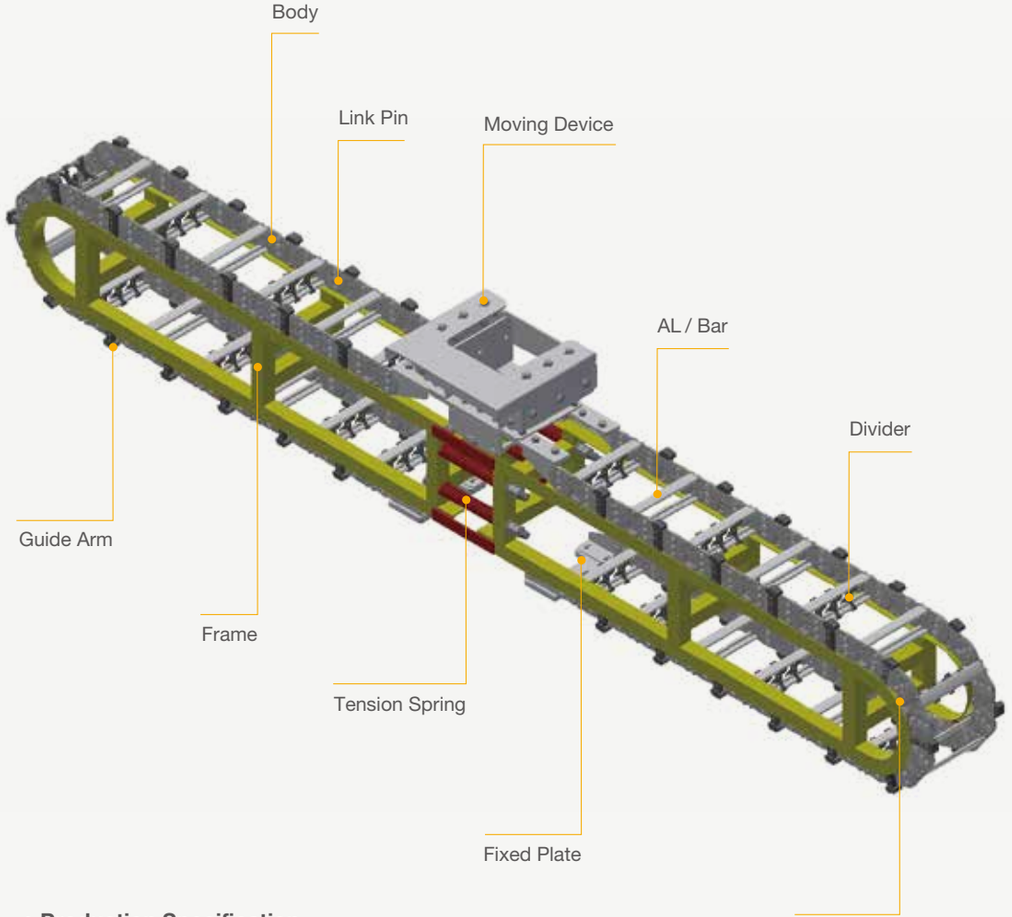


Structure Fork Carrier Type



- **Production Specification**
  : SRST080 / SRST100
- **Material**
  : AL6063, PA6, SS400
- **Speed**
  : 5m/sec
- **Acceleration**
  : 15m/s^2
- **Temperature**
  : -25~125℃
- **Applications**
  : 자동화기계, 공작기계, 용접장비, 절단장비, 일반산업기계 적용
  Automation machines, Machine tools Welding machine, Cutting machine General industrial machinery
- **Installation**
  : Max Stroke 1,000m

Structure Steel Carrier Type



- **Production Specification**
  : CDKST095 / CDKST130
- **Material**
  : SPHC, AL6063, PA6, SS400, SK5
- **Speed**
  : 2m/sec
- **Acceleration**
  : 5m/s^2
- **Temperature**
  : -25~125℃
- **Applications**
  : 자동화기계, 공작기계, 용접장비, 절단장비, 일반산업기계 적용
  Automation machines, Machine tools Welding machine, Cutting machine General industrial machinery
- **Installation**
  : Max Stroke 1,000m

Cable Track System

Installation Manual 설치 메뉴얼

Rail Installation Work / Rail 설치 공사

- 지면에 이물질 제거 후 바닥면을 고르게 한다.
- 구동방향의 센터를 기준하여 좌·우측으로 행정거리보다 3m 여유있게 설치한다.
- 설치 시 주의사항 : 상하좌우 수평을 조절하며 설치한다.
- Remove foreign substances on the ground and level the floor.
- Install the rails on the left and right sides of the center 3 meters more than the machine's travel distance.
- Caution for installation: Adjust the level of the top, bottom, left, and right.

Cable Carrier and Frame Installation Work / 케이블 캐리어 및 Frame 설치 공사

[Cable Carrier Installation Procedure / 케이블 캐리어 설치 순서]

❶ Guide Rail Center 기준으로 좌우 각각 250mm 간격으로 띄워 케이블 캐리어를 설치한다.
❷ 고정브라켓 레일 상단치부 ➡ 케이블 캐리어 엔드링크 고정브라켓에 조립 ➡ 스냅링과 핀을 이용하여 케이블 캐리어를 연결한다.

❶ Install the cable carrier at intervals of 250mm for left and right sides based on the Guide Rail Center.
❷ Fixed bracket rail top fitting ➡ Assemble into carrier end link fixed bracket ➡ Connect the cable carrier using a snap ring and pin.

[Frame Installation Procedure / Frame 설치 순서]

❶ 일반 Frame을 캐리어 상단에서 볼트와 스프링을 이용해 연결한다.
❷ 좌·우 곡률 ➡ Frame을 캐리어 상단에서 볼트와 스프링을 이용해 일반 Frame에 연결한다.
❸ Frame 연결 후 캐리어를 Frame 굴곡선을 따라 감은 후 미끄러지지 않게 고정시킨다.

❶ Connect the normal frame using a bolt and spring at the top of the carrier.
❷ Left and right curvature ➡ Connect the frame to the normal frame using a bolt and spring at the top of the carrier.
❸ After connecting the frame, wind the carrier along the frame curve and secure it against slipping.

[Cable Carrier Installation Procedure / 케이블 캐리어 설치 순서]

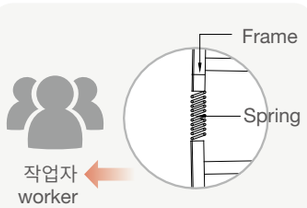
❶ Frame 굴곡선에 감긴 케이블 캐리어 좌·우를 Frame Center까지 연결한다.
❷ 무빙브라켓을 좌·우 케이블 캐리어와 연결 후 기계측 이동부에 부착한다.
❸ 케이블·호스를 캐리어에 삽입 결선한다.

❶ Connect the left and right sides of the cable carrier wrapped in the Frame Curve to the Frame Center.
❷ Connect the moving bracket to the left/right cable carrier and attach it to the moving part of the machine.
❸ Insert the cable/hose into the carrier and connect it.

[Installation Precautions / 설치 시 주의사항]

❶ 케이블 캐리어를 구동 기계측 방향으로 이동한다.
❷ 케이블 캐리어 무빙브라켓 끝단과 기계측 이동단과의 공차 -5mm를 확인한다.
(즉, 케이블 캐리어 높이(H)가 기계측 무빙브라켓 높이보다 5mm 작을것 : 여유공차)

❶ Move the cable carrier towards the driving machine.
❷ Check the cable carrier moving bracket end and the moving end of the machine for a tolerance of -5mm.
(i.e., cable carrier height (H) will be 5mm less than the height of the moving bracket on the machine: extra tolerance)



Spring Tension Control and Level Control / 스프링 텐션조절 및 레벨조절

- 주의사항 : 텐션조절시 스프링 장력을 이용해 Frame의 직진도를 맞춘다.
(스프링에 인장측 장력을 작용시킬 때 Frame은 작업자 측으로 향한다.)
스프링 간격을 180으로 늘려 적절히 캐리어와 프레임의 느슨함을 탄력있게 유지한다.
- Caution : Use spring tension to adjust the straightness of the frame.
(The frame is directed to the operator's side when tension on the tension side is applied to the spring.)
Increase the spring spacing to 180 to maintain proper carrier and frame slack.

Drive Test / 구동 테스트

- 주의사항 : 장비의 구동부와 케이블 캐리어의 직진도 및 수평을 점검 후 이상유무를 확인한다.
- Caution : Check the straightness and level of the drive of the equipment and the cable carrier for abnormalities.

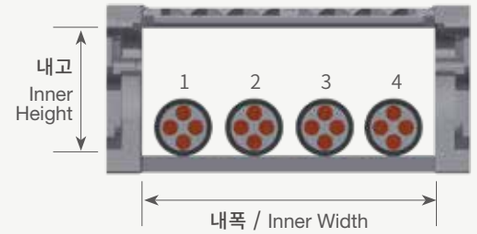
Caution at Installation / 설치 시 유의사항

- 캐리어 설치 시 장비를 우측 끝으로 이동한다.
- 케이블 캐리어 좌·우 구분 시 케이블이 꼬이지 않게 주의한다.
- 가드레일(앵글) 연결 시 뒤틀림 없이 직진도(좌·우 ±3mm), 수평을 유지할 수 있도록 용접한다.
- 가드레일 바닥 설치면이 평행하도록 설치한다.
(단, 평행하지 않을 경우 케이블의 이탈 및 치우침 현상으로 구동시 롤러의 케이블 캐리어의 정상적인 작동을 할 수 없게 한다.)
- 레일 설치 후 Fixed Point를 확인한 후 케이블 캐리어를 고정한다.
- 좌·우 레일 길이만큼 케이블 캐리어를 레일 위에 펼친 후 고정브라켓을 이용 케이블 캐리어를 고정한다.
- Frame의 연결부 텐션스프링을 조절하면서 케이블 캐리어의 느슨함을 탄력있게 한다.
- Moving Point 부착시 장비와 수평이 되도록 한다.
- 무빙, 고정단에 케이블 캐리어의 유동이 없도록 케이블 타이를 적당히 묶는다.
- 설치 완료 후 반복 작동으로 Test한 후 이상유무를 확인한다.

- When installing the carrier, move the equipment to the right end.
- Be careful not to twist cables when separating cable carriers from left and right.
- Weld the guide rail(angle) so that it can maintain straightness (R/L ±3mm)and level without twist.
- Place the guide rail bottom mounting surface parallel to it. (However, if not parallel, the cable carrier on the roller cannot operate normally when driven due to the dislocation and bias of the cable.)
- Check the fixed point after installing the rail and secure the cable carrier.
- Spread the cable carrier over the rail by the length of the left and right rails and use a fixed bracket to secure the cable carrier.
- Relax the cable carrier while adjusting the tensioning of the frame connection.
- Make sure that the moving point is level with the equipment when attaching it.
- Tie the cable ties appropriately so that there is no movement of the cable carrier in the moving and fixing ends.
- After completion of installation, test it with repeated operation and check for any abnormalities.

Cable Carrier Specification Selection

케이블 캐리어 사양 선정



① 케이블 캐리어 내고 설정 / Cable Carrier Inner Height Setting

전선, 혹은 호스의 가장 큰 외경을 기준으로 하며 약 20% UP하여 사양에 맞는 내고를 선정한다.

Based on the largest external diameter of a cable or hose, approximately 20% up to select the inner height that meets the specifications.

② 케이블 캐리어 내폭 설정 / Cable Carrier Inner Width Setting

전선, 혹은 호스의 외경(1+2+3+4)에 약 25% UP하여 사양에 맞는 내폭을 선정한다.
Select inner width according to the specification by increasing about 25% of cable and hose's outer diameter(1+2+3+4).

③ 케이블 캐리어 곡률반경 설정 / Cable Carrier Radius Setting

전선, 혹은 호스의 곡률반경에 맞게 선정한다. 케이블 캐리어의 곡률반경이 전선, 혹은 호스의 곡률반경 사양 대비 큰 설정은 문제가 없지만 작은 설정은 쓸림에 의한 마모나 전선 혹은 호스에 대한 케이블 캐리어의 반작용이 발생할 수 있다.

Select for the radius of a cable or hose. If the cable carrier radius is bigger than cable or hose, it is not a problem.
But if it is smaller setting, it may cause wear due to wiping or the reaction of the cable carrier to the cable or hose.

전선 : Electronic Cables	에어호스 : Pneumatic Hoses	유압호스 : Hydraulic Hoses
케이블 외경에 6~8배	에어호스 외경에 8~10배	유압호스 외경에 12~15배
R min > 6~8 x Φ	R min > 8~10 x Φ	R min > 12~15 x Φ

④ 케이블 캐리어 길이 설정 / Cable Carrier Length Setting (calculation)

장비의 행정거리 1/2 여유길이 N(Safety Length + πr) 값을 더하면 케이블 캐리어 전체 길이가 된다.
("N"값 : PAGE 10 및 각제품의 Specification 참조)

The cable carrier's total length is half of the equipment's total travel length and adding an extra length of N (Safety Length + πr) value. ("N": See PAGE10 and Specifications for each product)

(mm)

Order Form

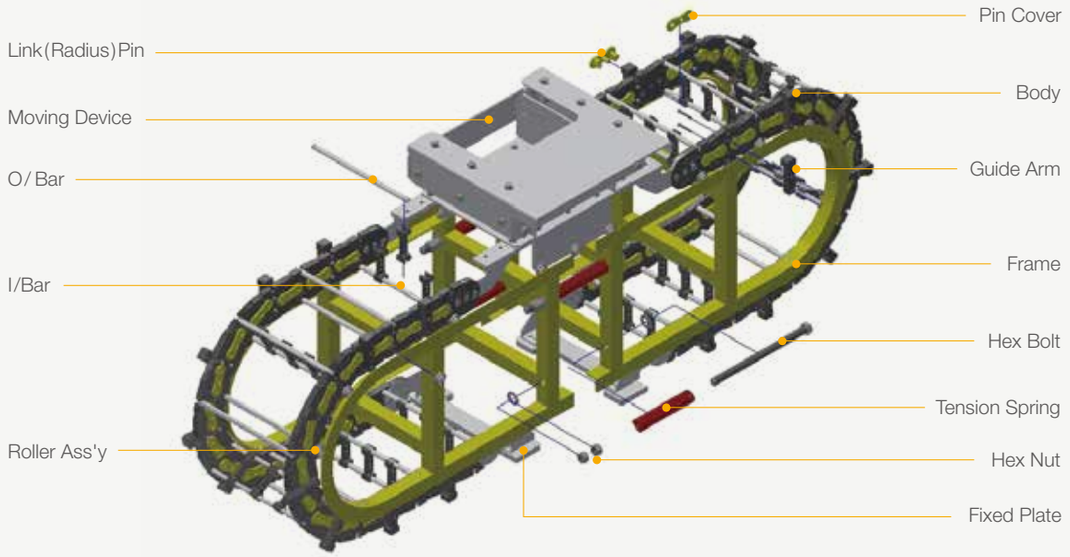
EX) SRST100 - W300 - R250 - ST30000L - SET

제품타입 Type	내폭 Width	곡률 Radius	주행 거리 Total Machine Travel

Cable Track System

SRST080

Structure



Specification

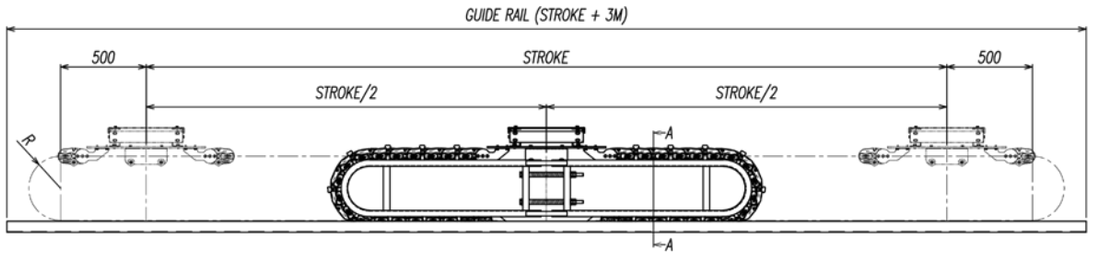
중량 R200 기준
Weight Base : R200

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	H mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
SRST080	80 (3.149)	150 (5.906)	80 (3.150)	506 (21.968)	2,220 (87.401)	1	11.805	0.996
	100 (3.937)					1	11.943	
	120 (4.724)	200 (7.874)		606 (23.858)	2,520 (99.213)	2	12.204	
	150 (5.905)					2	12.430	
	200 (7.874)	250 (9.843)		706 (27.795)	2,820 (111.023)	2	12.773	
	250 (9.842)					3	13.073	
	300 (11.811)	280 (11.024)		766 (30.157)	3,000 (118.110)	3	13.417	
	350 (13.779)	400 (15.748)		1,006 (40.240)	3,720 (146.457)	4	14.077	
	400 (15.748)					4	14.451	

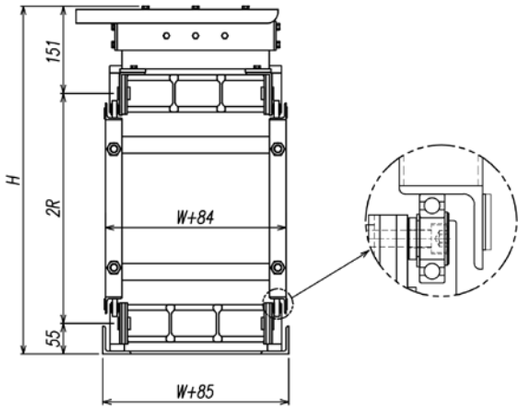
* Width 주문에 따라 제작가능 / Width can make to order

(1inch = 25.4mm)

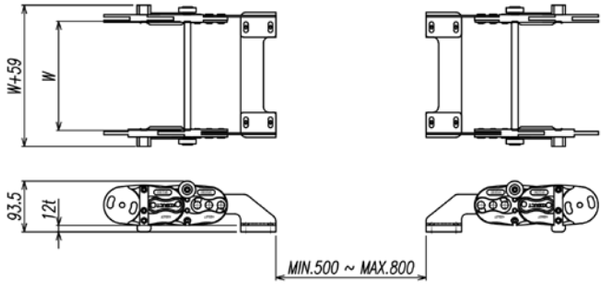
Carrier Link



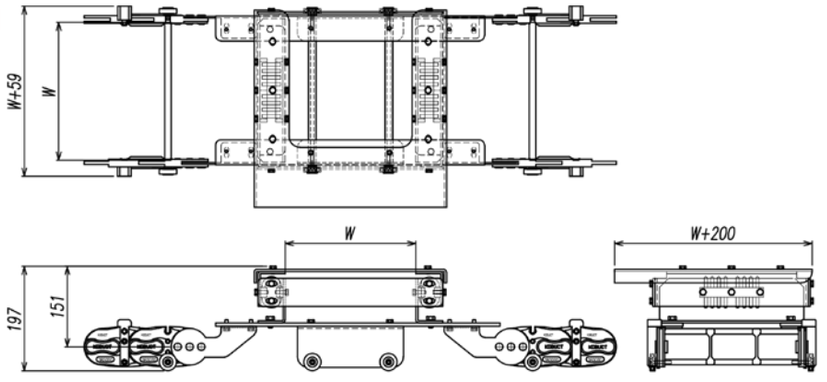
Section A-A



Fixed Plate



Moving Device

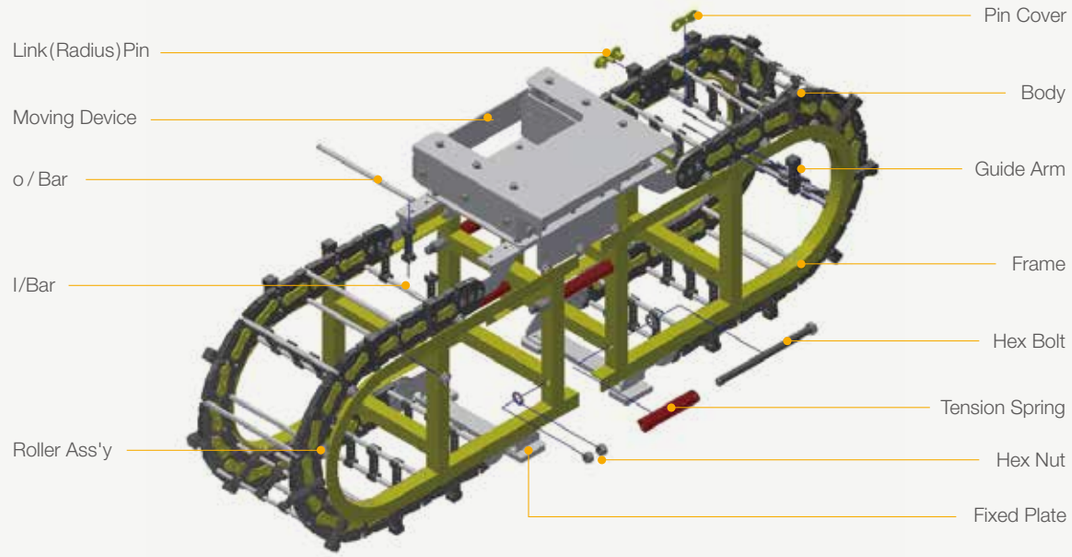


SRST080

Cable Track System

SRST100

Structure



Specification

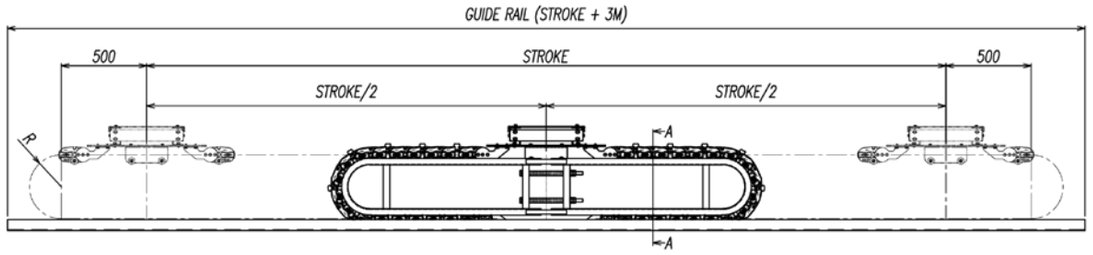
중량 R350 기준
Weight Base : R350

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	H mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
SRST100	100 (3.937)	200 (7.874)	100 (3.937)	679 (26.732)	2,600 (102.362)	1	19.86	3.043
	150 (5.905)					2	20.27	
	200 (7.874)	250 (9.843)		779 (30.669)	2,900 (114.173)	2	20.64	
	250 (9.842)	300 (11.811)		879 (34.606)	3,200 (125.984)	3	21.07	
	300 (11.811)					3	21.44	
	350 (13.779)	350 (13.779)		979 (38.543)	3,500 (137.795)	4	21.90	
	400 (15.748)	400 (15.748)		1,079 (42.480)	3,800 (149.606)	4	22.24	
	500 (19.685)					5	24.31	
	600 (23.622)	500 (19.685)		1,279 (50.354)	4,400 (173.228)	6	25.22	

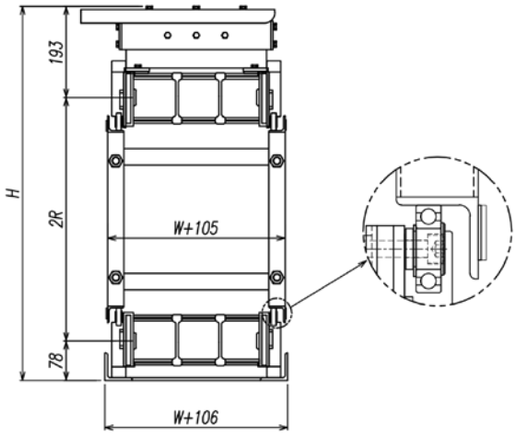
* Width 주문에 따라 제작가능 / Width can make to order

(1inch = 25.4mm)

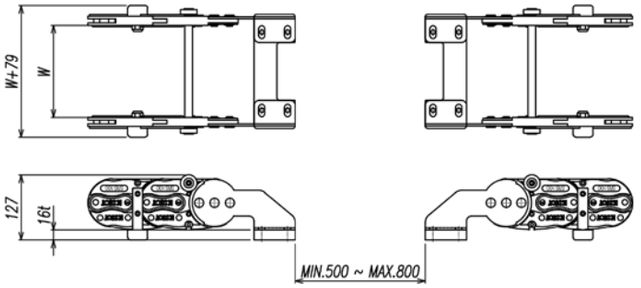
Carrier Link



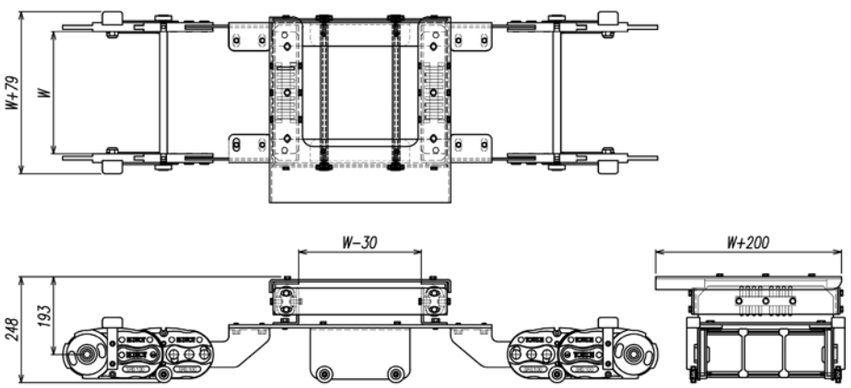
Section A-A



Fixed Plate



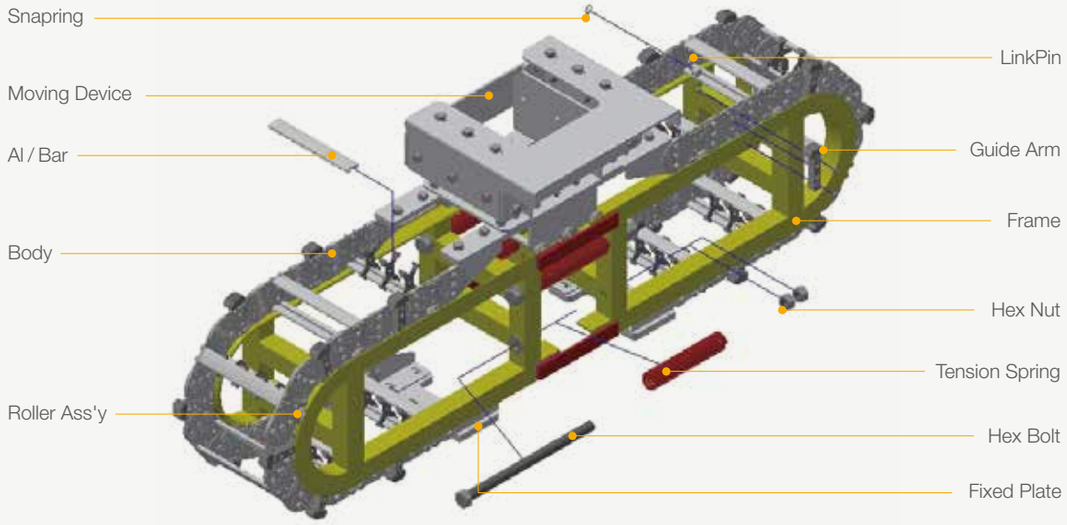
Moving Device



Cable Track System

CDKST095

Structure



Specification

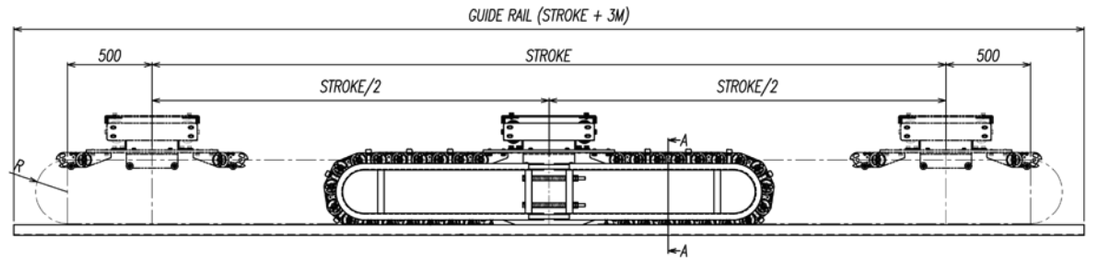
중량 R250 기준
Weight Base : R250

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	H mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDKST095	100 (3.937)	125 (4.921)	95 (3.740)	513 (20.196)	2,130 (83.858)	1	23.64	1.286
	150 (5.906)	145 (5.709)		553 (21.771)	2,250 (88.582)	2	24.08	
	200 (7.874)	200 (7.874)		663 (26.102)	2,580 (101.575)	2	24.49	
	250 (9.843)	250 (9.843)		763 (30.039)	2,880 (113.386)	3	24.95	
	300 (11.811)	300 (11.811)		863 (33.976)	3,180 (125.197)	3	25.37	
	350 (13.779)	400 (15.748)		1,063 (41.850)	3,780 (148.818)	4	25.81	
	400 (15.748)					4	26.2	

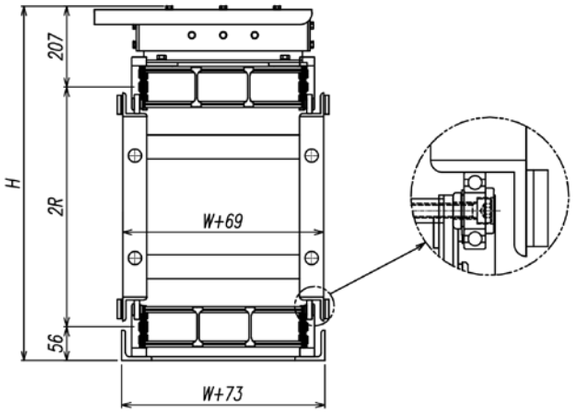
* Width 주문에 따라 제작가능 / Width can make to order

(1inch = 25.4mm)

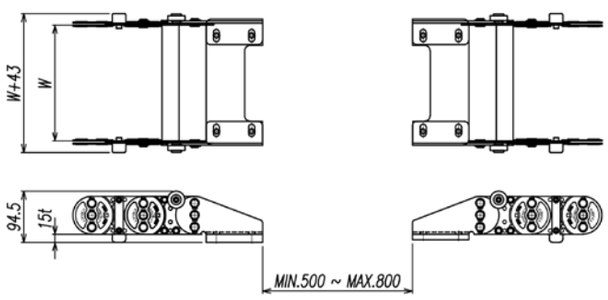
Carrier Link



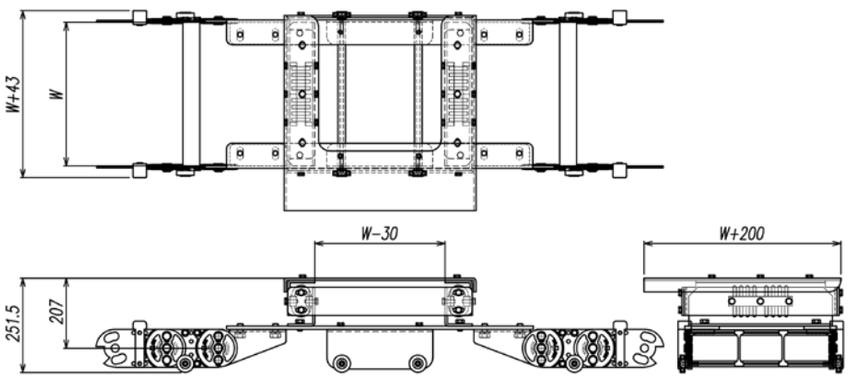
Section A-A



Fixed Plate



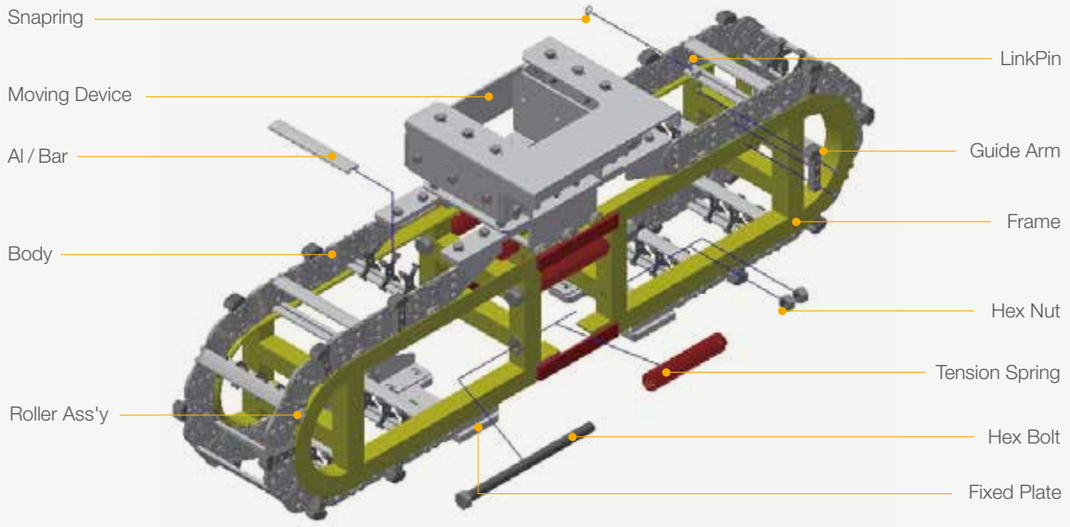
Moving Device



Cable Track System

CDKST130

Structure



Specification

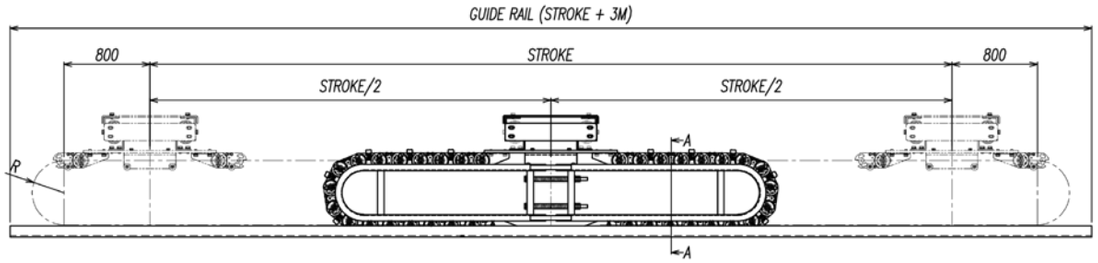
중량 R400 기준
Weight Base : R400

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	H mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDKST130	100 (3.937)	200 (7.874)	130 (5.118)	690 (27.165)	2,720 (107.086)	1	34.78	3.170
	125 (4.921)					2	35.06	
	150 (5.906)	250 (9.843)		790 (31.102)	3,020 (118.897)	2	35.35	
	200 (7.874)	300 (11.811)		890 (35.901)	3,320 (130.708)	2	35.81	
	250 (9.843)					3	36.36	
	300 (11.811)	400 (15.748)		1,090 (42.913)	3,920 (154.331)	3	36.82	
	350 (13.779)	500 (19.69)		1,290 (50.787)	4,520 (177.953)	4	37.38	
	400 (15.748)					4	37.85	

* Width 주문에 따라 제작가능 / Width can make to order

(1inch = 25.4mm)

Carrier Link



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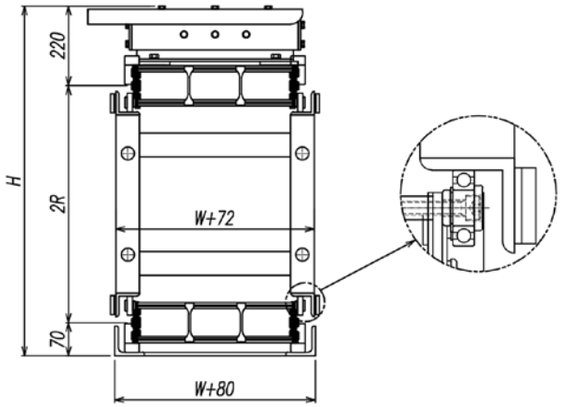
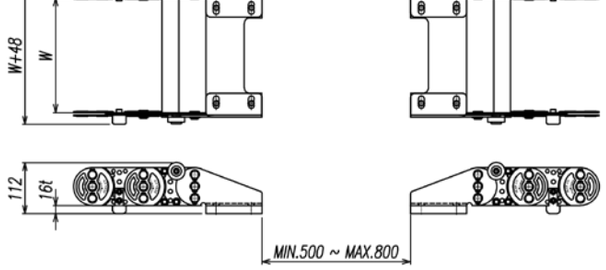
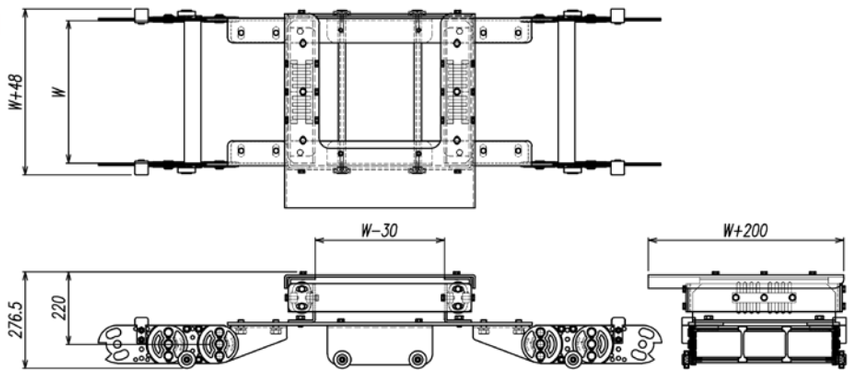


Fixed Plate

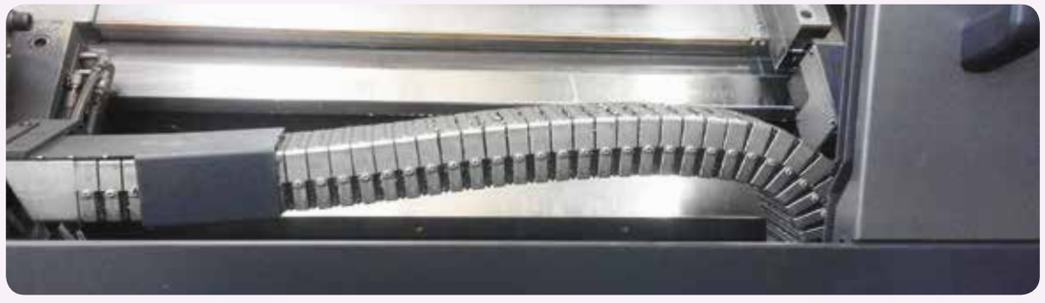


Moving Device



CalmlyFlex

KCF115 | KCF120 | KCFM115 | KCFM120



CalmlyFlex

CalmlyFlex는 Steel과 Plastic 바디의 공용부품 사용으로 처짐 및 강도가 보완되어 기존 Duct Type에 비해 내구성이 뛰어나다. 피치대비 케이블 인입구 비율의 최적화로 케이블 및 호스의 쓸림을 최소화 할 수 있다. 리벳으로 링크를 연결하는 구조로 링크 이탈이 거의 없다. 또한 칩침투가 거의 없는 구조로 되어 있어 칩에 의한 파손이 거의 없다.

CalmlyFlex is more durable than the existing Duct Type due to the combination of steel and plastic body parts. The ratio of cable entrances to pitch is optimized to minimize cable and hose abrasion. It's a structure that links connect with rivets so there's almost no link deviating. It has no damage caused the chip penetration due to special structure.

- **주요 사용장비 :** 공작기계, 자동화기계, 의료기계, 겐트리로봇, 일반산업기계 적용
- **Applications :** Machine tools, Automations machines, Medical equipment, Gantry robot equipment

Standard Type

Chip Enclosed Type

CalmlyFlex Features

CalmlyFlex 특징

Excellent Durability ▮ 뛰어난 내구성

CalmlyFlex는 바디와 커버가 리벳방식의 연결구조로 조립되어 이탈이 없고 내구성이 뛰어나다. 또한 바디는 엔지니어링 플라스틱(PA6)을 사용해 제품이 경량화 되고 처짐은 보완 되었다. 커버는 Stainless Steel(STS304)을 사용해 내식성이 우수하다. 최적의 설계로 바디와 커버 사이 공간을 최소화 하여 칩 침투를 방지 하였다. Chip Enclosed Type은 칩 침투 방지용 커버를 사용해 칩 침투가 없고 이로 인한 파손이 없어 수명이 연장되었다. 피치대비 케이블 인입구 비율의 최적화로 곡률회동 각도를 완만히 하여 소음 및 케이블 꺾임이 최소화 되었고 케이블 피로도 및 내구성이 기존대비 30% 이상 증가되었다.

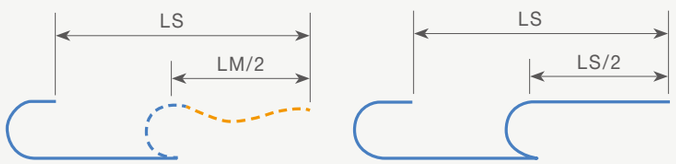
CalmlyFlex has excellent durability as its body and cover are assembled in rivet-type connection structure, with no breakaway. Also body is using engineering plastics (PA6) to make the product lighter and to supplement for sagging. The cover has excellent corrosion resistance using the Stainless Steel (STS304). The optimal design minimizes the space between the body and the cover to prevent chip penetration. Chip Enclosed Type uses a cover to prevent chip penetration, so there is no chip penetration and there is no breakage resulting from it, extending its life span. By optimizing the ratio of the cable inlet to pitch, the angle of curvature rotation is moderated to minimize noise and cable bend, increasing cable fatigue and durability by more than 30% compared to the previous one.

FreeSpan

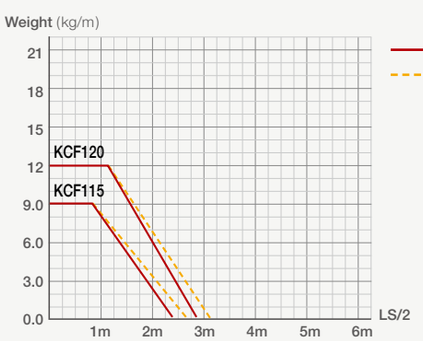
케이블 캐리어의 **Self-Load**에 의한 처짐이 없는 길이를 **FreeSpan** 이라 하고, 케이블 하중에 따라 지지 하중의 길이가 달라진다. 케이블 캐리어는 처짐이 있으나 허용 가능한 길이(LM/2)와 처짐이 없이 허용가능한 길이(LS/2)가 있다.

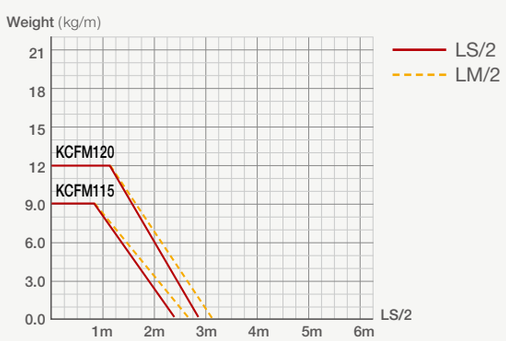
The length of the carrier without sagging by **Self-Load** is called **FreeSpan**, and the self-supporting length is depends on the value of cable load. There are two kinds of length.

- **LS :** Travel length
- **LS / 2 :** 처짐이 없으며 허용 가능한 케이블 캐리어 길이
  No Sagging and acceptable length
- **LM / 2 :** 처짐이 있으나 허용 가능한 케이블 캐리어 길이
  Sagging but acceptable length

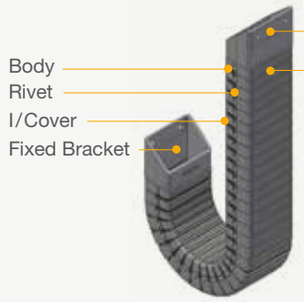


Load Diagrams Self-Supporting Length





Structure ▮ Standard Type



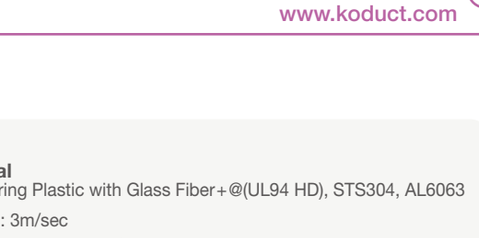
- **Material**
  : Engineering Plastic with Glass Fiber+@(UL94 HD), STS304, AL6063
- **Speed** : 3m/sec
- **Acceleration** : 10m/s^2
- **Temperature** : -25~125°C
- **Applications**
  : 공작기계, 자동화기계, 의료기계, 겐트리로봇, 일반산업기계 적용
  Machine tools, Automations machines, Medical equipment, Gantry robot equipment

End Bracket Setting Example

- **TYPE 1 :** FA / FA
- **TYPE 2 :** FA / FA
- **TYPE 3 :** FC / FA (FB)
- **TYPE 4 :** FA / FA
- **TYPE 5 :** FA / FA
- **TYPE 6 :** FC / FA (FB)
- **TYPE 7 :** FA / FC (FB)
- **TYPE 8 :** FA / FC (FB)
- **TYPE 9 :** FC / FC (FB) (FB)

Cable Carrier Specification Selection

케이블 캐리어 사양 선정



① 케이블 캐리어 내고 설정 / Cable Carrier Inner Height Setting

전선, 혹은 호스의 가장 큰 외경을 기준으로 하며 약 20% UP하여 사양에 맞는 내고를 선정한다.
Based on the largest external diameter of a cable or hose, approximately 20% up to select the inner height that meets the specifications.

② 케이블 캐리어 내폭 설정 / Cable Carrier Inner Width Setting

전선, 혹은 호스의 외경(1+2+3+4)에 약 25% UP하여 사양에 맞는 내폭을 선정한다.
Select inner width according to the specification by increasing about 25% of cable and hose's outer diameter(1+2+3+4).

③ 케이블 캐리어 곡률반경 설정 / Cable Carrier Radius Setting

전선, 혹은 호스의 곡률반경에 맞게 선정한다. 케이블 캐리어의 곡률반경이 전선, 혹은 호스의 곡률반경 사양 대비 큰 설정은 문제가 없지만 작은 설정은 쓸림에 의한 마모나 전선 혹은 호스에 대한 케이블 캐리어의 반작용이 발생할 수 있다.
Select for the radius of a cable or hose. If the cable carrier radius is bigger than cable or hose, it is not a problem. But if it is smaller setting, it may cause wear due to wiping or the reaction of the cable carrier to the cable or hose.

전선 : Electronic Cables	에어호스 : Pneumatic Hoses	유압호스 : Hydraulic Hoses
케이블 외경에 6~8배	에어호스 외경에 8~10배	유압호스 외경에 12~15배
R min > 6~8 x Φ	R min > 8~10 x Φ	R min > 12~15 x Φ

④ 케이블 캐리어 길이 설정 / Cable Carrier Length Setting (calculation)

장비의 행정거리 1/2 여유길이 N(Safety Length + πr) 값을 더하면 케이블 캐리어 전체 길이가 된다.
("N"값 : PAGE 10 및 각제품의 Specification 참조)
The cable carrier's total length is half of the equipment's total travel length and adding an extra length of N (Safety Length + πr) value. ("N": See PAGE10 and Specifications for each product)

(mm)

Order Form

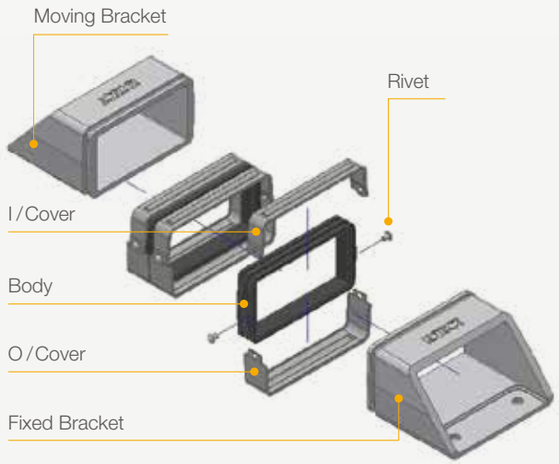
EX) **KCF115 - R140 - 2000L - TYPE/3**

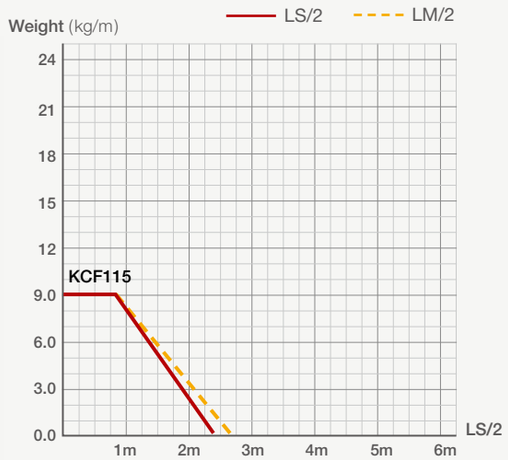
제품타입 Type	곡률 Radius	길이 Length	브라켓 조립방향 End Bracket Setting

CalmlyFlex

KCF115

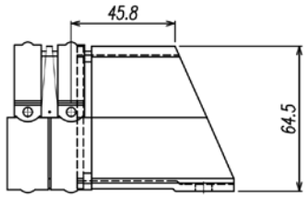
Structure

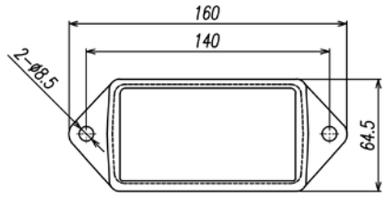


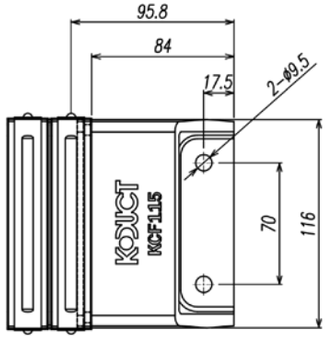


[Load Diagrams Self-Supporting Length]

End Bracket







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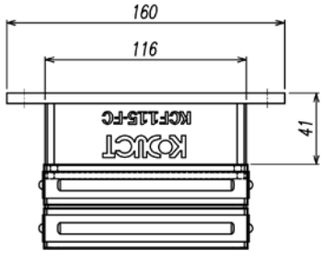
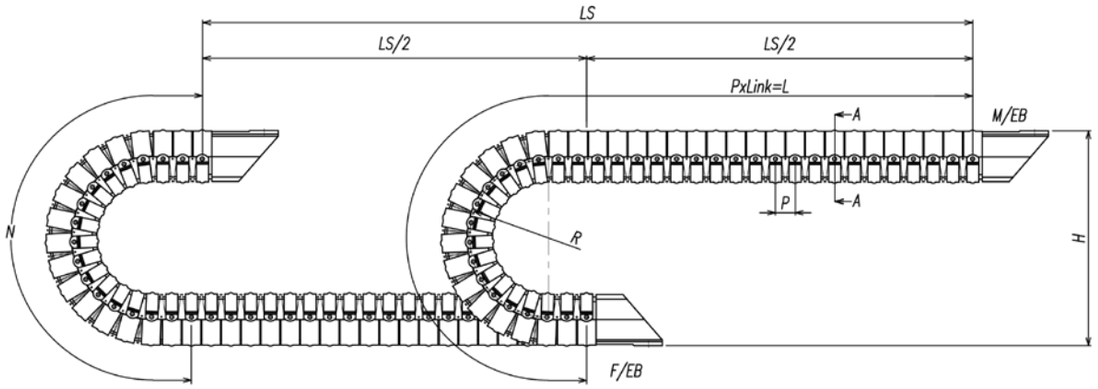


[FC Type]

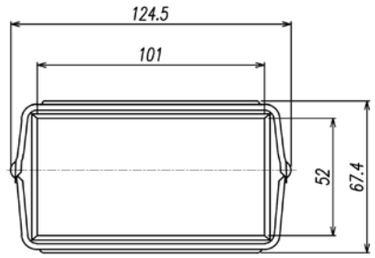
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Specification

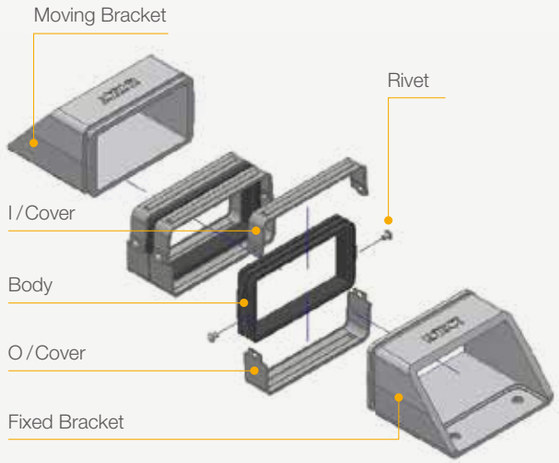
TYPE	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
KCF115	100 (3.937)	25 (0.984)	273 (10.748)	420 (16.535)	2.94	FA : 0.32 FC :0.26
	140 (5.5118)		353 (13.913)	550 (21.653)		
	225 (8.858)		523 (20.591)	810 (31.889)		
	300 (11.811)		673 (26.496)	1,050 (41.339)		

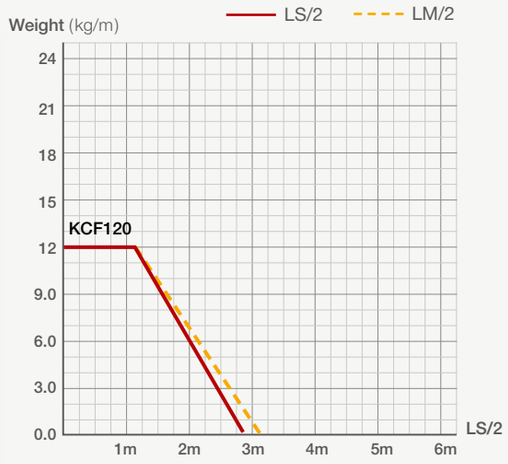
(1inch = 25.4mm)

CalmlyFlex

KCF120

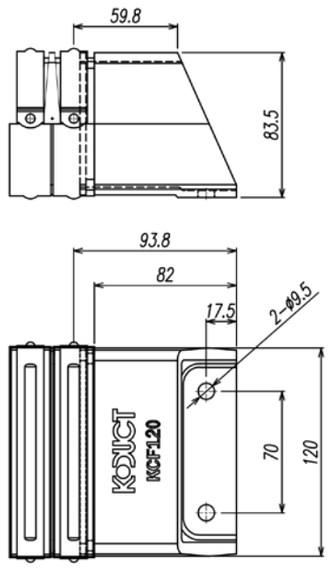
Structure





[Load Diagrams Self-Supporting Length]

End Bracket



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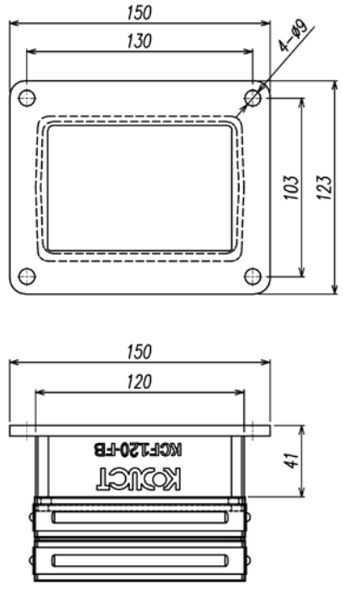
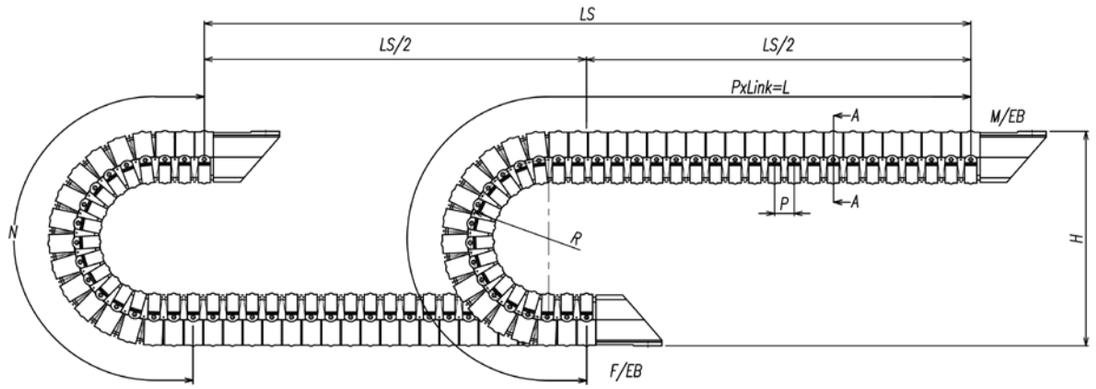


[FB Type]

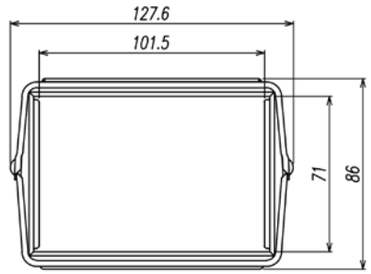
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Specification

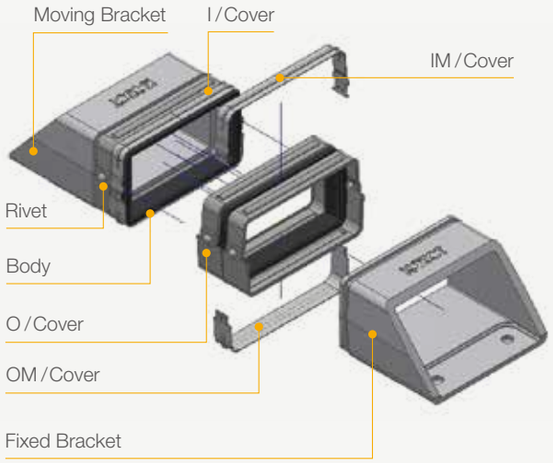
TYPE	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
KCF120	150 (5.901)	25 (0.984)	392 (15.43)	580 (22.835)	3.94	FA : 0.39 FC :0.45
	200 (7.874)		492 (19.37)	730 (28.740)		
	225 (8.858)		542 (21.339)	810 (31.889)		
	300 (11.811)		692 (27.244)	1,050 (41.339)		

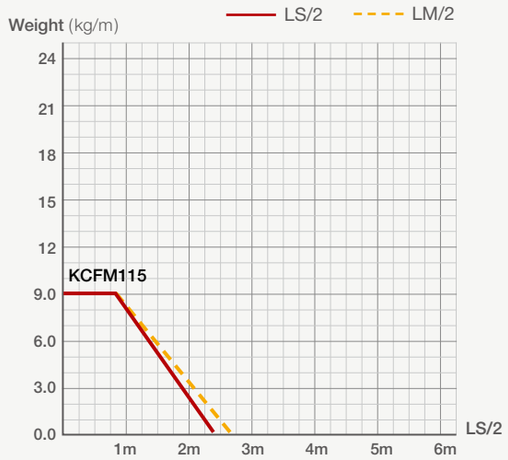
(1inch = 25.4mm)

CalmlyFlex

KCFM115

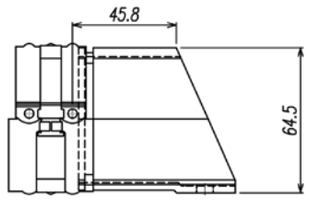
Structure

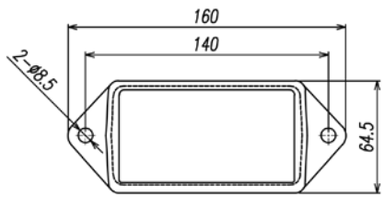


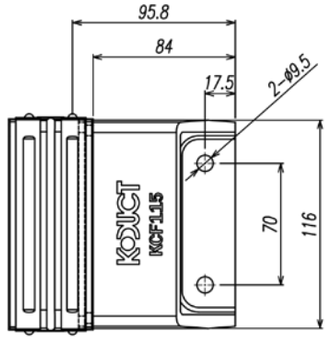


[Load Diagrams Self-Supporting Length]

End Bracket







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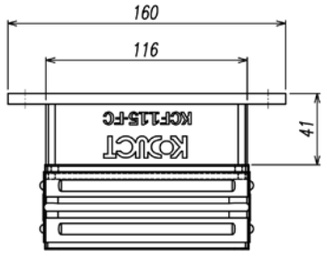
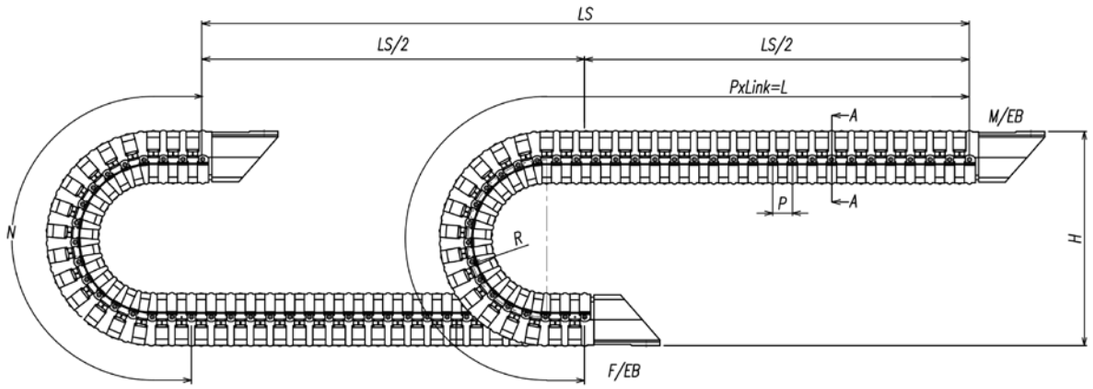


[FC Type]

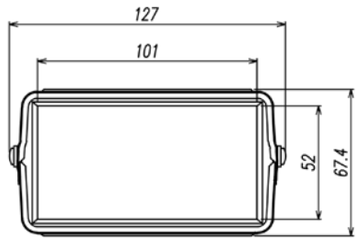
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Specification

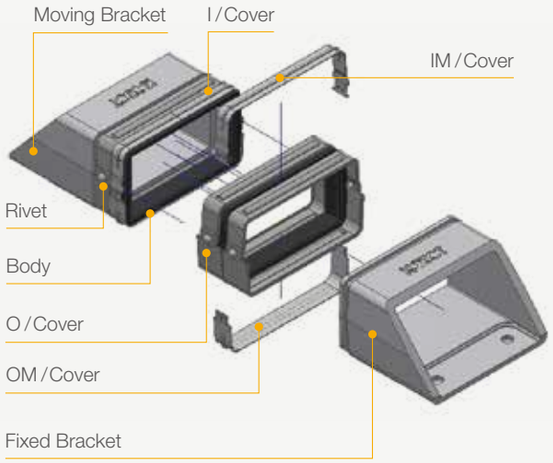
TYPE	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
KCFM115	100 (3.937)	25 (0.984)	273 (10.748)	420 (16.535)	3.82	FA : 0.32 FC :0.26
	140 (5.5118)		353 (13.913)	550 (21.653)		
	225 (8.858)		523 (20.591)	810 (31.889)		
	300 (11.811)		673 (26.496)	1,050 (41.339)		

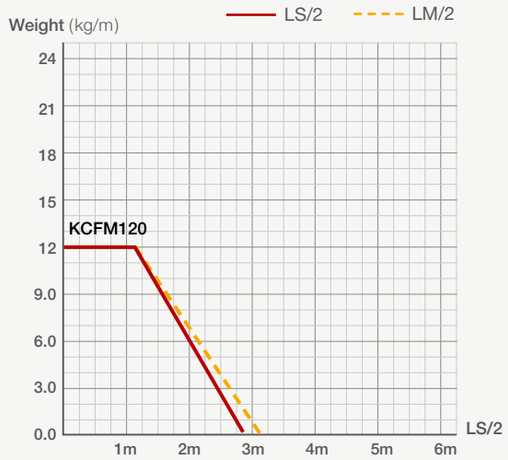
(1inch = 25.4mm)

CalmlyFlex

KCFM120

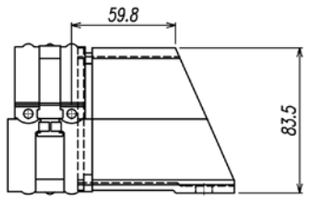
Structure

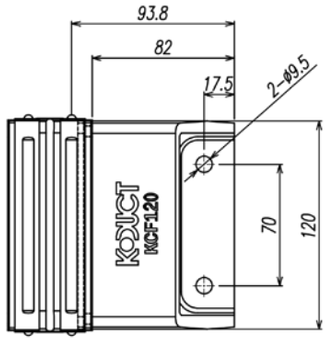




[Load Diagrams Self-Supporting Length]

End Bracket





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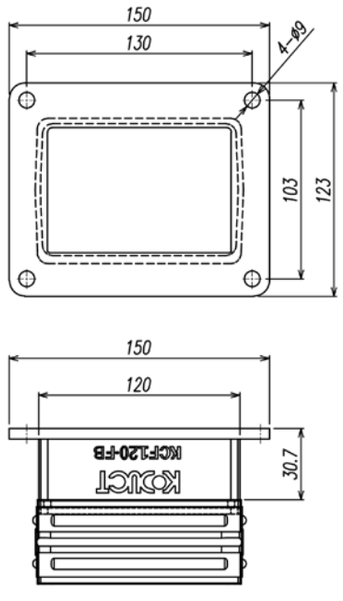
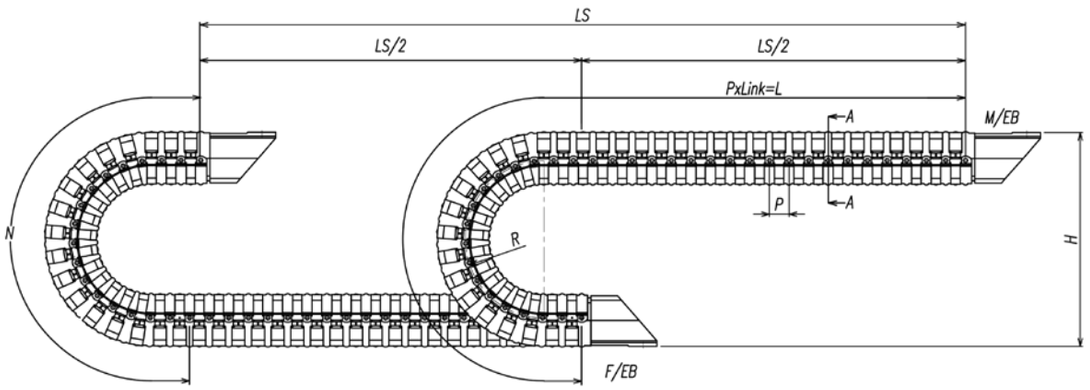


[FB Type]

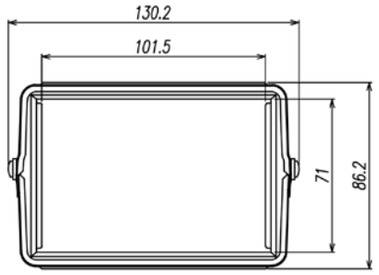
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A

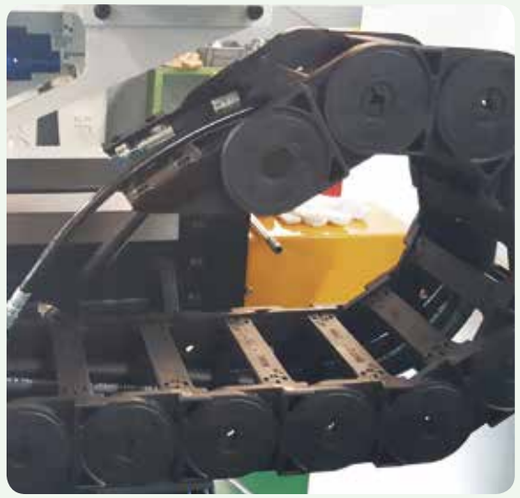


Specification

TYPE	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
KCFM120	150 (5.901)	25 (0.984)	392 (15.43)	580 (22.835)	4.82	FA : 0.39 FC :0.45
	200 (7.874)		492 (19.37)	730 (28.740)		
	225 (8.858)		542 (21.339)	810 (31.889)		
	300 (11.811)		692 (27.244)	1,050 (41.339)		

(1inch = 25.4mm)

KCFM120



Additional Carrier

I KP357 I CDP091 I CDM091 I KDP100 I KDM100 I

• **KP357** Page : I 03

• **CDP091** Page : I 05

• **CDM091** Page : I 07

• **KDP100** Page : I 09

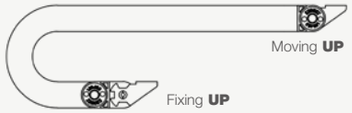
• **KDM100** Page : I 11

Additional Carrier Features

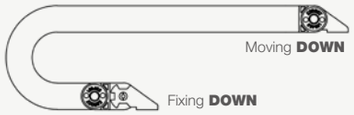
End Bracket Setting Example

• **Type 1 :** MU/FD(UD)

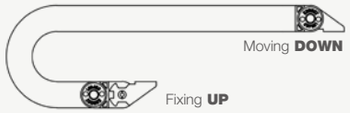
• **Type 2 :** MU/FU(UU)



• **Type 3 :** MD/FD(DD)

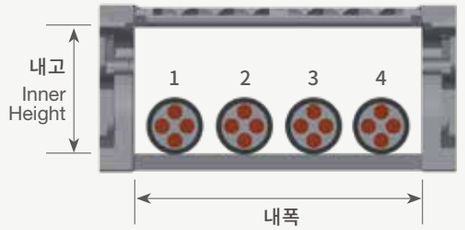


• **Type 4 :** MD/FU(DU)



Cable Carrier Specification Selection

케이블 캐리어 사양 선정



① 케이블 캐리어 내고 설정
Cable Carrier Inner Height Setting

전선, 혹은 호스의 가장 큰 외경을 기준으로 하며 약 20% UP 하여 사양에 맞는 내고를 선정한다.

Based on the largest external diameter of a cable or hose, approximately 20% up to select the inner height that meets the specifications.

② 케이블 캐리어 내폭 설정
Cable Carrier Inner Width Setting

전선, 혹은 호스의 외경(1+2+3+4)에 약 25% UP하여 사양에 맞는 내폭을 선정한다.

Select inner width according to the specification by increasing about 25% of cable and hose's outer diameter(1+2+3+4).

③ 케이블 캐리어 곡률반경 설정
Cable Carrier Radius Setting

전선, 혹은 호스의 곡률반경에 맞게 선정한다. 케이블 캐리어의 곡률반경이 전선, 혹은 호스의 곡률반경 사양 대비 큰 설정은 문제가 없지만 작은 설정은 쓸림에 의한 마모나 전선 혹은 호스에 대한 케이블 캐리어의 반작용이 발생할 수 있다.

Select for the radius of a cable or hose.
If the cable carrier radius is bigger than cable or hose, it is not a problem. But if it is smaller setting, it may cause wear due to wiping or the reaction of the cable carrier to the cable or hose.

전선 : Electronic Cables	에어호스 : Pneumatic Hoses	유압호스 : Hydraulic Hoses
케이블 외경에 6~8배 R min > 6~8 x Φ	에어호스 외경에 8~10배 R min > 8~10 x Φ	유압호스 외경에 12~15배 R min > 12~15 x Φ

④ 케이블 캐리어 길이 설정
Cable Carrier Length Setting (calculation)

장비의 행정거리 1/2 여유길이 N(Safety Length + πr) 값을 더하면 케이블 캐리어 전체 길이가 된다.
("N"값 : PAGE 10 및 각제품의 Specification 참조)

The cable carrier's total length is half of the equipment's total travel length and adding an extra length of N (Safety Length + πr) value. ("N": See PAGE10 and Specifications for each product)

(mm)

Order Form

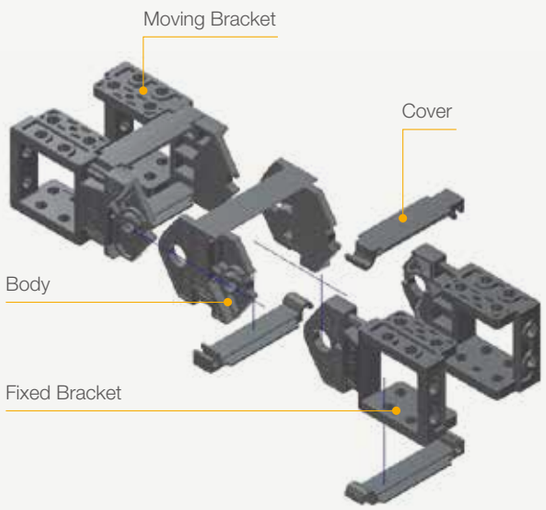
EX) **CDP100 - W250 - R200 - 3990L - SETUD**

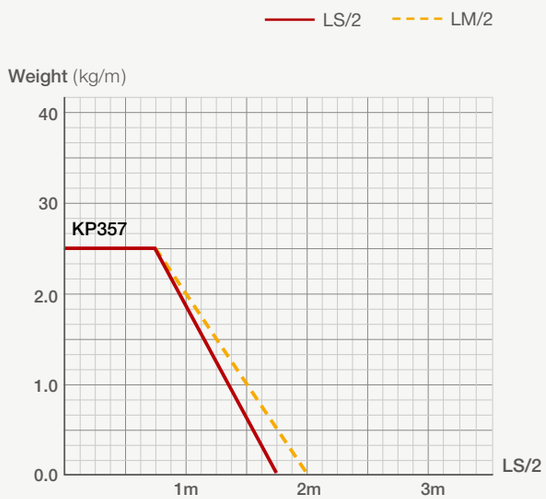
제품타입 Type	내폭 Width	곡률 Radius	길이 Length	브라켓 조립방향 End Bracket Setting

Additional Carrier

KP357

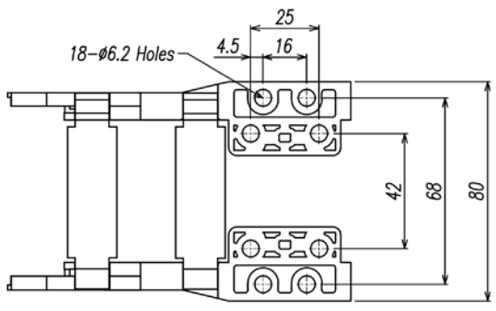
Structure



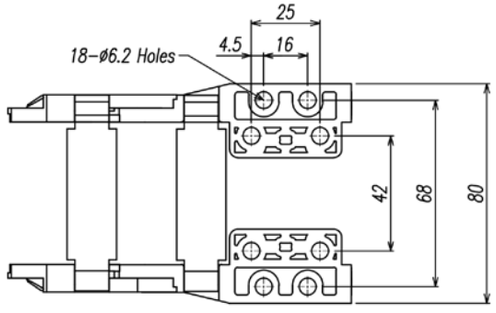


[Load Diagrams Self-Supporting Length]

End BRACKET

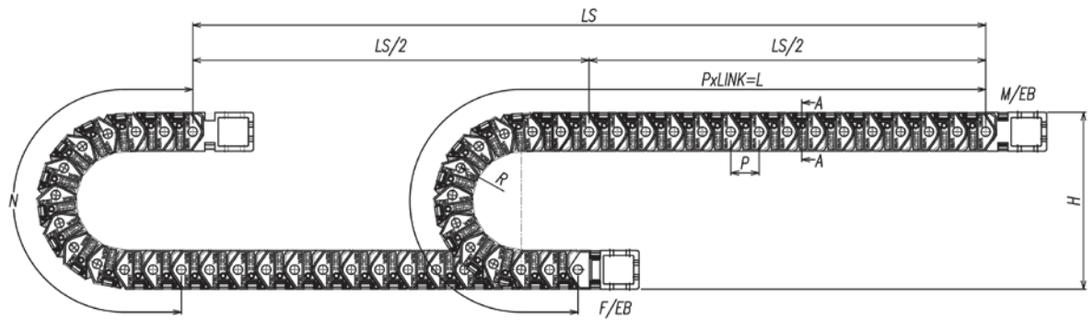


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

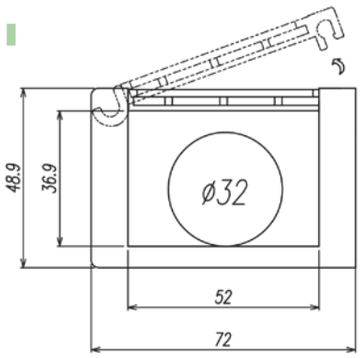
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
KP357	52 (2.047)	75 (2.952)	35 (1.406)	196.9 (7.752)	380 (14.961)	1.01	0.11
		87 (3.425)		221.7 (8.728)	420 (16.535)		
		100 (3.937)		248.9 (9.799)	460 (18.110)		
		125 (4.921)		298.8 (11.764)	540 (21.260)		
		150 (5.906)		348.7 (13.728)	620 (24.409)		
		200 (7.874)		448.2 (17.646)	780 (30.709)		

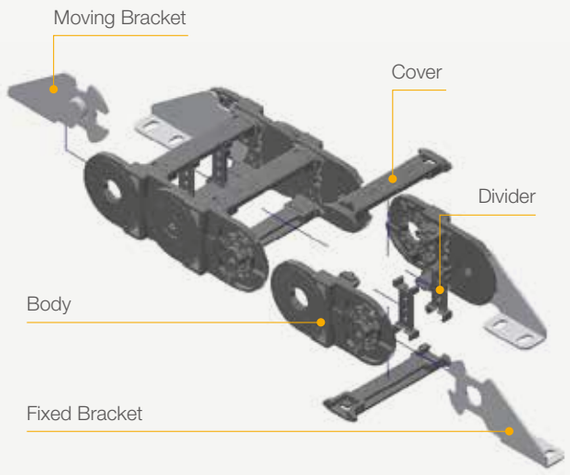
(1inch = 25.4mm)

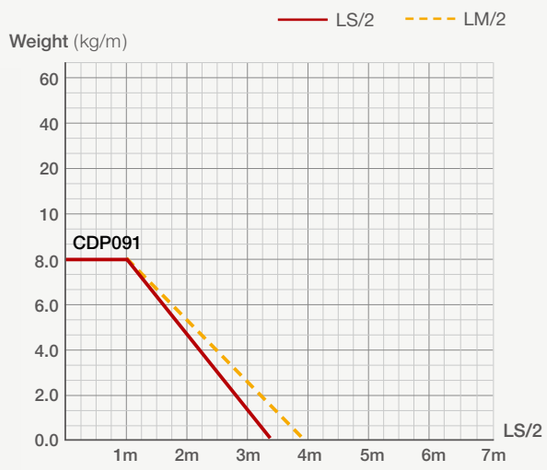
KP357

Additional Carrier

CDP091

Structure





[Load Diagrams Self-Supporting Length]

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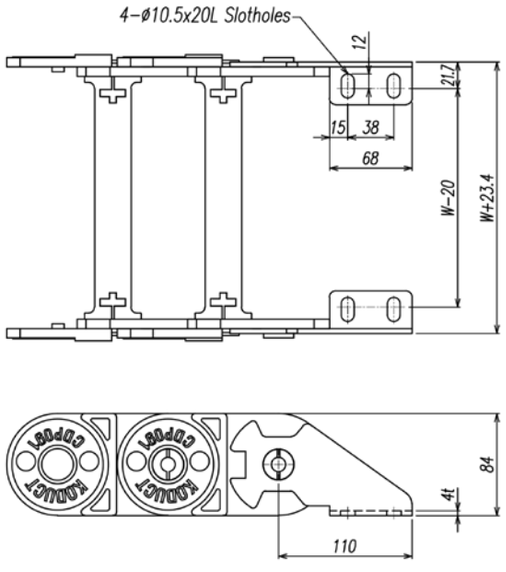
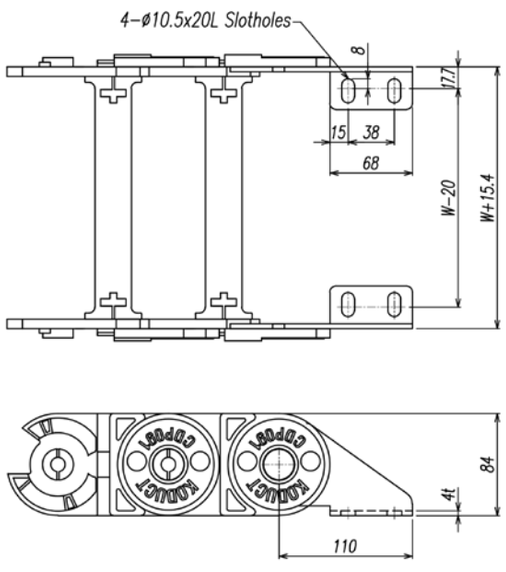
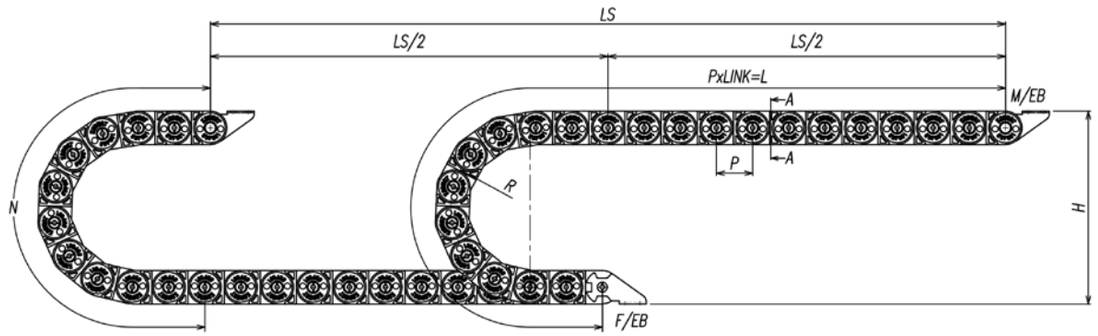


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

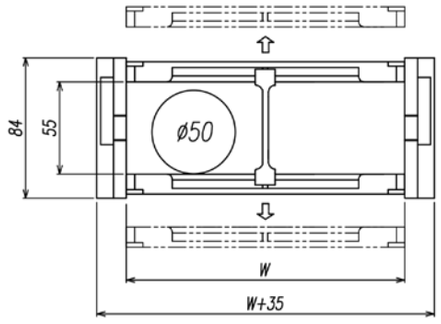
Carrier Link



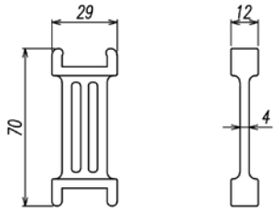
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDP091	100 (3.937)	150 (5.906)	91 (3.583)	384 (15.118)	835 (32.874)	1	2.941	1.080
	150 (5.906)					2	3.263	
	200 (7.874)	200 (7.874)		484 (19.055)	992 (39.055)	2	3.483	
	250 (9.843)					3	3.700	
	300 (11.811)	250 (9.843)		584 (22.992)	1,149 (42.236)	3	4.114	
	350 (13.780)	300 (11.811)		684 (26.929)	1,306 (51.417)	4	4.216	
	400 (15.748)					4	4.568	

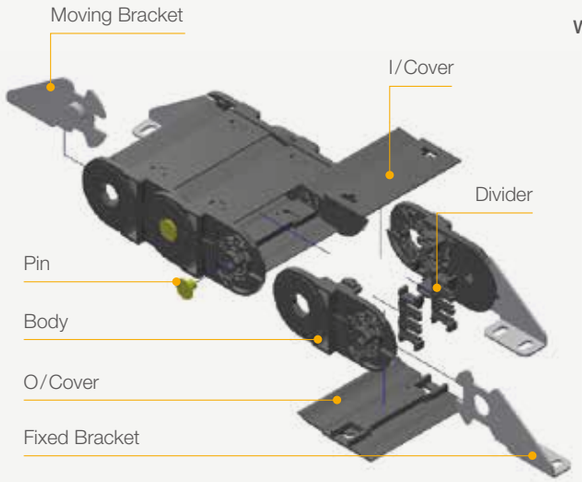
(1inch = 25.4mm)

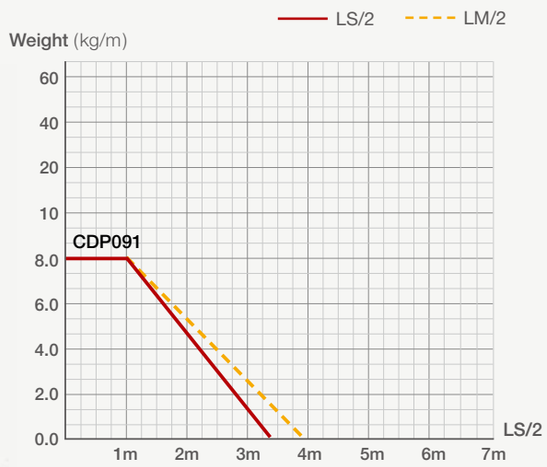
CDP091

Additional Carrier

CDM091

Structure





[Load Diagrams Self-Supporting Length]

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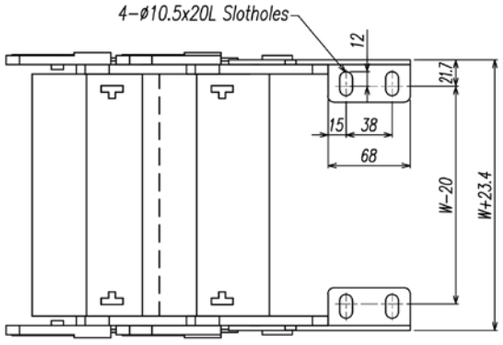
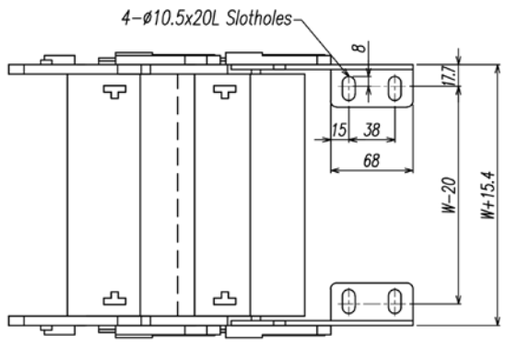
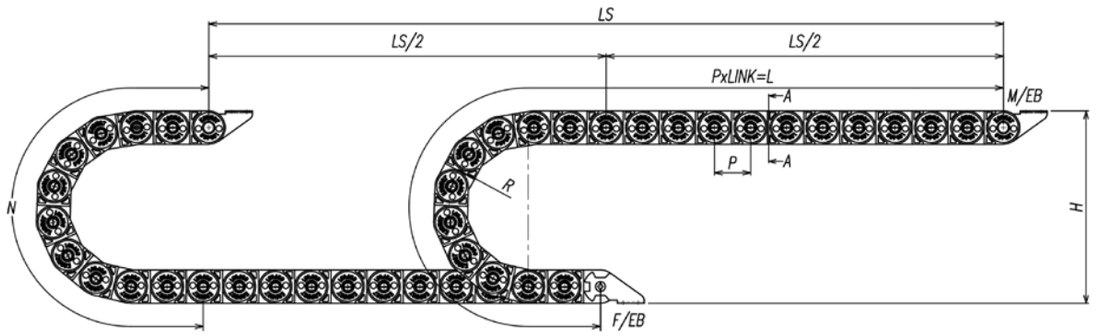


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

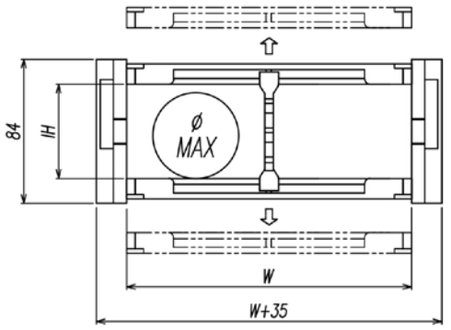
Carrier Link



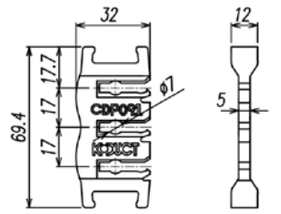
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	IH mm (inch)	ØD MAX	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
CDM091	150 (5.906)	150 (5.906)	91 (3.583)	41 (1.850)	Ø25	384 (15.118)	835 (32.874)	2	4.126	1.080
	200 (7.874)	200 (7.874)		51 (2.008)	Ø33	484 (19.055)	992 (39.055)	2	4.700	
	250 (9,843)	250 (9.843)		55 (2.165)	Ø51	584 (22.992)	1,149 (45.236)	3	5.229	
	300 (11.811)	300 (11.811)		55 (2.165)		684 (26.929)	1,306 (51.417)	3	5.908	

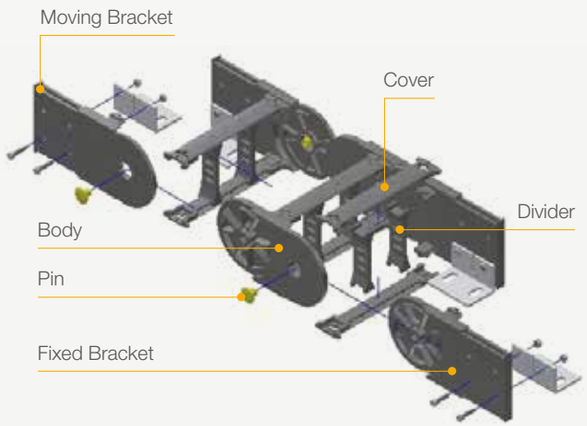
(1inch = 25.4mm)

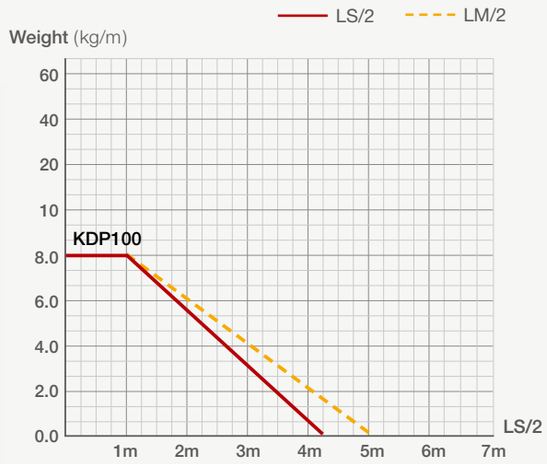
CDM091

Additional Carrier

KDP100

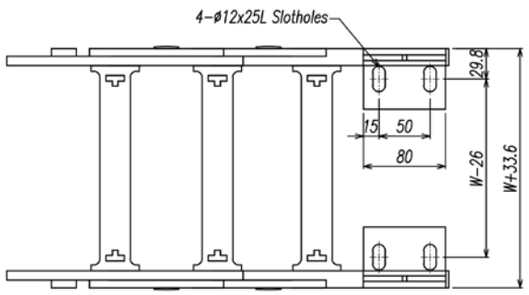
Structure

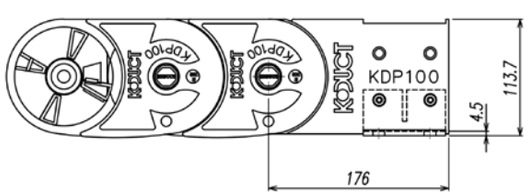




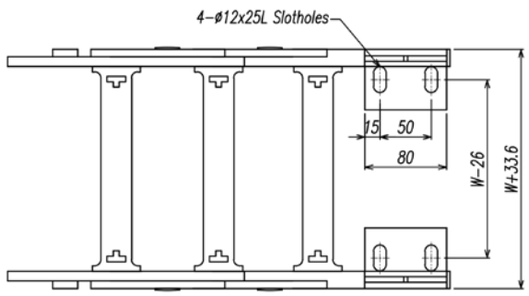
[Load Diagrams Self-Supporting Length]

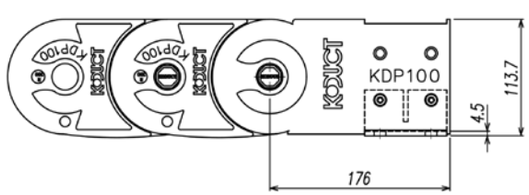
End BRACKET





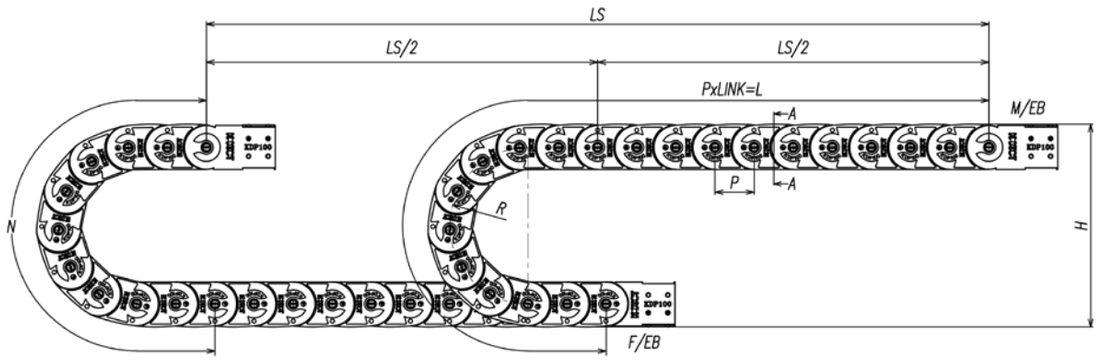
[Fixed Bracket (F/EB)]





[Moving Bracket (M/EB)]

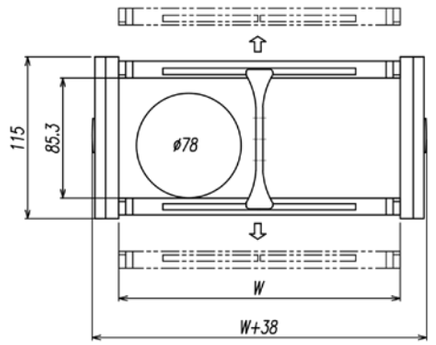
Carrier Link



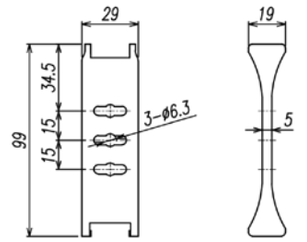
$$\left[L = \frac{LS}{2} + N \right]$$

• **LS :** Total Machine Travel • **L :** Length • **N :** Safety Length+πr • **P :** Pitch
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

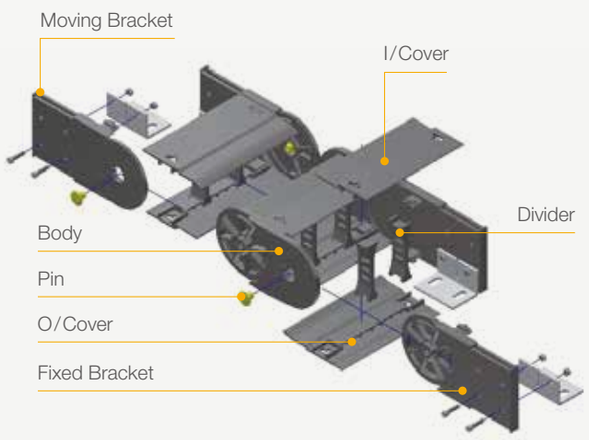
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KDP100	100 (3.937)	150 (5.906)	100 (3.937)	418 (16.457)	871 (34.291)	1	3.860	1.870
	150 (5.906)	200 (7.874)		518 (20.394)	1,028 (40.472)	2	6.090	
	200 (7.874)	250 (9.843)		618 (24.331)	1,185 (46.653)	2	6.290	
	250 (9.843)	300 (11.811)		718 (28.268)	1,342 (52.835)	3	6.554	
	300 (11.811)	350 (13.780)		818 (32.205)	1,499 (59.016)	3	6.930	
	350 (13.780)	400 (15.748)		918 (36.142)	1,656 (65.197)	4	7.090	
	400 (15.748)					4	7.410	

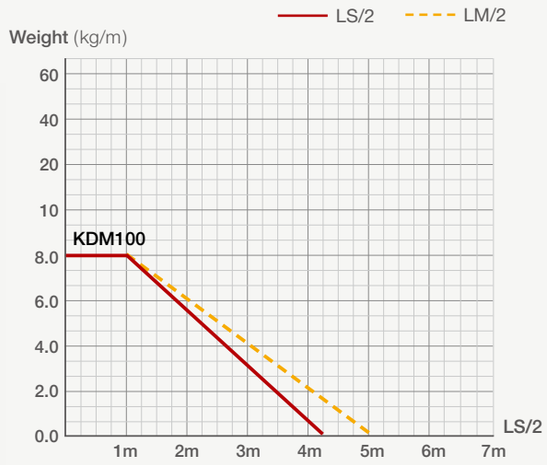
(1inch = 25.4mm)

Additional Carrier

KDM100

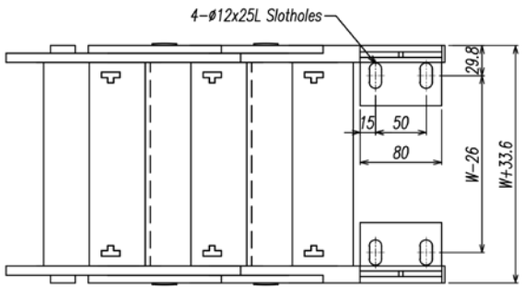
Structure



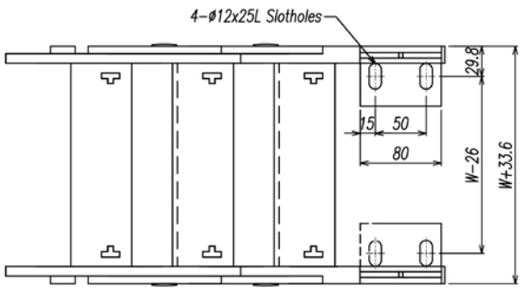


[Load Diagrams Self-Supporting Length]

End BRACKET

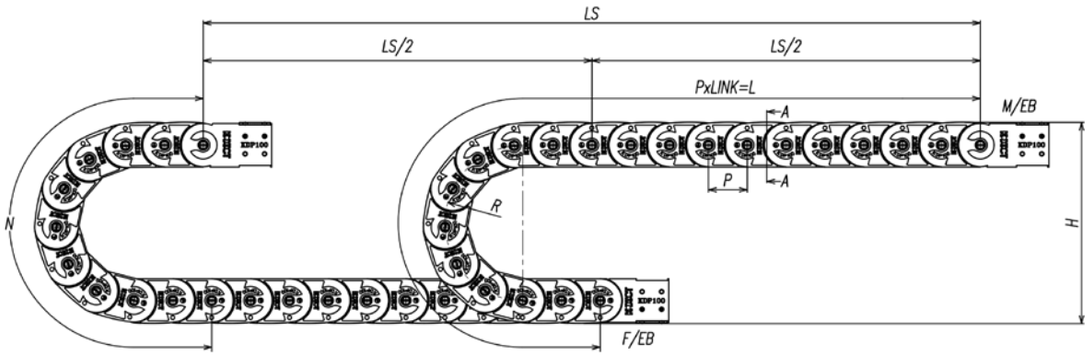


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

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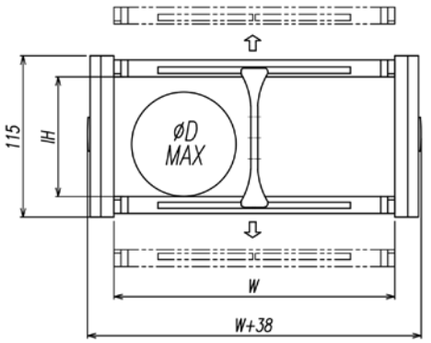
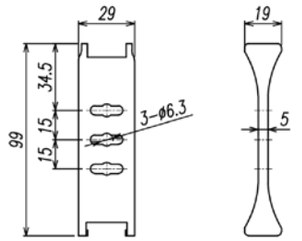
• **R :** Radius • **H :** Height • **F/EB :** Fixed Bracket • **M/EB :** Moving Bracket

Section A-A



Divider



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	IH mm (inch)	ØD MAX	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KDM100	150 (5.906)	200 (7.874)	100 (3.937)	63 (2.480)	Ø33	515 (20.394)	1,028 (40.472)	2	5.322	3.043
		250 (9.842)		66 (2.598)	Ø42	618 (24.331)	1,185 (46.653)			
	200 (7.874)	300 (11.811)		68 (2.677)	Ø50	718 (28.268)	1,342 (52.835)	2	5.746	
		350 (13.780)		68 (2.677)	Ø58	818 (32.205)	1,499 (59.016)			
	300 (11.811)	400 (15.748)		68 (2.677)	Ø64	918 (36.642)	1,656 (65.197)	3	7.199	

(1inch = 25.4mm)

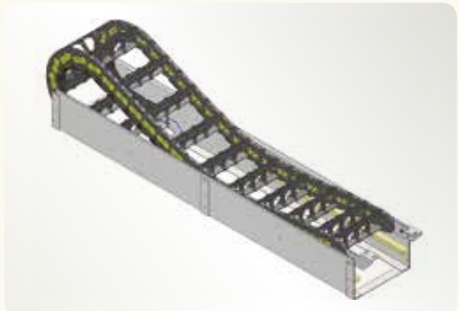
Guide Channel

SRS070 | SRS080 | SRS100 | SRS150 | KDPS070 | CDPS080 | CDPS100 |
KH526/S | KHA526/S | KHA91/S | KHA92/S | CDKSL095 | CDKSL130 | CDKHL095 | CDKHL130

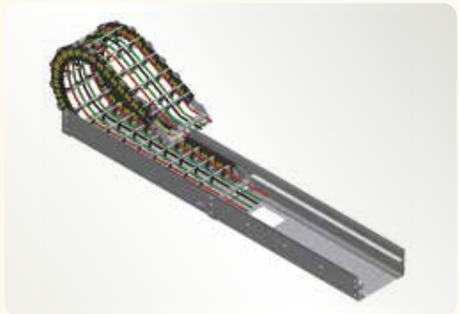
Guide Channel

Guide Channel은 케이블 캐리어의 원활한 직선운동을 위한 가이드역할을 한다. 동작 중 케이블 캐리어의 좌, 우 흔들림에 의한 휨 현상이나 무빙단 집중응력에 의한 케이블 캐리어 파손을 최대한 방지 하기 위해 사용한다. 케이블 캐리어의 충격 혹은 진동에 의한 소음을 최소화 하기 위한 구조로 되어 있다.

Guide Channel is guide for smooth straight-line movement of cable carriers. It is used to prevent damage to the cable carrier by bending due to left and right allowance tolerances or moving point stress concentration. The structure is designed to minimize noise caused by shock or vibration in cable carriers.

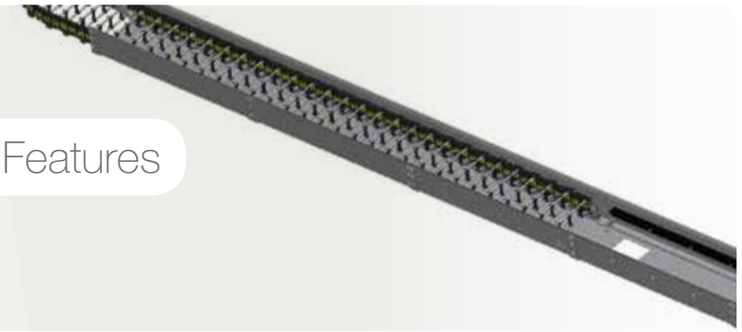


Fork Carrier



Hybrid Carrier

Steel Carrier Type



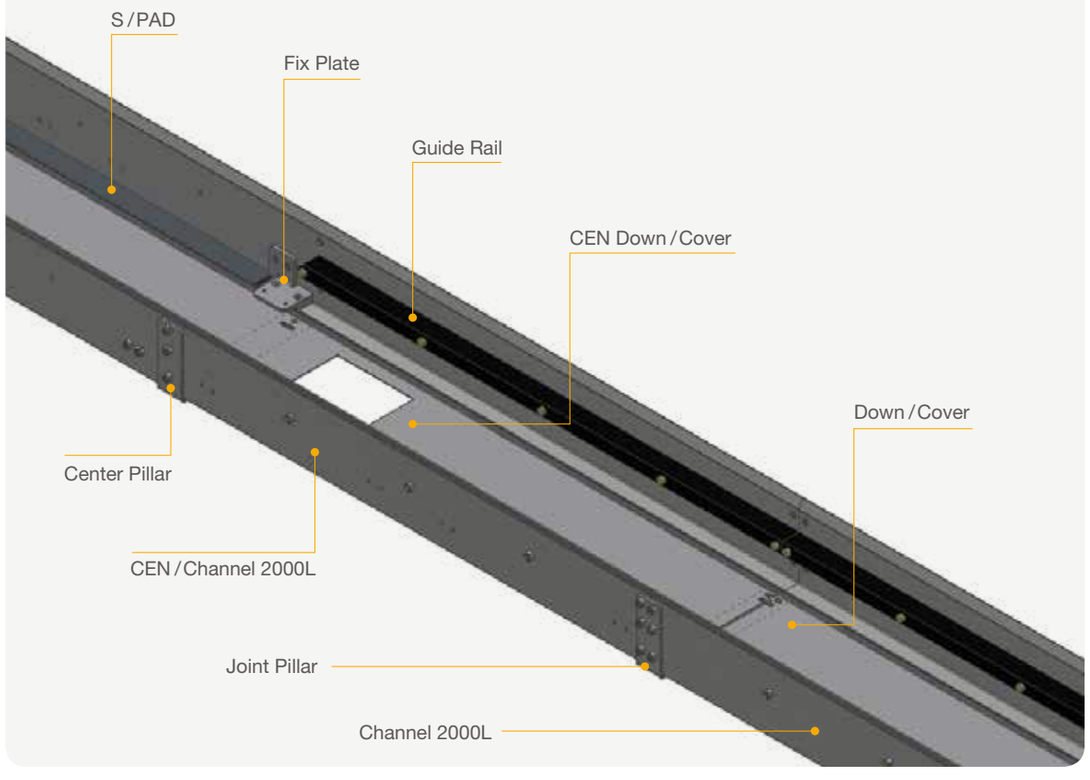
Guide Channel Features

Guide Channel 특징

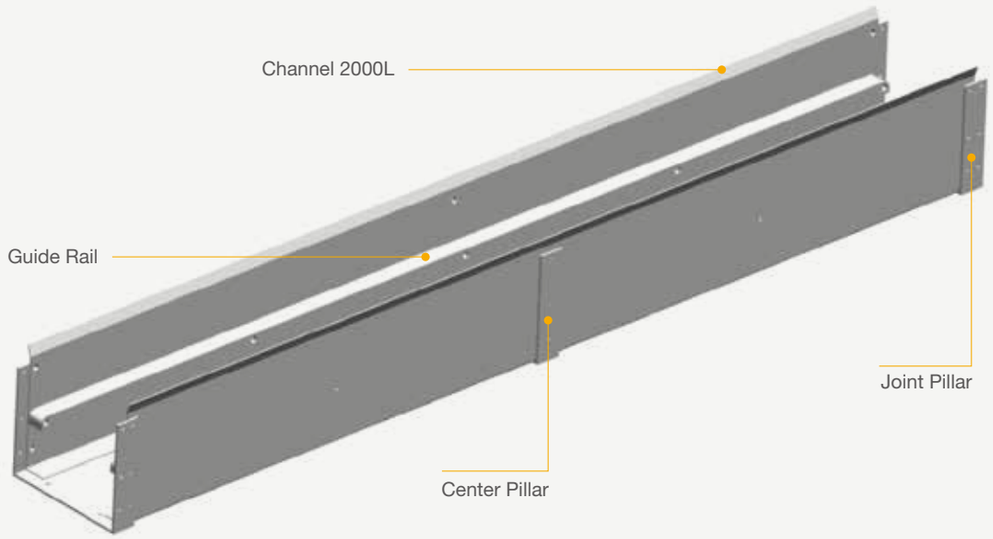
Guide Channel은 케이블 캐리어의 원활한 직선운동을 위한 가이드 역할을 하며 가이드 잔넬 내폭은 작동범위 내에서 케이블 캐리어의 응력 집중을 최소화 하기 위한 최대치로 설정되어 있다. 또한 잔넬의 가이드레일은 PE 또는 STEEL을 사용하여 케이블 캐리어 혹은 가이드레일의 마모를 최소화 하였다. Special Type의 가이드 잔넬은 소음 및 분진을 최소화 하기 위해 패드 및 다운커버를 사용 하였으며 가이드레일의 재질은 사용환경에 따라 플라스틱 또는 스틸이 적용된다.

Guide Channel serves as a guide for smooth straight-line motion of the cable carrier, and the guide channel width is set to a maximum to minimize stress concentration of the cable carrier within its operating range. In addition, the guide rail of the channel uses PE or STEEL to minimize wear on the cable carrier or guide rail. Special Type guide channel uses pads and down/cover to minimize noise and dust, and the material of the guide rail is plastic or steel depending on the use environment.

Special Type Structure



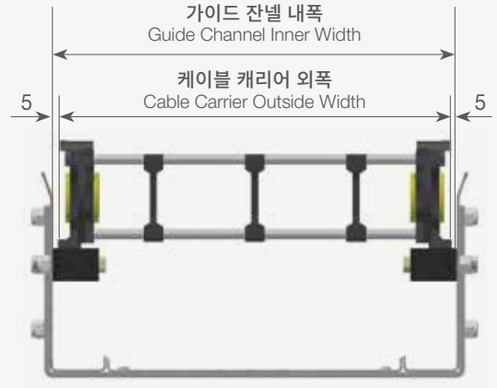
Normal Type Structure



Guide Installation Guide 설치

Guide Channel 내폭과 케이블 캐리어 외폭의 여유가 5(±2)mm 이하 혹은 이상일 때 좌, 우 작동범위가 너무 크거나 작아 가이드 잔넬 내측 작동이 원활하지 않아 케이블 캐리어가 작동범위 내에서 이탈이 발생하여 케이블 캐리어 자체 혹은 무빙단 응력집중에 의한 케이블 캐리어 파손이 발생할 수 있다. Guid Channel 설치시 상하 수평 공차는 ±2mm를 적용하여야 한다.

Gap of the **guide channel** width and the outer of the cable carrier width are must be equal to 5(±2)mm. If it more or less than 5(±2)mm, the left and right operating ranges are too large or too small, cable carrier's improper operation in the guide channel may cause cable carriers to deviate within the operating range and may cause damage to the cable carriers due to moving point stress concentration. It may be possible. When installing the Guide Channel, the horizontal tolerance above and below shall be applied ±2mm.Guide channel internal width, cable carrier external width.



Order Form

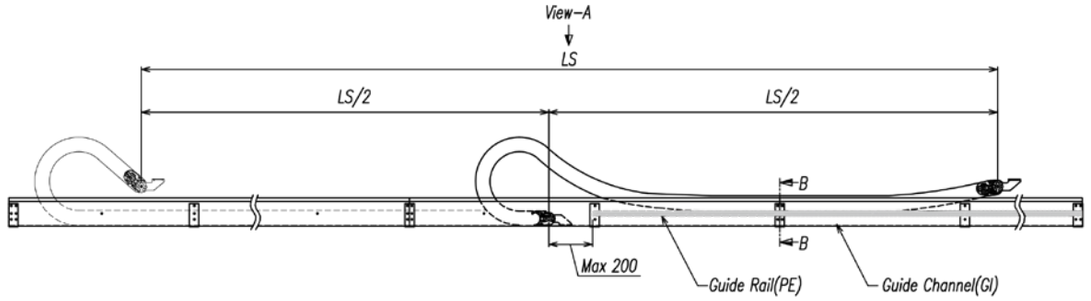
(mm)

EX) **S/GC - SRS100 - W250 - 30000L - SET**

가이드 잔넬 타입 Guide Channel Type	제품타입 Type	내폭 Width	길이 Length	수량 SET

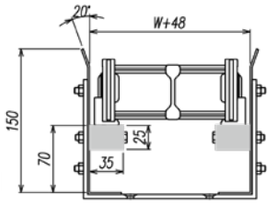
Guide Channel

Fork Carrier [Single] AL Bar Type

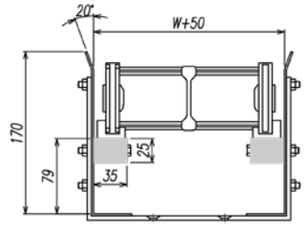


Section B-B

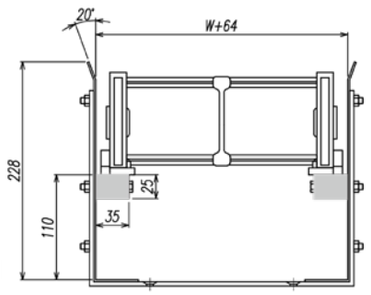
[**SRS**070]



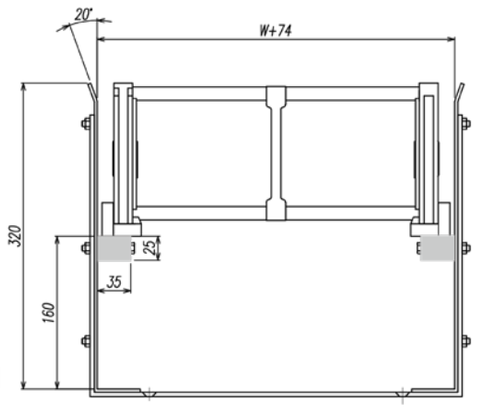
[**SRS**080]



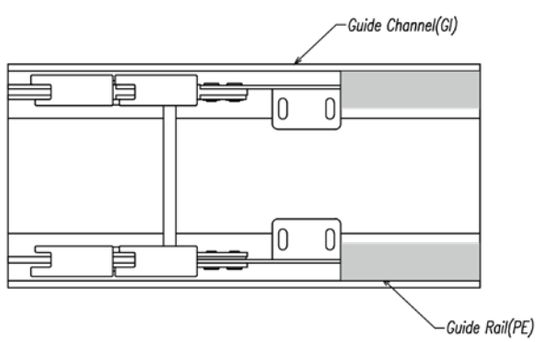
[**SRS**100]



[**SRS**150]

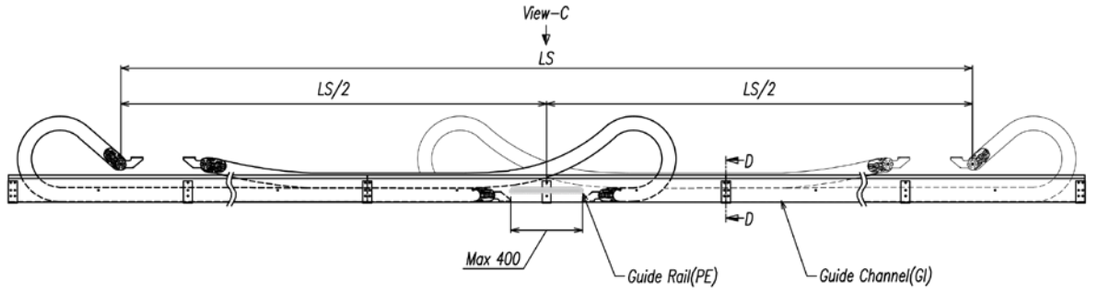


View-A



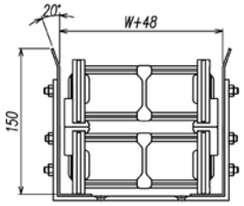
Guide Channel

Fork Carrier [Double] AL Bar Type



Section D-D

[**SRS**070]



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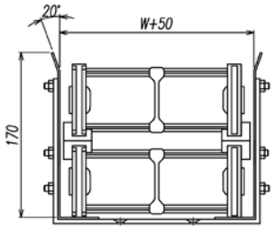
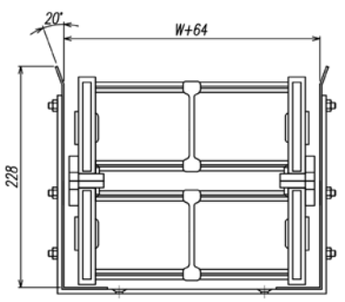
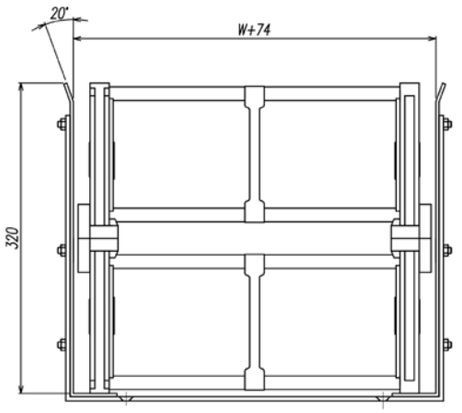


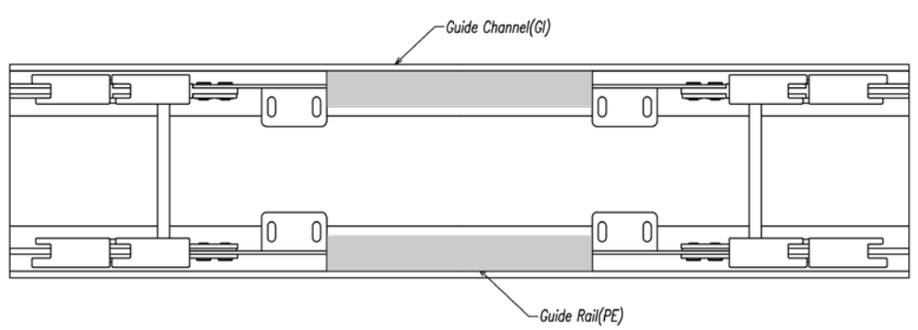
[**SRS**100]



[**SRS**150]

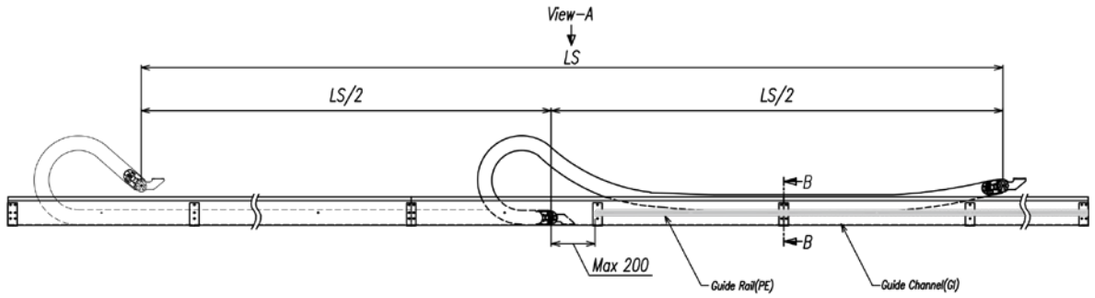


View-C



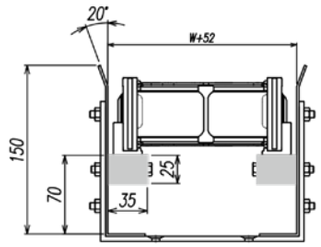
Guide Channel

Fork Carrier [Single] PL Cover Type

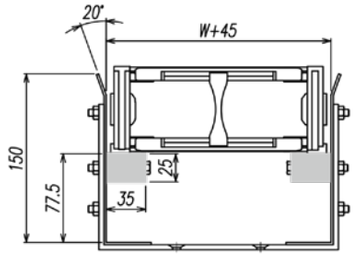


Section B-B

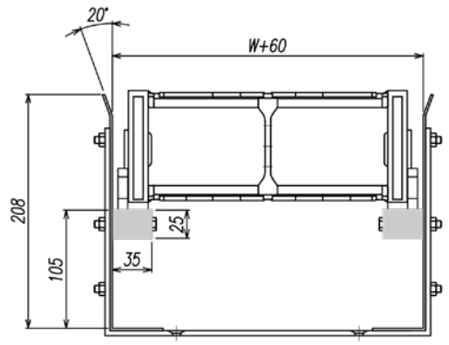
[**KDPS**070]



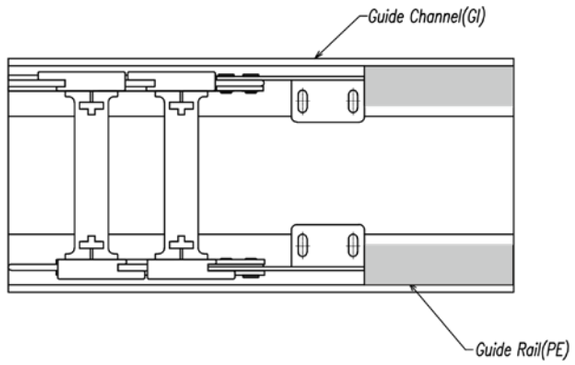
[**CDPS**080]



[**CDPS**100]

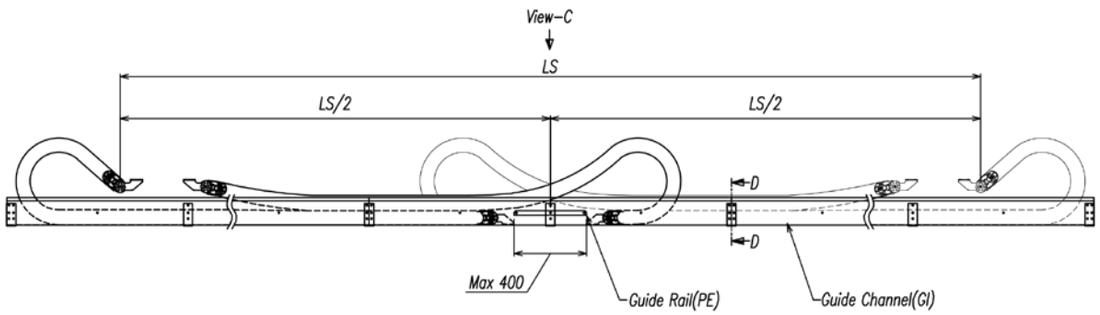


View-A



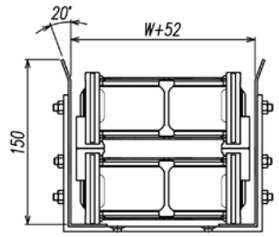
Guide Channel

Fork Carrier [Double] PL Cover Type



Section D-D

[**KDPS**070]



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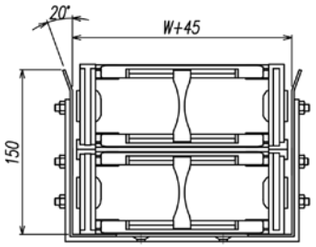
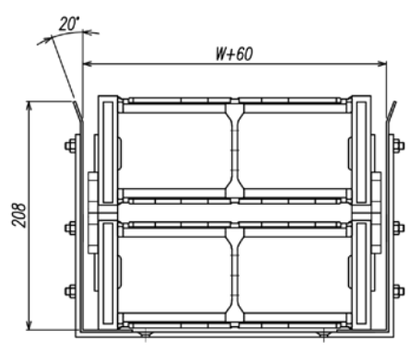
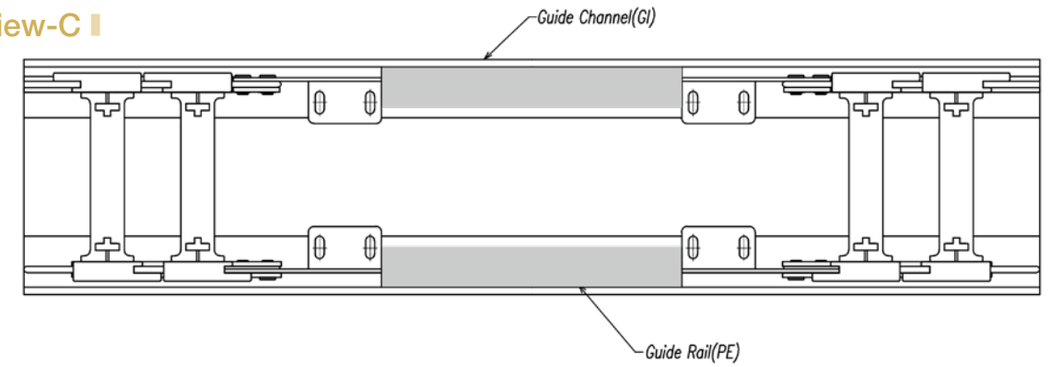


[**CDPS**100]

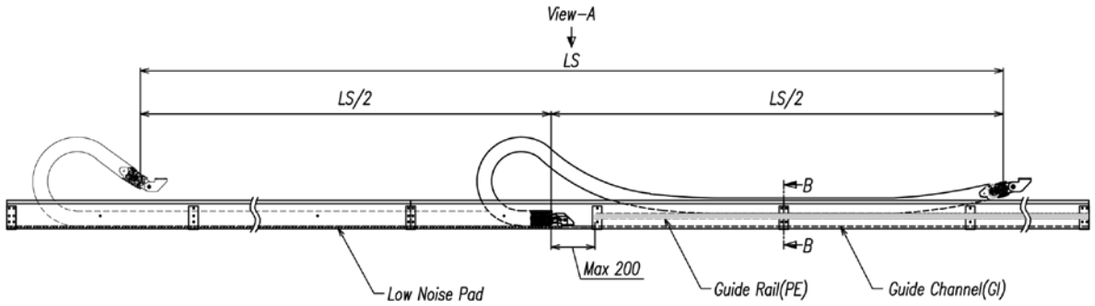


View-C



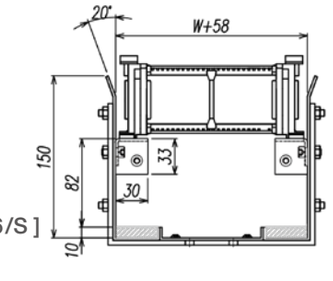
Guide Channel

Hybrid Carrier [Single]

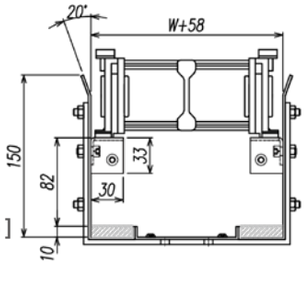


Section B-B

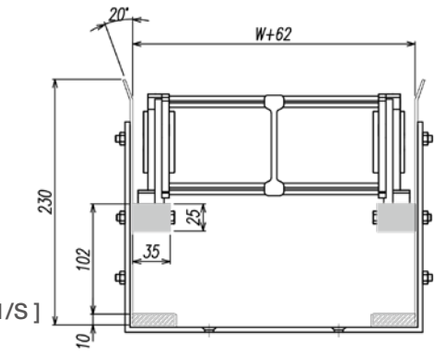
[**KH**526/S]



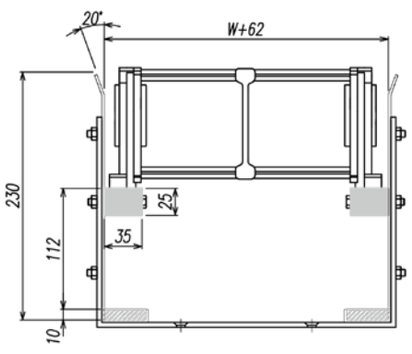
[**KHA**526/S]



[**KHA**91/S]

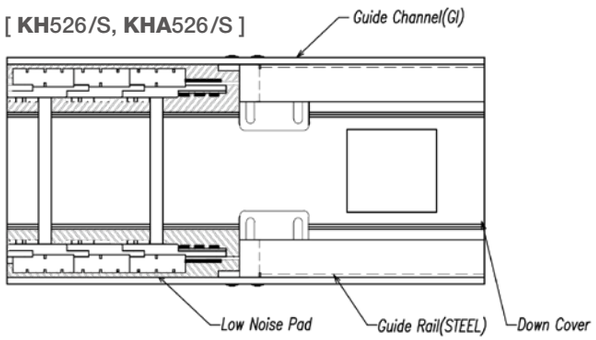


[**KHA**92/S]

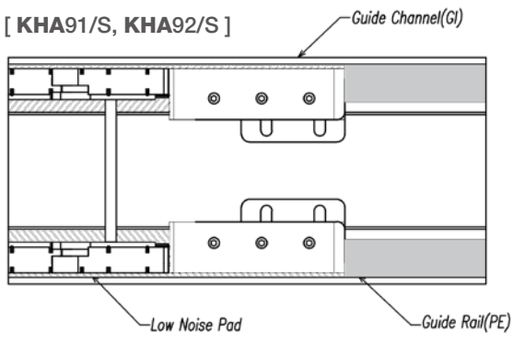


View-A

[**KH**526/S, **KHA**526/S]



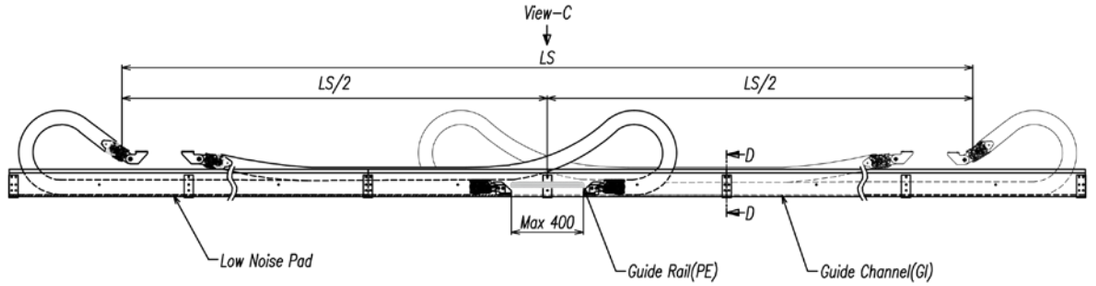
[**KHA**91/S, **KHA**92/S]



Special Type Guide Channel

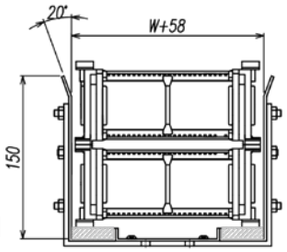
Guide Channel

Hybrid Carrier [Double]

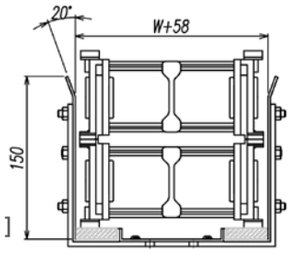


Section D-D

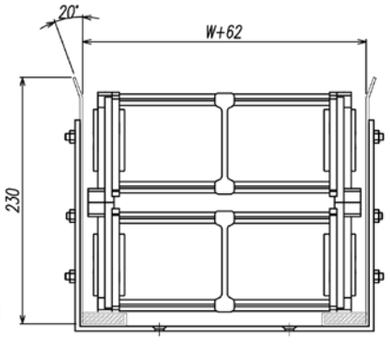
[**KH**526/S]



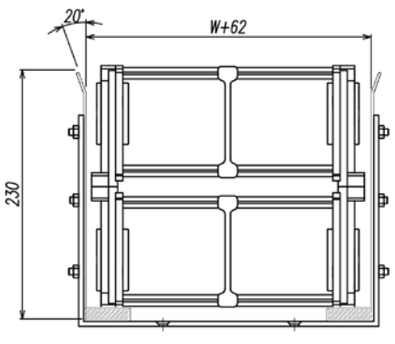
[**KHA**526/S]



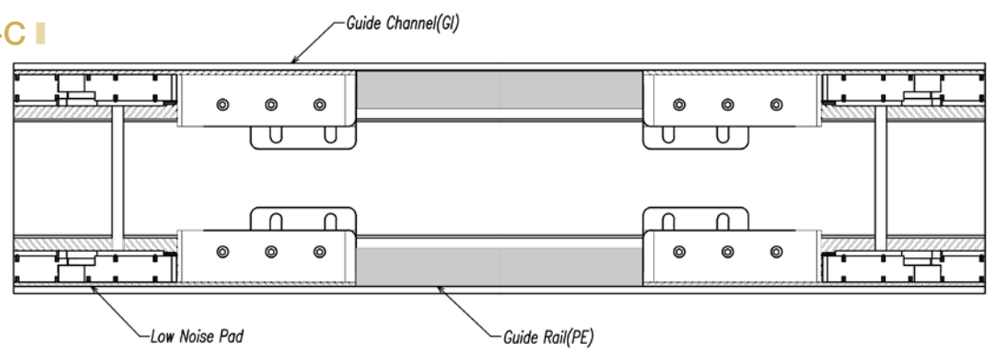
[**KHA**91/S]



[**KHA**92/S]

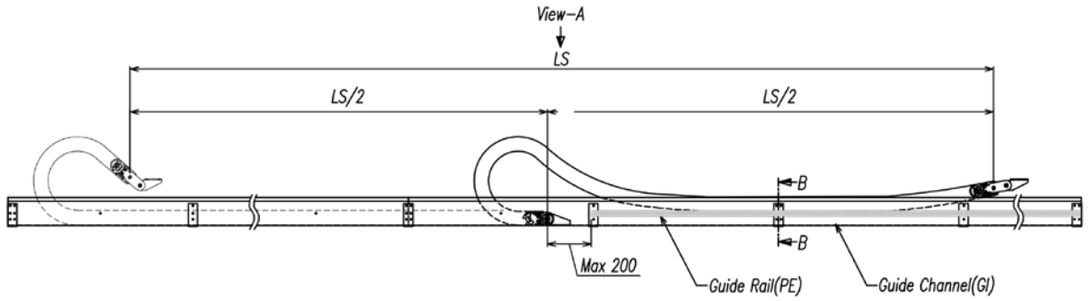


View-C



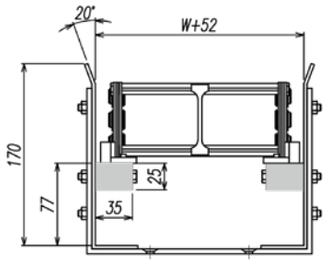
Guide Channel

Steel Carrier [Single]

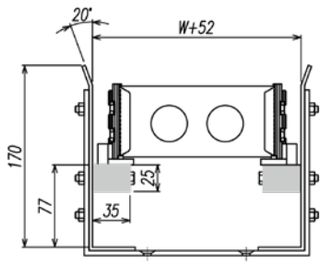


Section B-B

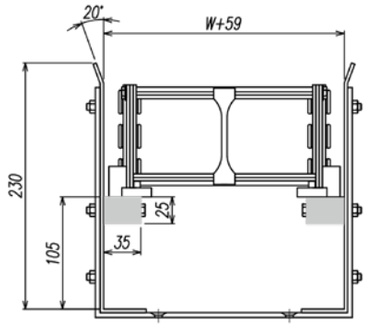
[**CDKSL**095]



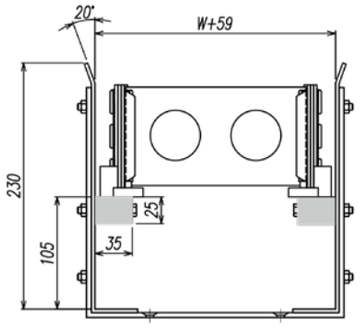
[**CDKHL**095]



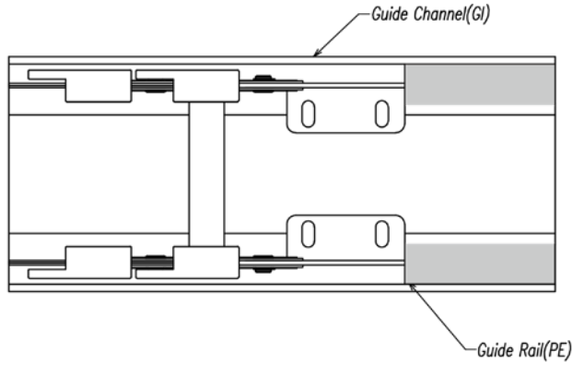
[**CDKSL**130]



[**CDKHL**130]

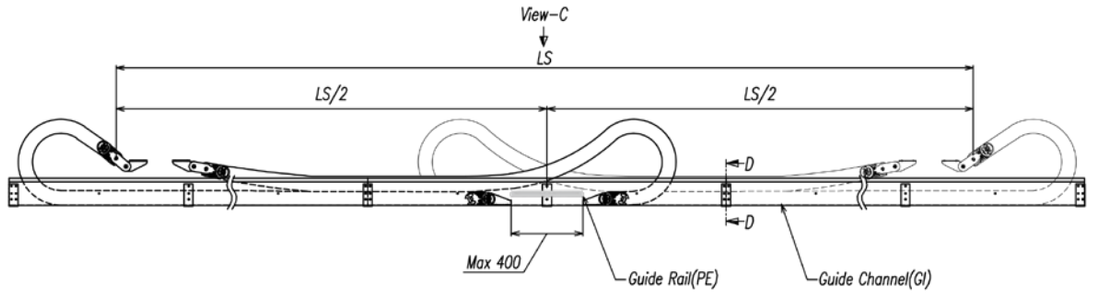


View-A



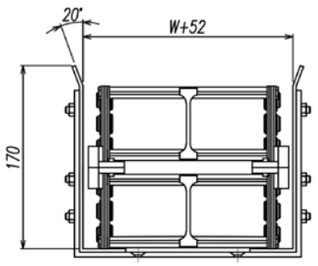
Guide Channel

Steel Carrier [Double]

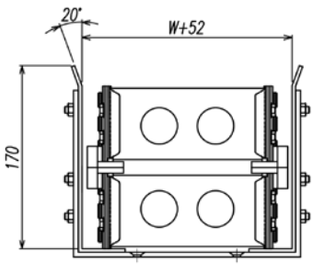


Section D-D

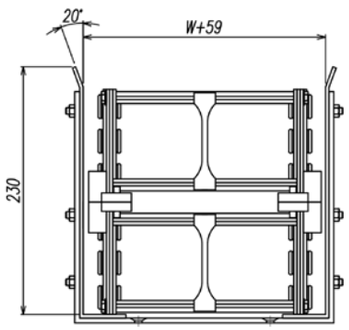
[**CDKSL**095]



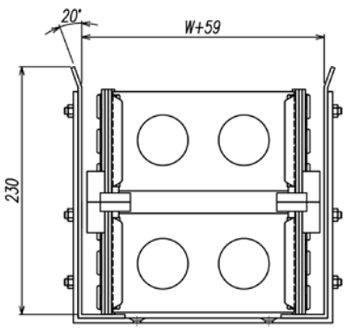
[**CDKHL**095]



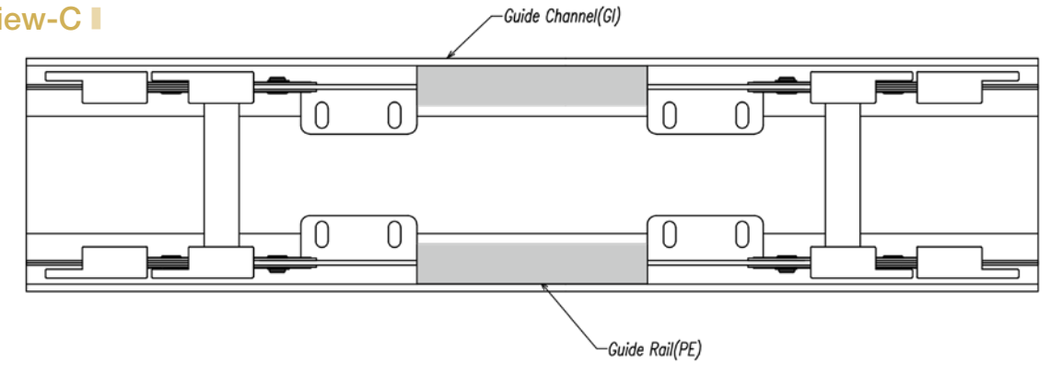
[**CDKSL**130]



[**CDKHL**130]

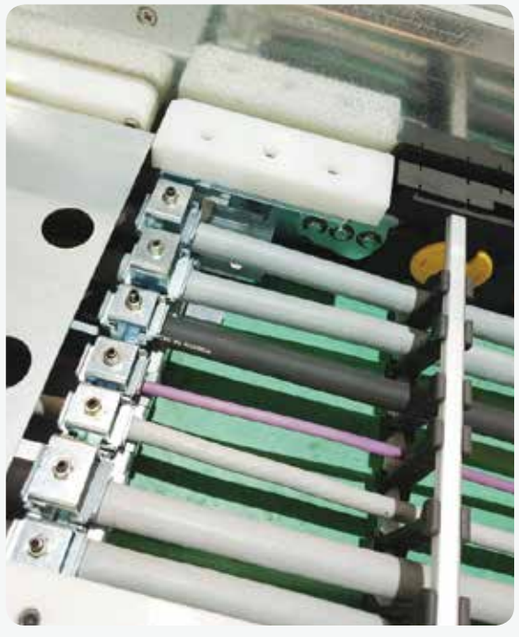


View-C



Cable Binder

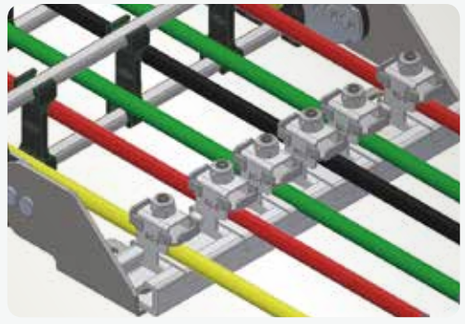
KCB-RAIL43 | KCB-RAIL22 | KCB-KC1 | KCB-KC2 | KCB-KC3 | KCB-HNGR/A | KCB-HNGR/B



Cable Binder

케이블 캐리어 작동시 케이블을 고정하지 않으면 케이블의 당김, 쓸림, 마모, 절단 등의 현상이 발생할 수 있다. 또한 케이블 캐리어의 커버 혹은 Al/Bar의 이탈, 휨으로 인한 케이블 캐리어의 파손이 발생한다. Cable Binder를 사용하여 위와 같은 현상을 방지 및 예방할 수 있어 품질이 안정적으로 유지 될 수 있다.

If the cable is not fixed during operation of the cable carrier, it may cause pulling, dragging, abrasion, cutting, etc. of the cable. Also, the cover of the cable carrier or the Al / Bar is dislodged or bent causing the cable carrier to break. Quality can be maintained stably by using Cable Binder to prevent the above phenomenon.



KCB Clamp Type

Cable Binder

- **KCB-RAIL43** Page : K 04
- **KCB-KC1** Page : K 04
- **KCB-KC2** Page : K 04
- **KCB-KC3** Page : K 04

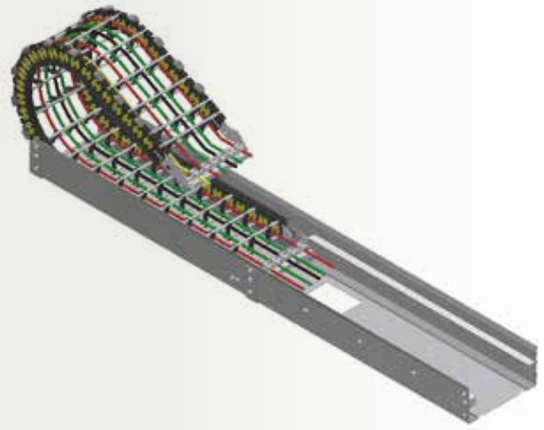
KCB Hanger Type

Cable Binder

- **KCB-RAIL43** Page : K 05
- **KCB-HNGR/A** Page : K 05
- **KCB-RAIL22** Page : K 06
- **KCB-HNGR/B** Page : K 06

Cable Binder

Cable Binder



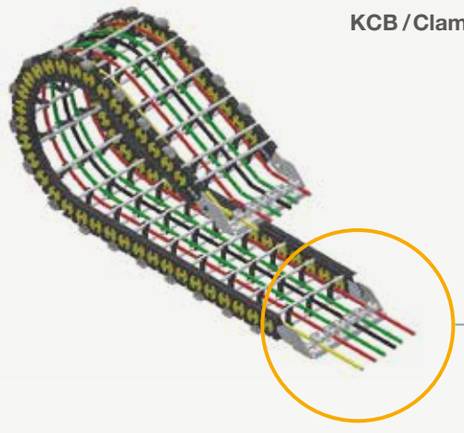
Cable Binder Features

Cable Binder 특징

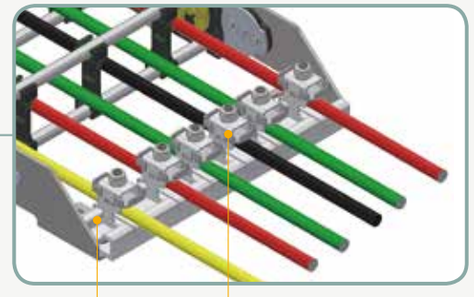
Cable Binder는 케이블 캐리어의 빠른 속도와 움직임으로 인해 발생하는 케이블, 호스 등의 쓸림, 꼬임을 방지하며 집중 부하에 의한 케이블의 끊김 및 케이블 캐리어의 커버 이탈 및 파손이 발생하지 않게 할 수 있다. 또한 깔끔하게 케이블 상태를 정렬 함으로서 케이블 당김 현상을 방지할 수 있어 케이블 유동에 의한 케이블 수명을 연장할 수 있다.

Cable Binder prevents cables, hoses, etc. from being dragging or twisted due to the fast speed and movement of the cable carrier, and prevents cable loss due to heavy load and cable carrier cover separation or breakage. Cable life cycle can be extended due to prevents cable shake also prevents cable pulling by aligning the cable state neatly.

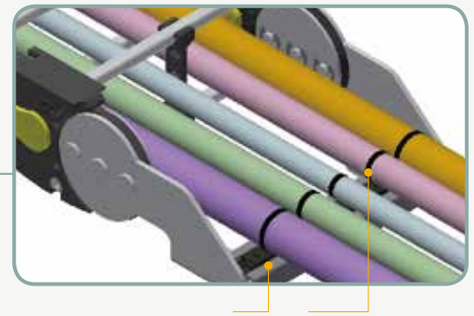
Structure



KCB / Clamp Type

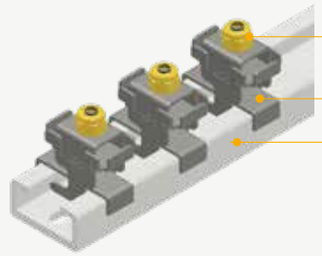


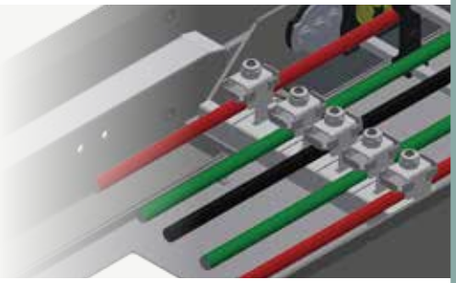
KCB / Hanger Type

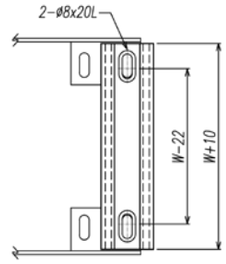
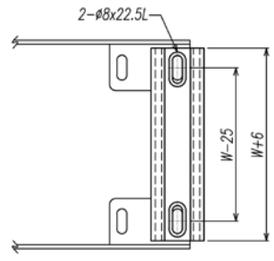
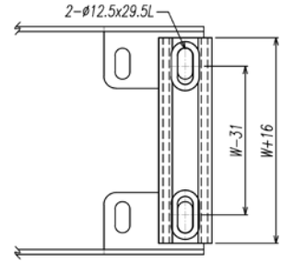
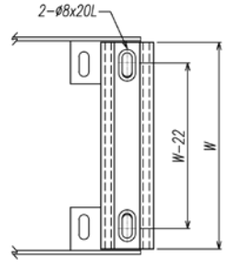
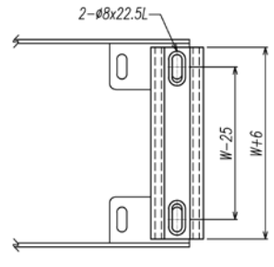
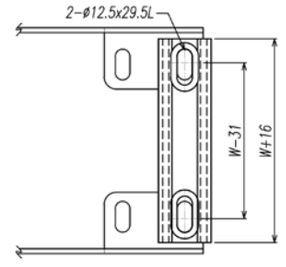


Cable Binder

KCB Clamp Type

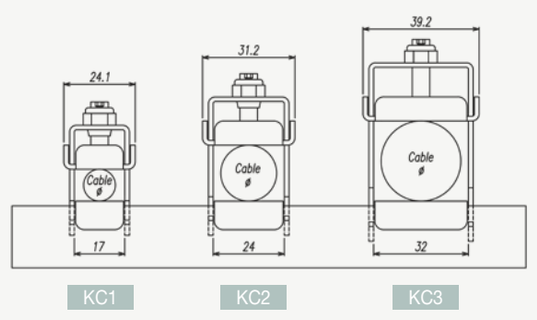




Bracket	CDS/SRS070	CDS/SRS080	CDS/SRS100
Fixed Bracket			
Moving Bracket			

Clamp Type별 Soket set screw + Nylon nut & Cable Size

Clamp Type	Bolt	Cable (Ø)
KC1/A	M6 x 20L	10 ~ 17
KC1/B	M6 x 25L	10 ~ 17
KC2/A	M6 x 25L	18 ~ 24
KC2/B	M6 x 30L	18 ~ 24
KC3/A	M6 x 30L	25 ~ 32
KC3/B	M6 x 35L	25 ~ 32



Order Form

Rail KCB - RAIL43 / SRS070 - W200 1EA

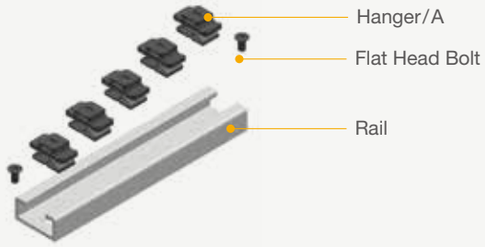
레일 Rail | 제품타입 Type | 제품내폭 Width

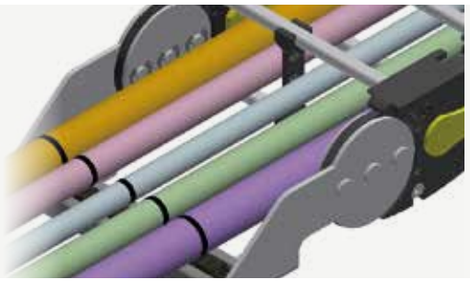
Hanger KCB - KC1/B 1EA

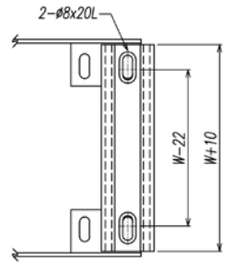
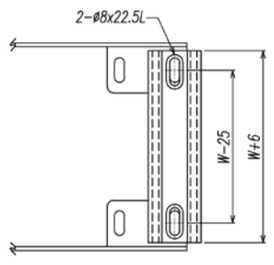
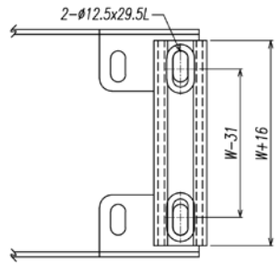
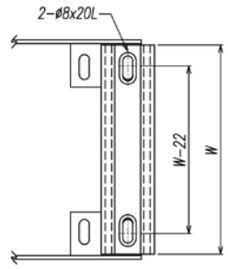
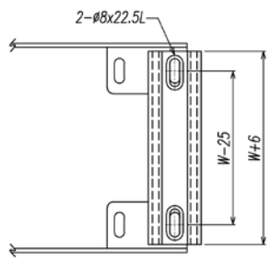
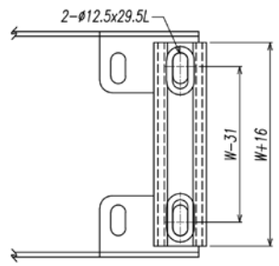
클렘프타입 ClampType

Cable Binder

KCB Hanger A Type





Bracket	CDS/SRS070	CDS/SRS080	CDS/SRS100
Fixed Bracket			
Moving Bracket			

Flat Head Bolt

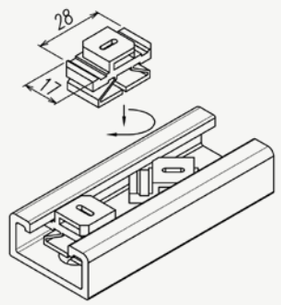
CDS070	CDS080	CDS100	SRS070	SRS080	SRS100
M6 x 20L	M10 x 25L	M6 x 20L	M6 x 20L	M6 x 20L	M10 x 20L

※ CDS100 / SRS100 M8 Bolt 사용 시 Rail은 주문사양임.

Hanger Maximum Q'ty

W80	W100	W120	W150	W200	W250	W300	W350	W400
4 EA	6 EA	7 EA	9 EA	11 EA	14 EA	17 EA	20 EA	23 EA

KCB-RAIL43, HNGR / A



Order Form

Rail KCB - RAIL43 / SRS070 - W200 1EA

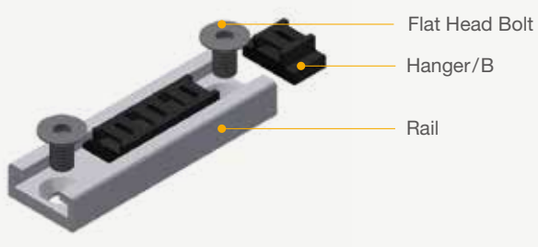
레일 Rail | 제품타입 Type | 제품내폭 Width

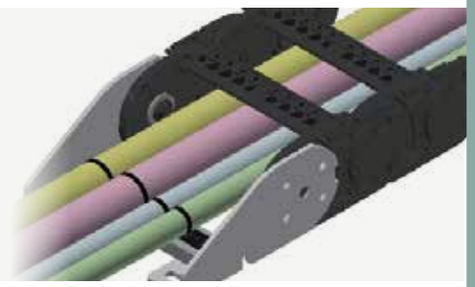
Hanger KCB - HNGR/A 10EA

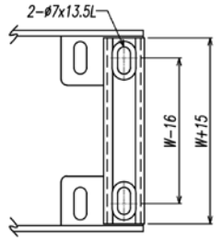
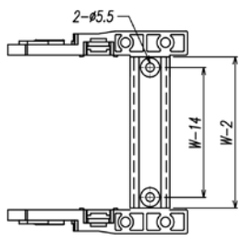
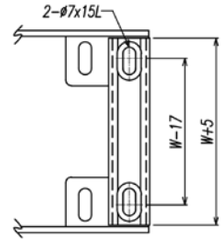
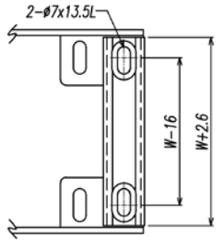
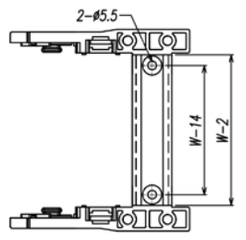
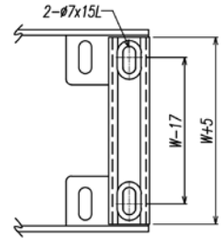
행거타입 HangerType

Cable Binder

KCB Hanger B Type





Bracket	KP50	KP50/Type3	KSC588
Fixed Bracket			
Moving Bracket			

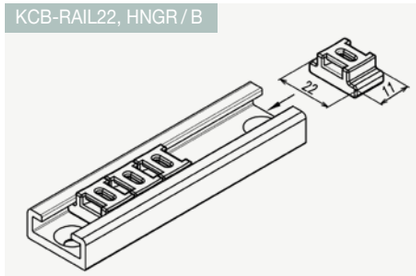
Flat Head Bolt

KP50	KP50/Type3	KSC588
M6 x 20L	M4 x 8L	M6 x 20L

Hanger Maximum Q'ty

W50	W65	W75	W80	W87	W100
3 EA	4 EA	5 EA	5 EA	6 EA	7 EA
W120	W150	W160	W175	W187	W200
9 EA	11 EA	12 EA	14 EA	15 EA	16 EA

KCB-RAIL22, HNGR / B



Order Form

Rail KCB - RAIL22 / KP50 - W080 1EA

레일 Rail | 제품타입 Type | 제품내폭 Width

Hanger KCB - HNGR/B 8EA

행거타입 HangerType

Dresspack System

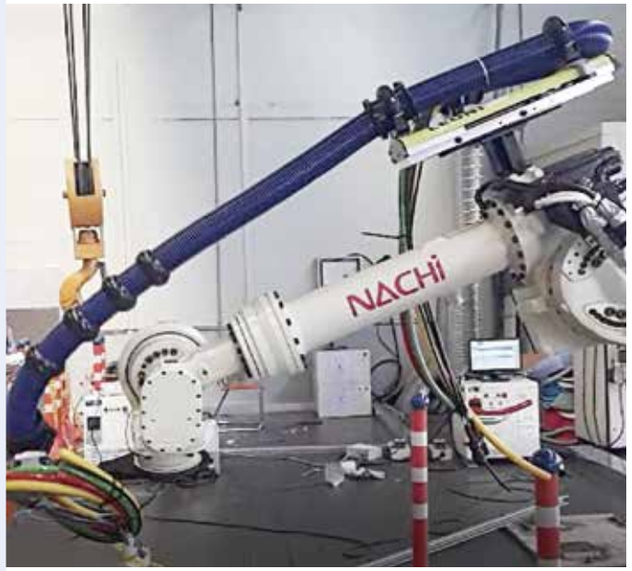
DPU | DPI | DPA | DPL | KSST

Dresspack System

Overview of the Dresspack System Dresspack System의 개요

산업용 다관절 로봇 말단부에 장착되는 툴에는 로봇 사용 용도에 따라 다양한 전선과 호스가 연결된다. 로봇의 다양한 동작을 위해 전선과 호스의 길이를 여유 있게 설치하면 주위 구조물에 걸리거나 꼬이는 현상이 발생하여 연속 작업이 어려워 지고, 짧게 설치하면 전선과 호스가 당겨져 손상이 발생하거나 로봇의 동작으로 인해 전선과 호스가 최소 허용 곡률 반경 이하로 접히는 현상이 반복되면 전선과 호스는 피로 누적에 의한 파손이 일어나게 된다. 드레스팩 시스템은 산업용 다관절 로봇에 설치되는 전선 및 호스를 보호하고 작업 환경에 따른 최적화된 로봇 운용을 가능하게 한다.

The tool, which is mounted at the end of the industrial multi-joint robot, connects various cables and hoses depending on the purpose of the robot. If the length of the cables and hoses is installed in longer for various movements of the robot, it will be difficult to perform continuous operation due to entangling or twisting of surrounding structures, or if installed in short, the cables and hoses will be pulled and damaged. If the robot's operation causes the cables and hoses to bended below than the minimum allowed radius of curvature, the cables and hoses will be damaged by accumulation of fatigue. The dresspack system protects cable and hoses installed in industrial multi-joint robots and enables optimized robot operation according to working environment.

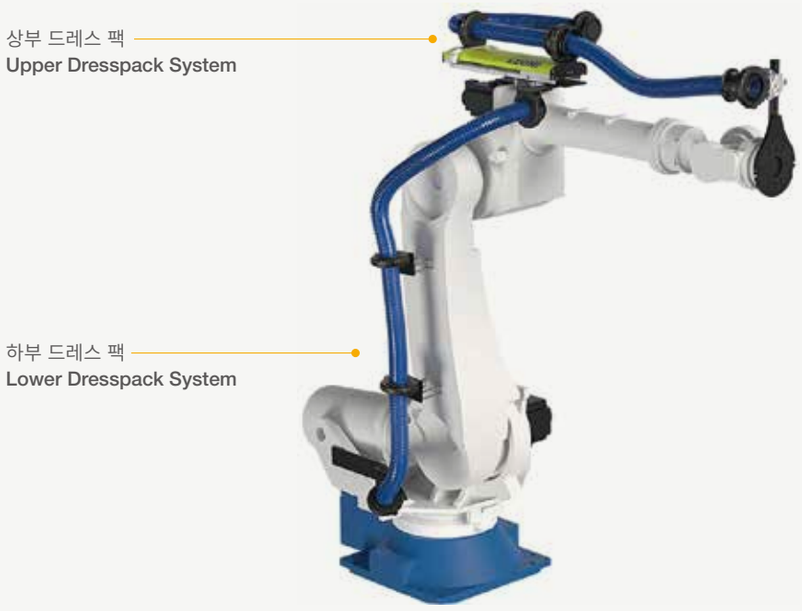


Function of the Dresspack System Dresspack System의 기능

- 주름 튜브로 외부 작업 환경으로부터 전선과 호스를 보호
- 주름 튜브로 전선과 호스가 최소 곡률 반경 이하로 접히는 것을 방지
- 리트랙션(Retraction) 기구로 주름 튜브(전선 및 호스)가 비틀리거나 늘어나는 것을 방지
- 리트랙션 기구로 주름 튜브를 로봇 팔에 가능한 밀착시켜 주름 튜브의 걸림을 방지
- 리트랙션 기구로 로봇의 동작에 따른 주름 튜브의 길이 변화에 대응

- Protecting cables and hoses from external working environments with corrugated tube.
- Corrugated tube prevent cables and hoses from bending below the minimum radius of curvature.
- Retraction equipment prevents corrugated tubes (wire and hose) from twisting or stretching.
- Retraction equipment keep the corrugated tubes as close to the robot's arm as possible to prevent it from getting caught.
- Retraction equipment can responds to changes in the length of the corrugated tubes as the robot operates.

Classification of Dresspack Systems Dresspack System의 분류



[Upper Dresspack System]

상부 드레스 팩 시스템 : 3축 ~ 6축 사이의 전선과 호스 보호

Upper DressPack System : Protection of cables and hoses installed from axis 3 to axis 6

- **Dresspack System U Type (DPU)**

  적용 : 4축~6축의 동작이 복잡하고 작업 환경이 협소한 경우.

  Application : In case the robot's movements are complicated and the working environment is narrow.

- **Dresspack System I type (DPI)**

  적용 : 4축~6축의 동작이 단순하고 작업 환경이 협소하지 않은 경우.

  Application : In case the robot's movements are simple and the working environment is not narrow.

- **Dresspack System A type (DPA)**

  적용 : 4축~6축의 동작이 단순하고 작업 환경이 협소하지 않은 경우.
  주름 튜브의 고정 위치를 작업 환경에 따라 변경해야 하는 경우.
  6축에 설치되는 툴의 부피가 큰 경우.

  Application : In case the robot's movements are simple and the working environment is not narrow.
  The fixed position of the corrugated tubes should be changed depending on the working environment.
  The tool installed on the 6th axis is bulky.

[Lower Dresspack System]

하부 드레스 팩 시스템 : 1축 ~ 3축 사이의 전선과 호스 보호

Lower DressPack System : Protection of cables and hoses installed from axis 1 to axis 3

- **Dresspack System L Type (DPL)**

  적용 : 1축~3축의 동작이 복잡하고 작업 환경이 협소한 경우.

  Application : In case the robot's movements are complicated and the working environment is narrow.

Key Components of the Dresspack System Dresspack System의 주요 구성품

[Tube Assembly]

주름 튜브 기계, 화학적 특성
Corrugated tube machine, chemical properties

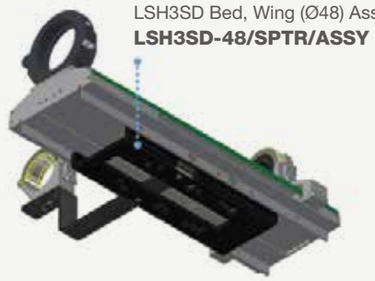
- 실리콘, 할로겐, 카드뮴 프리
- 내성 (오일, 산소, 오존, 약산, 자외선)
- 용접 스플래터 내성, 내마모성
- 교대로 휨 응력을 받는 고강도 특성
- 작동 온도 범위 : –40°C ~ +90°C

- Silicon, halogen, cadmium free
- Resistance (oil, oxygen, ozone, acid, ultraviolet)
- Weld splatter resistant, wear-resistant
- High-strength properties under alternating bending stress
- Operating temperature range : –40°C to + 90°C

[LSH3SD Assembly]

LSH3SD (Ø70) 조립품
LSH3SD (Ø70) Assembly
LSH3SD-70/ASSY

LSH3SD (Ø48) 조립품
LSH3SD (Ø48) Assembly
LSH3SD-48/ASSY



[I3PLT Assembly]

I-TYPE 3축 플레이트(Ø70) 조립품
I-TYPE Axis 3 Plate (Ø70) Assembly
I3PLT-70/ASSY

I-TYPE 3축 플레이트(Ø48) 조립품
I-TYPE Axis 3 Plate (Ø48) Assembly
I3PLT-48/ASSY

[Fry Pan Assembly]

프라이팬 조립품 ØXXX
Fry Pan (Ø xxx) Assembly
FPAN-ASSY-WXXX

[Tube Clamp Assembly]

튜브 클램프 조립품(Ø70)
Tube Clamp (Ø70) Assembly
TUB70-CLMP/ASSY

[Handling Clamp Assembly]

❶ 핸들링클램프 Ø70 하프쉘 조립품 RXXX
Handling Clamp Ø70 Half Shell Assembly
H/CLMP-ASSY/HAF/70-RXXX

❷ 핸들링클램프 Ø70 더블 트럼펫 조립품 RXXX
Handling Clamp Ø70 Double Trumpet Assembly
H/CLMP-ASSY/DBL/70-RXXX

❸ 핸들링클램프 Ø48 하프쉘 조립품 RXXX
Handling Clamp Ø48 Half Shell Assembly
H/CLMP-ASSY/HAF/48-RXXX

❹ 핸들링클램프/플레이트 밴드 Ø70 하프쉘 조립품 RXXX
Handling Clamp/Plate Band Ø70 Half Shell Assembly
H/CLMP/PB-ASSY/HAF/70-RXXX

❺ 핸들링클램프/하프스프링 Ø70 하프쉘 조립품 RXXX
Handling Clamp/Half Spring Ø70 Half Shell Assembly
H/CLMP/HS-ASSY/HAF/70-RXXX

❻ 핸들링클램프/노스프링 Ø70 하프쉘 조립품 RXXX
Handling Clamp/No Spring Ø70 Half Shell Assembly
H/CLMP/NS-ASSY/HAF/70-RXXX

❼ 핸들링클램프/노밴드 Ø70 하프쉘 조립품
Handling Clamp/No Band Ø70 Half Shell Assembly
H/CLMP/NB-ASSY/HAF/70

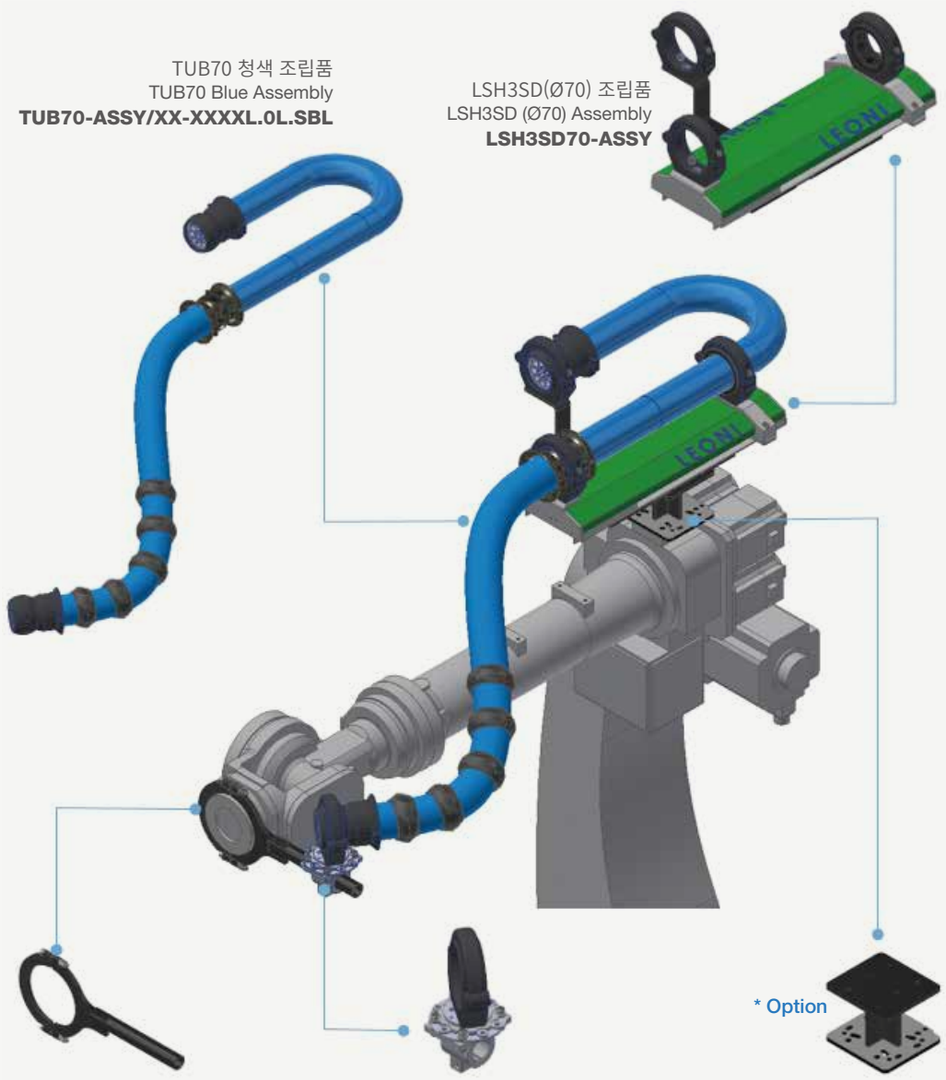
Dresspack System

Dresspack System

DPU

Configuration of DPU70 DPU70의 구성

상부 드레스 팩 시스템 U 타입, 튜브 70mm
Upper Dresspack System U type, Tube 70mm



TUB70 청색 조립품
TUB70 Blue Assembly
TUB70-ASSY/XX-XXXXL.0L.SBL

LSH3SD(Ø70) 조립품
LSH3SD (Ø70) Assembly
LSH3SD70-ASSY

프라이팬 조립품 ØXXX
Fry Pan Assembly ØXXX
FPAN-ASSY-WXXX

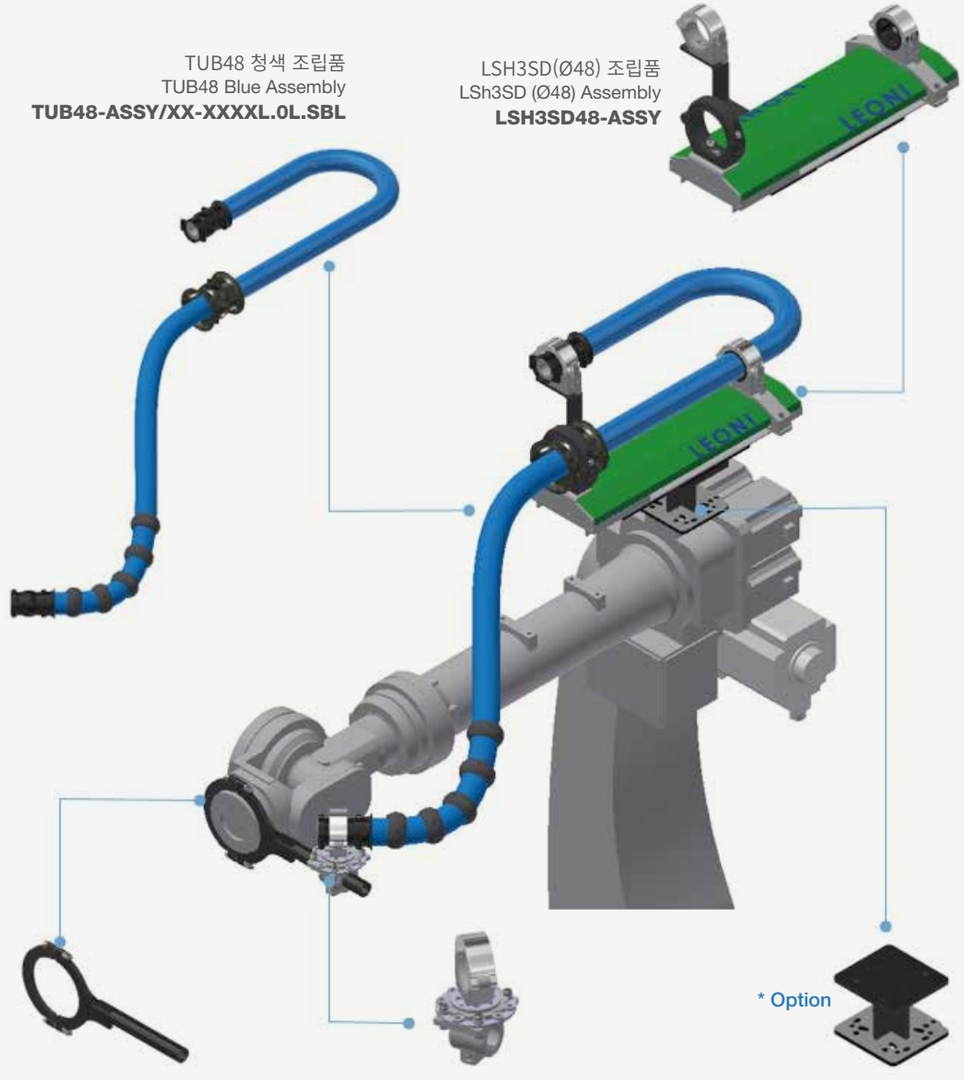
튜브 클램프(Ø70) 조립품
Tube Clamp (Ø70) Assembly
TUB70-CLMP/ASSY

* Option

베드 서포터 조립품
Bed Supporter Assembly
BSPTR-ASSY

Configuration of DPU48 DPU48의 구성

상부 드레스 팩 시스템 U 타입, 튜브 48mm
Upper Dresspack System U type, Tube 48mm



TUB48 청색 조립품
TUB48 Blue Assembly
TUB48-ASSY/XX-XXXXL.0L.SBL

LSH3SD(Ø48) 조립품
LSh3SD (Ø48) Assembly
LSH3SD48-ASSY

프라이팬 조립품 ØXXX
Fry Pan Assembly ØXXX
FPAN-ASSY-WXXX

튜브 클램프(Ø48) 조립품
Tube Clamp (Ø48) Assembly
TUB48-CLMP/ASSY

* Option

베드 서포터 조립품
Bed Supporter Assembly
BSPTR-ASSY

Dresspack System - DPU

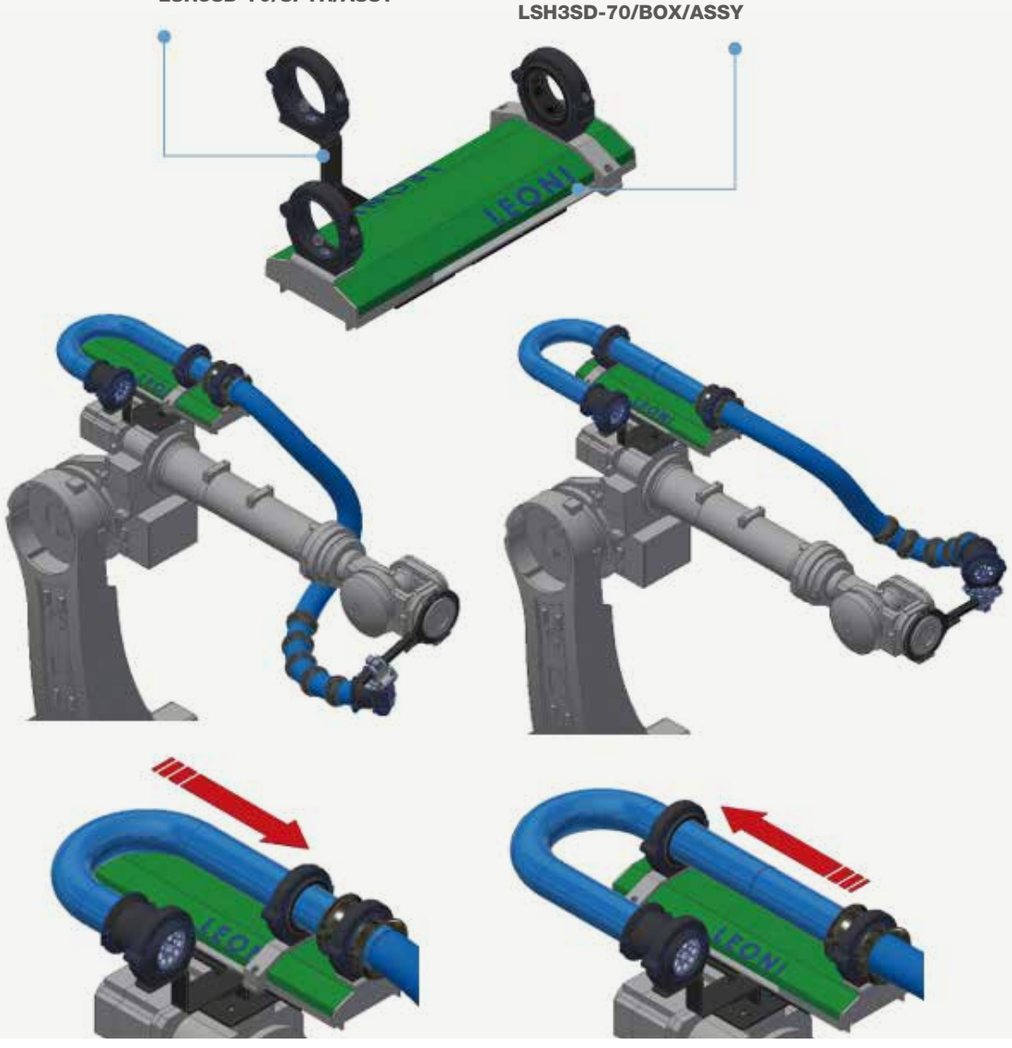
DPU Features DPU의 특징

- 특수 고무 재질의 탄성 로프와 레일 시스템을 적용한 튜브 리트랙션 (Retraction) 기구 적용.
  (LSH3SD ASSY – 스트로크 350mm)
- 스프링 타입의 리트랙션 기구 보다 유연하게 동작하며 내구성 우수.
- 콤팩트한 사이즈, 설치 간편, 튜브 길이 조정 및 기구 위치 변경 용이.

- Applying tube retraction instruments with special rubber elastic ropes and rail systems.
  (LSH3SD ASSY – Stroke 350 mm)
- More flexible operation than spring type retractors and better durability.
- Compact size, easy installation, easy tube length adjustment and easy instrument positioning.

LHS3SD 받침, 날개(Ø70) 조립품
LHS3SD Bed, Wing (Ø70) Assembly
LSH3SD-70/SPTR/ASSY

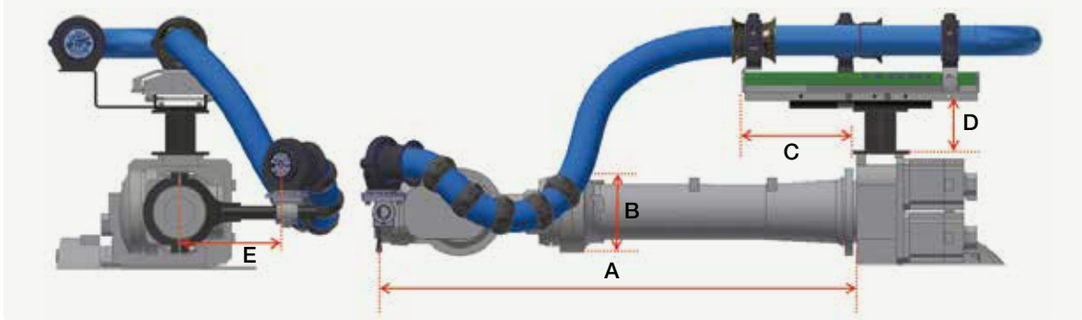
LSH3SD 박스(Ø70) 조립품
LSH3SD Box (Ø70) Assembly
LSH3SD-70/BOX/ASSY



Tube Length Calculation 튜브 길이 계산

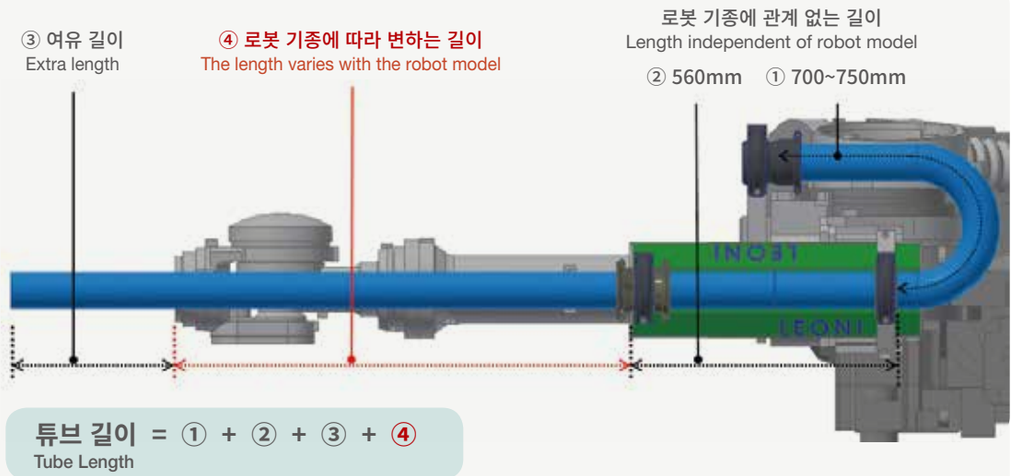
[DPU 적용시 튜브 길이에 영향을 주는 인자]
Factors affecting tube length when DPU is applied

로봇 암 길이(A) 및 형상(B) / 베드 서포터 높이(D) 및 LSH3D ASSY 설치 위치(C) / 툴 이동 궤적 반경(E)
Robot Arm Length (A) and Shape (B) / Bed Supporter Height (D) and LSH3D ASSY Installation Position (C) / Tool Movement Trace Radius (E)



HYUNDAI ROBOTICS HS220에 DPU70을 설치 할 경우 각 인자의 값은 다음과 같다.
When installing DPU70 on HYUNDAI ROBOTICS HS220, the values of each factor are as follows.

[이와 같은 조건일 경우 DPU 튜브 길이의 계산]
Calculation of DPU tube length under these conditions



튜브 길이 = ① + ② + ③ + ④
Tube Length

튜브 길이 결정은 툴의 크기, 로봇 티칭에 의해 결정되는 작업 궤적에 가장 영향을 받기 때문에 상기의 튜브 길이 계산 방법을 모든 경우에 적용 할 수 있는 것은 아니다.

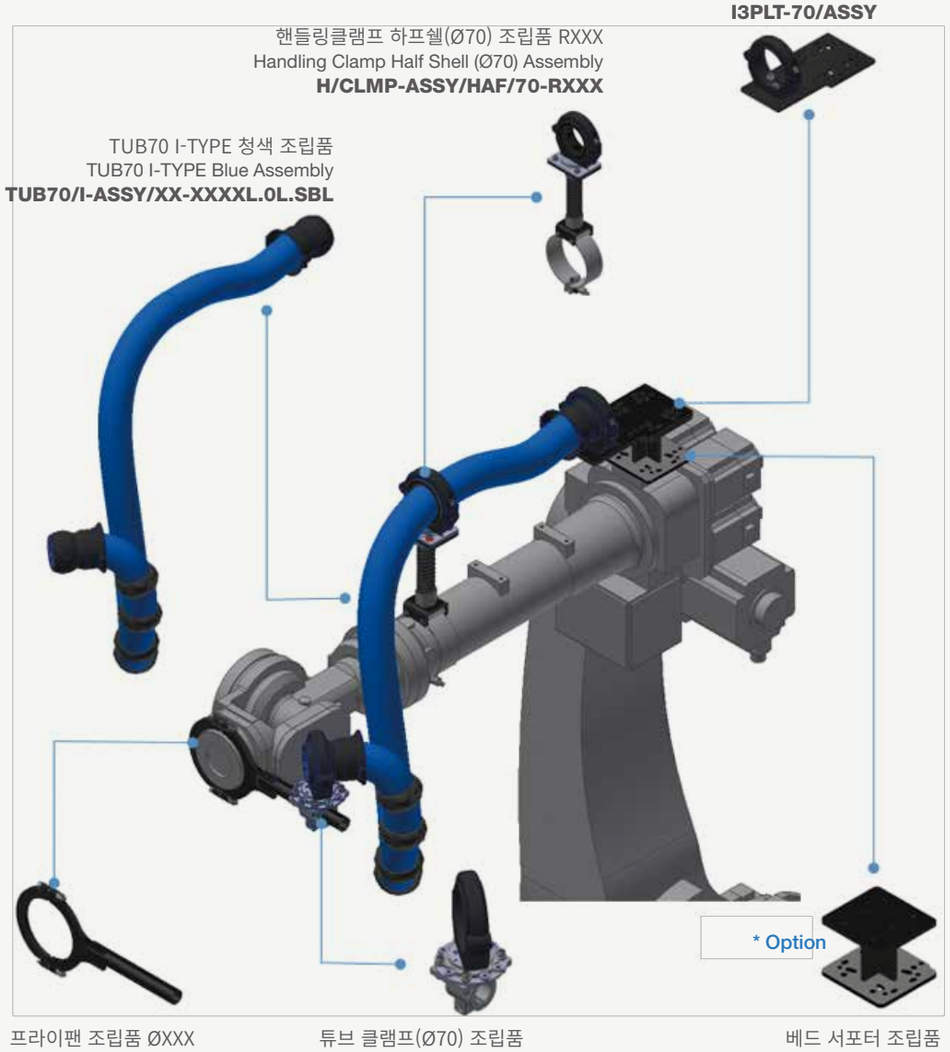
The above tube length calculation method is not applicable in all cases because the tube length determination is most affected by the working trajectory determined depend on the size of the tool and the robot teaching.

Dresspack System

DPI

Configuration of DPI70 DPI70의 구성

상부 드레스 팩 시스템 I 타입, 튜브 70mm
Upper Dresspack System I type, Tube 70mm



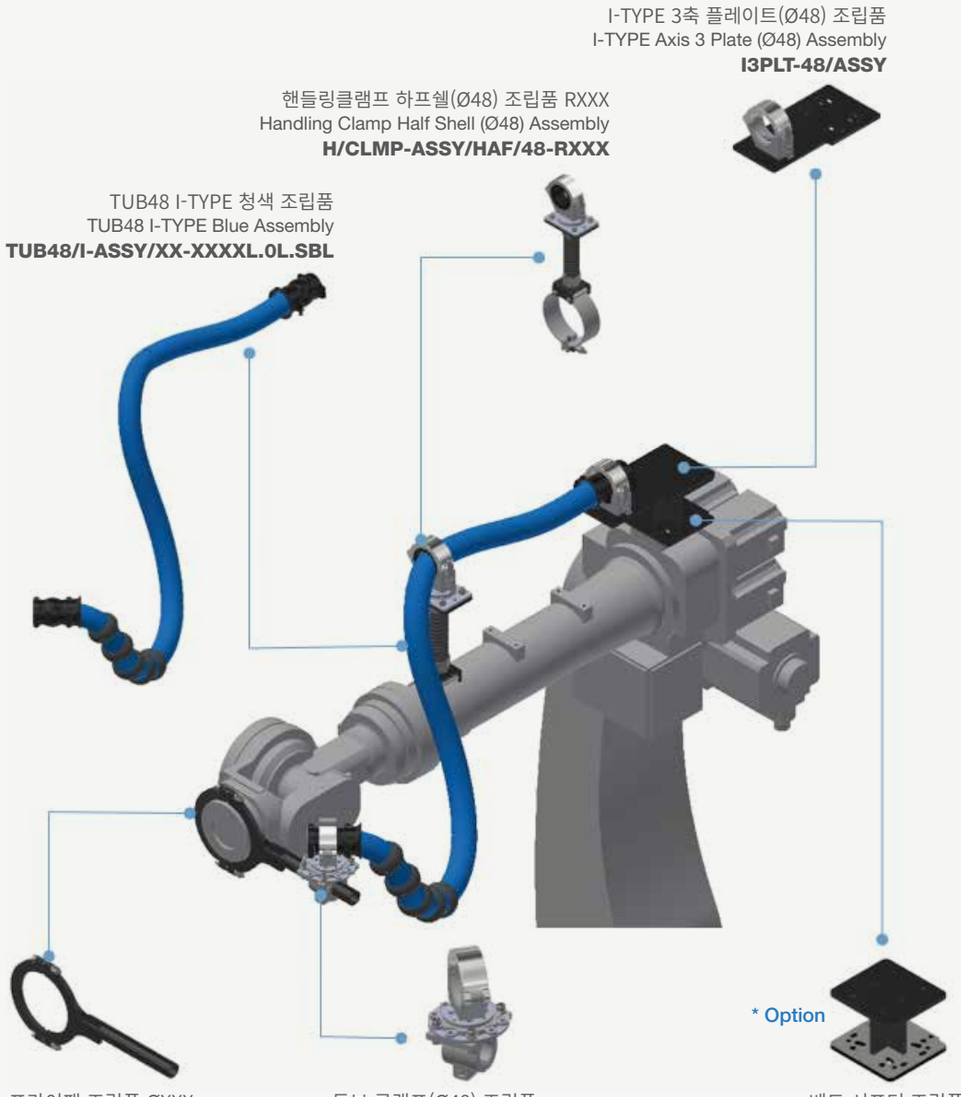
프라이팬 조립품 ØXXX
Fry Pan Assembly ØXXX
FPAN-ASSY-WXXX

튜브 클램프(Ø70) 조립품
Tube Clamp (Ø70) Assembly
TUB70-CLMP/ASSY

베드 서포터 조립품
Bed Supporter Assembly
BSPTR-ASSY

Configuration of DPI48 DPI48의 구성

상부 드레스 팩 시스템 I 타입, 튜브 48mm
Upper Dresspack System I type, Tube 48mm



프라이팬 조립품 ØXXX
Fry Pan Assembly ØXXX
FPAN-ASSY-WXXX

튜브 클램프(Ø48) 조립품
Tube Clamp (Ø48) Assembly
TUB48-CLMP/ASSY

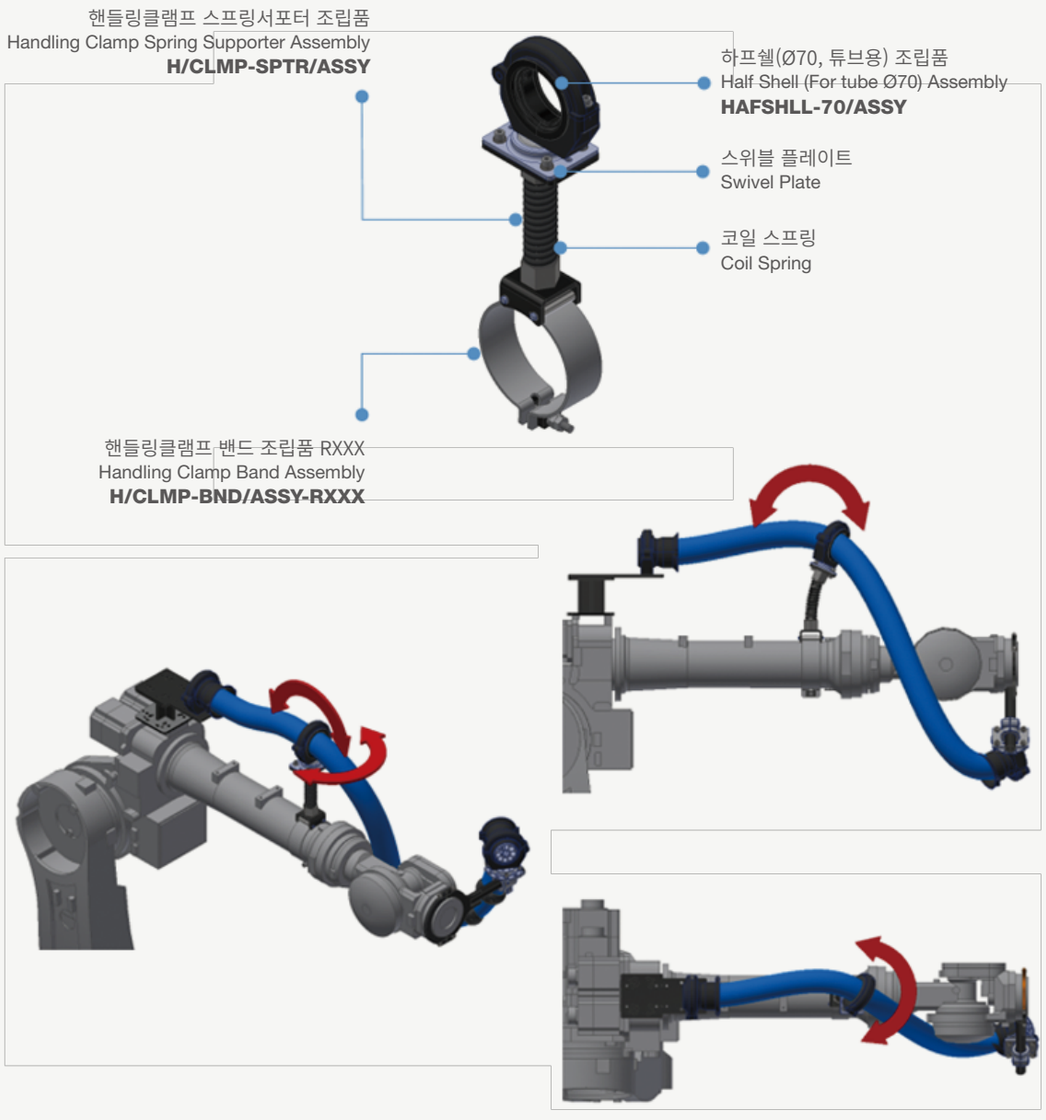
베드 서포터 조립품
Bed Supporter Assembly
BSPTR-ASSY

Dresspack System - DPI

DPI Features DPI의 특징

- 스위블(Swivel) 플레이트와 코일 스프링으로 구성된 튜브 핸들링 클램프.
- 코일 스프링에 의한 튜브 리트랙션(Retraction) 기능.
- 스위블 플레이트에 의한 튜브 회전 기능.

- Tube handling clamp consisting of a swivel plate and a coil spring.
- Tube retraction by coil spring.
- Function of tube rotation by swivel plate.

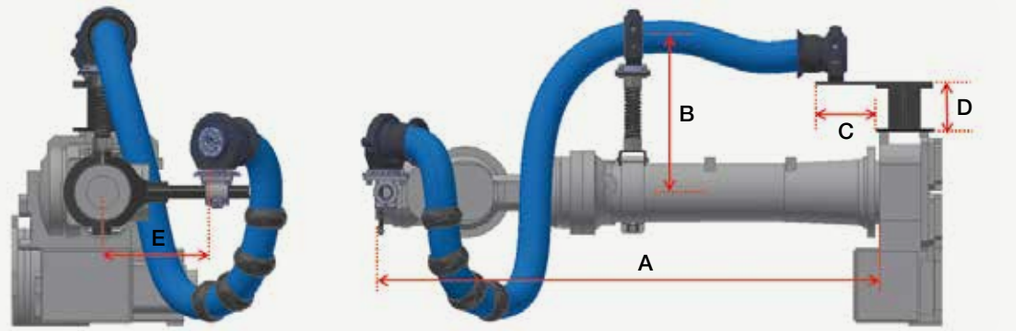


Tube Length Calculation 튜브 길이 계산

[DPI 적용시 튜브 길이에 영향을 주는 인자]
Factors affecting tube length when DPI is applied

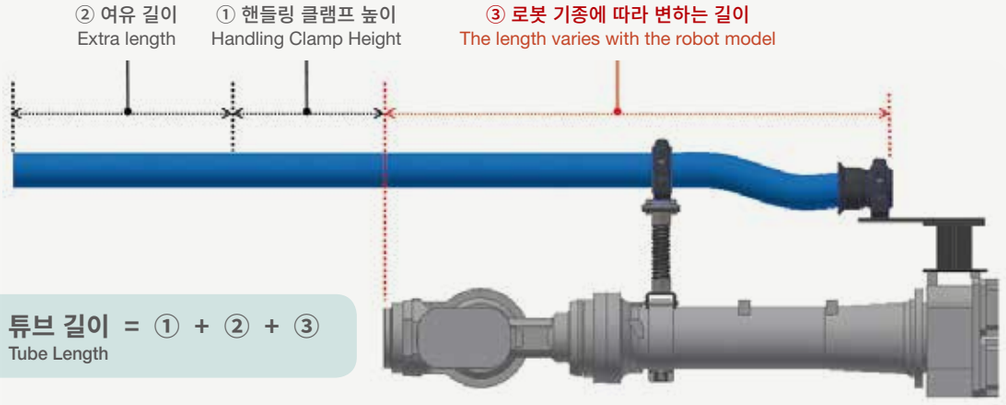
로봇 암 길이(A) 및 핸들링 클램프 서포터 높이(B) / 베드 서포터 높이(D) 및 I3PLT ASSY 설치 위치(C) / 툴 이동 궤적 반경(E)

Robot Arm Length (A) and Handling clamp Supporter Height (B) / Bed Supporter Height (D) and I3PLT ASSY Installation Position (C) / Tool Movement Trace Radius (E)



HYUNDAI ROBOTICS HS220에 DPI70을 설치 할 경우 각 인자의 값은 다음과 같다.
When installing DPI70 on HYUNDAI ROBOTICS HS220, the values of each factor are as follows.

[이와 같은 조건일 경우 DPI 튜브 길이의 계산]
Calculation of DPI tube length under these conditions



튜브 길이 = ① + ② + ③
Tube Length

튜브 길이 결정은 툴의 크기, 로봇 티칭에 의해 결정되는 작업 궤적에 가장 영향을 받기 때문에 상기의 튜브 길이 계산 방법을 모든 경우에 적용 할 수 있는 것은 아니다.

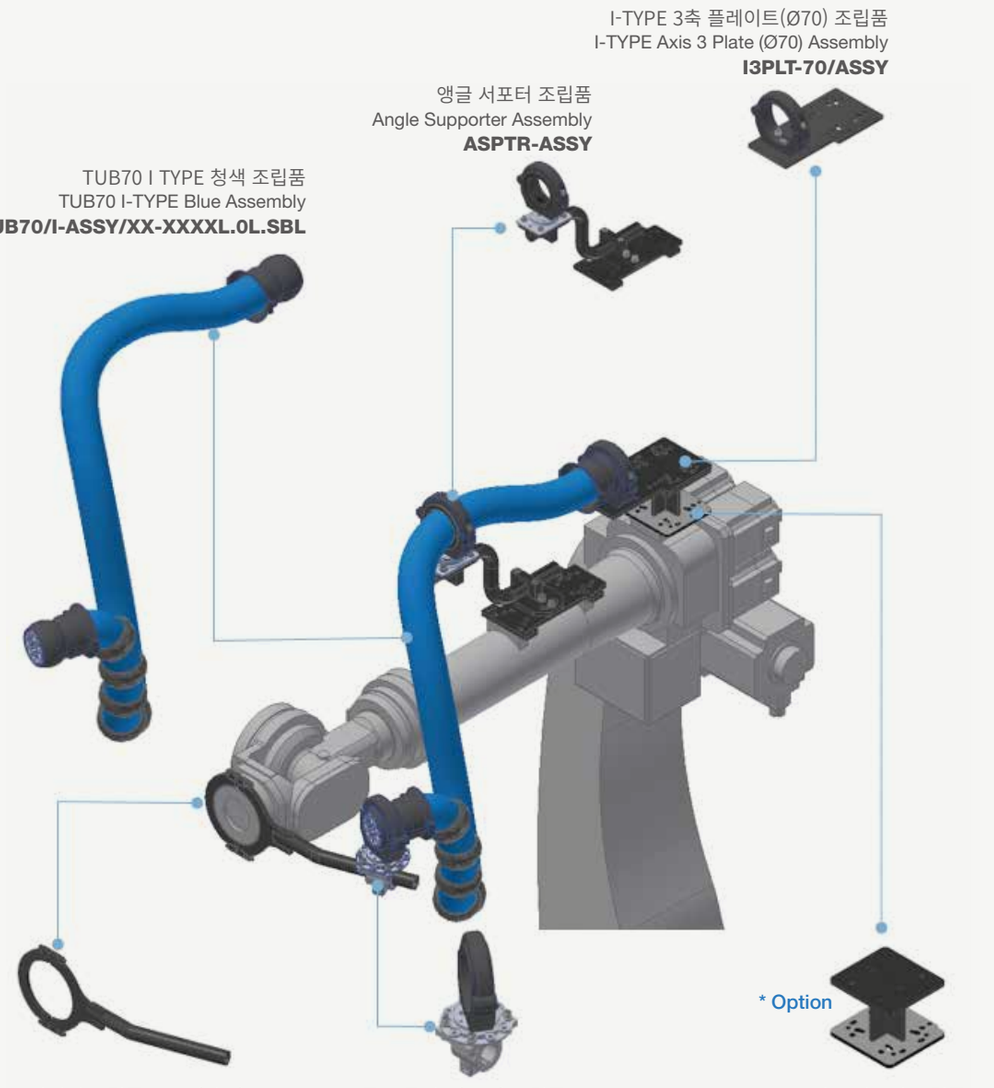
The above tube length calculation method is not applicable in all cases because the tube length determination is most affected by the working trajectory determined depend on the size of the tool and the robot teaching.

Dresspack System

DPA

Configuration of DPA 70 DPA70의 구성

상부 드레스 팩 시스템 A 타입, 튜브 70mm
Upper Dresspack System A type, Tube 70mm



프라이팬 조립품 ØXXX(각도)
Fry Pan assembly (Angle)
FPAN/A-ASSY-WXXX

튜브 클램프(Ø70) 조립품
Tube Clamp (Ø70) Assembly
TUB70-CLMP/ASSY

베드 서포터 조립품
Bed Supporter Assembly
BSPTR-ASSY

DPA Features DPA의 특징

- 스위블 플레이트와 각도 조절 플레이트, 서포터 파이프로 구성된 앵글 서포터 조립품.
- 앵글 서포터 각도 조절 플레이트와 서포터 파이프 클램프를 활용하여 싱글 브라켓의 높이, 각도, 전·후 위치 등을 변경할 수 있음.
- Angle supporter assembly consisting of a swivel plate, angulation plate, and support pipe.
- The height, angle, fore and aft position of the single bracket can be changed using angle adjust plate and support pipe clamp.

Tube Length Calculation 튜브 길이 계산

DPI와 동일한 방법으로 튜브 길이를 계산. Calculate tube length in the same way as DPI.

Dresspack System - DPA

Dresspack System

DPL

Configuration of DPL 70 DPL70의 구성

하부 드레스 팩 시스템 L 타입, 튜브 70mm / **Lower Dresspack System L type, Tube 70mm**

※ HYUNDAI ROBOTICS HX165 적용 예 / Example of HYUNDAI ROBOTICS HX165 Application

DPL Features DPL70의 특징

하부 드레스 팩은 로봇의 1, 2축 형상이 동일하면 공용이 가능하나 대부분 로봇 기종에 따라 전용 하부 드레스 팩이 사용 된다.

The lower dresspack can be used for common use if the axis 1 and axis 2 shapes of the robot are the same, but most of the lower dress packs are used exclusively depending on the type of robot.

Registered Lower Dresspack 등록된 하부 드레스 팩

- DPL70-HS165 (HYUNDAI ROBOTICS)
- DPL70-HS180 (HYUNDAI ROBOTICS)
- DPL70-HX165 (HYUNDAI ROBOTICS)
- DPL70-HX300 (HYUNDAI ROBOTICS)
- DPL70-ES165 (YASKAWA)
- DPL70-ZX165 (KAWASAKI)

Dresspack System

KSST

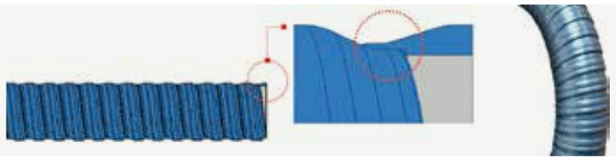
Configuration of KSST-70 KSST-70의 구성

코닥트 쉴드 스프링 튜브, 튜브 70mm / **Koduct Shield Spring Tube, Tube 70mm**

KSST-70 Features KSST-70의 특징

- 드레스 팩 튜브의 손상을 방지하기 위한 보호 튜브 조립품.
- 스프링 형태이기 때문에 기 설치된 드레스 팩 튜브에도 설치 가능.
- 보호 도넛 적용이 어려운 경우.
  - 로봇과 튜브의 마찰이 심해서 보호 도넛에 의해 로봇 바디 표면에 손상을 주는 경우.
  - 동작 중 보호 도넛이 로봇에 걸려 드레스 팩의 동작이 원할하지 않는 경우.
  - ➡ 보호 도넛 대체 사용 가능.
- 쉴드 스프링 튜브는 구부러 졌을때 골 부분에 발생되는 틈새를 최소화 하여 기존의 스프링 튜브와 비교해서 외부 용접 스패터 또는 이물질로 인한 드레스 팩 튜브의 손상 방지 기능이 우수함.

- Protective tube assembly to prevent damage to the dresspack tube.
- Spring shape, it can also be installed in a previously installed dresspack tube.
- Difficult to apply protective donuts.
  - If the robot and tube have lots of friction, causing damage to the robot body surface by an oval donut
  - Oval donut is stuck on the robot during operation and the operation of the dresspack is not smooth.
  - ➡ KSST can replace protective donuts
- Shield Spring Tube minimizes gaps in the groove area when bended, so that the dresspack tube is resistant to damage by external weld spatter or dust compared to existing spring tube.



- 쉴드 스프링 튜브는 최대 설치 길이는 950~970mm 이다.
- Shield spring tubes have a maximum installation length of 950mm to 970mm.

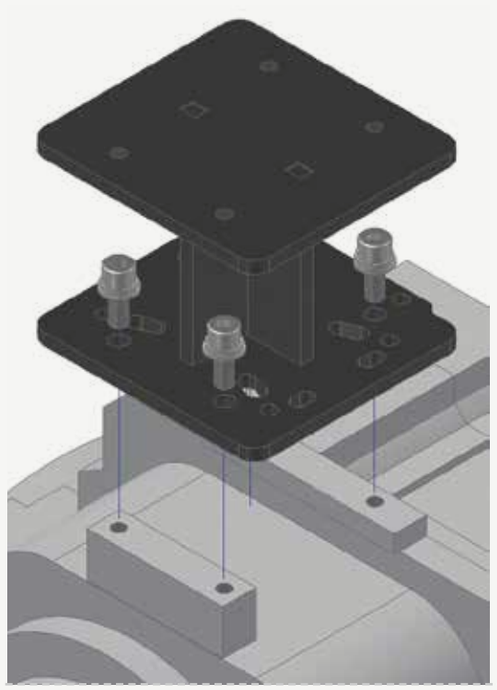
Dresspack System

DPU 설치

Install LSH3SD ASSY LSH3SD ASSY 설치

1. Install BED SUPPORTER (Option) / BED SUPPORTER 설치(Option)

- BED SUPPORTER를 로봇 3축 상단에 설치한다.
- 공용으로 사용하기 위해 BED SUPPORTER에 다양한 규격의 홀이 가공 되어 있다.
- Install the BED SUPPORTER on top of the robot's axis 3.
- The BED SUPPORTER has various sizes of holes machined for common use.



[BED SUPPORTER]

Top View

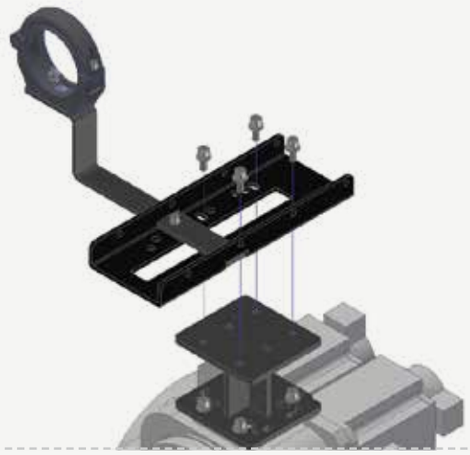
Bottom View

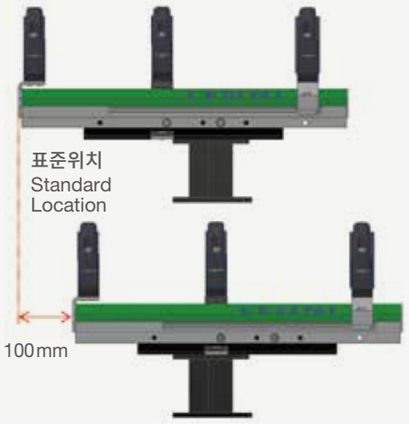
[ROBOT INSTALLATION HALL]

- HYUNDAI ROBOTICS (100 x 70, Ø11 / BED SUPPORTER 설치 홀 (Installation Holes))
- HYUNDAI ROBOTICS (100 x 70, Ø9)
- NACHI (80 x 110, Ø9)
- NACHI (60 x 60, Ø9)
- NACHI (52 x 120, Ø9)
- YASKAWA (40 x 120, Ø9)
- FANUC (67 x 80, Ø11)
- KAWASAKI (150 x 90, Ø11)

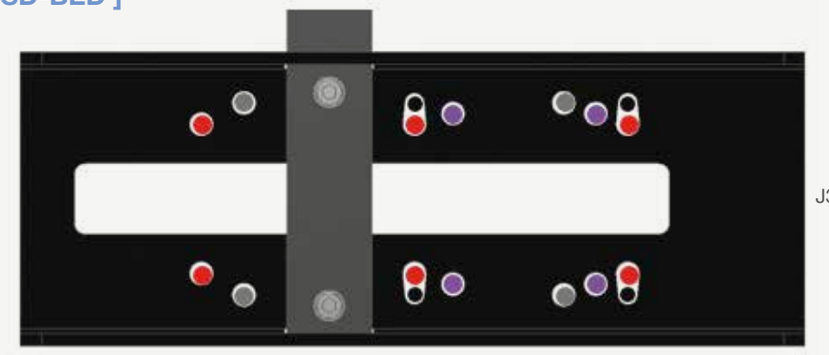
2. Install LSH3SD-XX/SPTR/ASSY / LSH3SD-XX/SPTR/ASSY 설치

- BED SUPPORTER에 LSH3SD-70/SPTR/ASSY 설치한다.
- LSH3SD-BED의 홀 정보를 활용한다.
- 경우에 따라 BED SUPPORTER 없이 로봇에 직접 설치가 가능하도록 다양 규격의 홀이 LSH3SD-BED에 가공되어 있다.
- 100 x 70, Ø11 홀 사용 경우 100mm 옵셋이 가능하다.
- Install LSH3SD-70/SPTR/ASSY on BED SUPPORTER.
- Use holes information from LSH3SD-BED.
- In some cases, LSH3SD-BED has holes of various specifications that allow direct installation on the robot without BED SUPPORTER.
- 100 x 70 and Ø11 holes allow 100 mm offset.





[LSH3SD-BED]



Top View

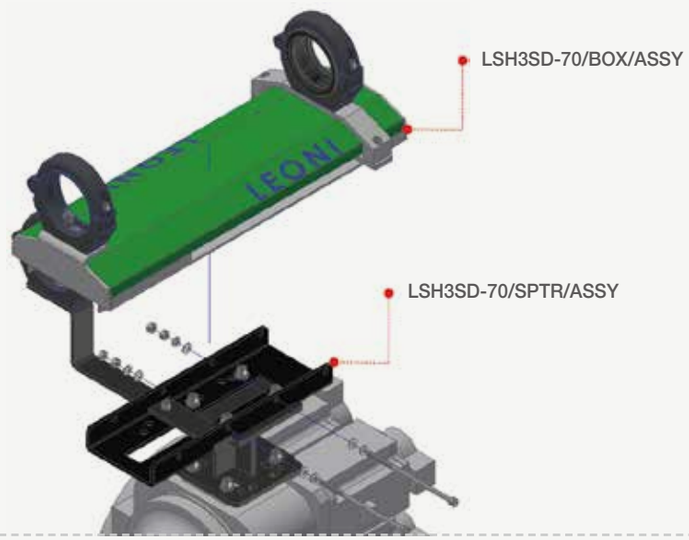
[ROBOT INSTALLATION HALL]

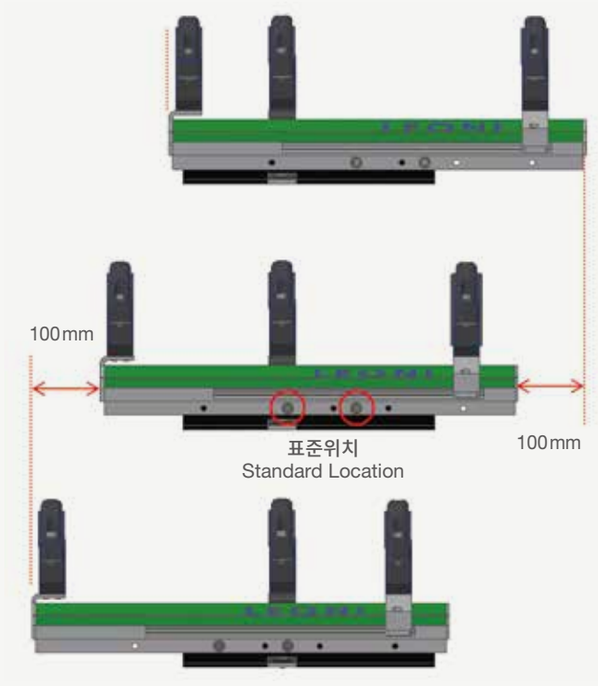
- HYUNDAI ROBOTICS (100 x 70, Ø11 / BED SUPPORTER 설치 홀 (Installation Holes))
- FANUC (67 x 80, Ø11)
- KAWASAKI (150 x 90, Ø11)
- YASKAWA BED SUPPORTER (100 x 90, Ø9)

3. Assembling LSH3SD-XX/BOX/ASSY / LSH3SD-XX/BOX/ASSY 조립

- LSH3SD-XX/SPTR/ASSY와 LSH3SD-XX/BOX/ASSY의 측면 홀을 정렬한 후 볼트로 조립한다.
- 측면 홀을 정렬하는 위치에 따라 표준 위치에서 전후 100mm 옵셋이 가능하다.

- Side holes of LSH3SD-XX / SPTR / ASSY and LSH3SD-XX / BOX / ASSY are aligned and assembled with bolts.
- The 100 mm offset before and after is possible in the standard position depending on the position of the side hole alignment.





Install FRY PAN & TUBE CLAMP ASSY FRY PAN & TUBE CLAMP ASSY 설치

- FRY PAN을 6축 말단부에 설치 한다.
- TUBE CLAMP를 FRY PAN에 설치 한다.

- Install the FRY PAN at the end of the axis 6.
- Install the TUBE CLAMP on the FRY PAN.

TUBE ASSY Installation TUBE ASSY 설치

1. TUBE ASSY Direction / TUBE ASSY 방향

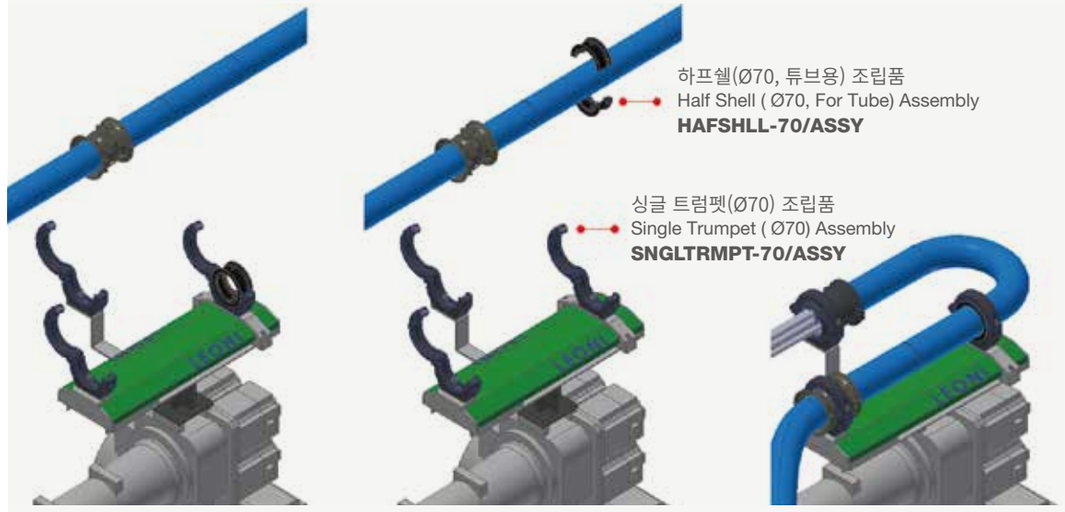
- OVAL DONUT(보호 도넛) 설치 위치로 방향 확인.
- SINGLE TRUMPET 전후의 CABLE 및 HOSE의 길이(A, B)로 방향 확인.
- CABLE에 CONNECTOR처리가 된 경우 CONNECTOR TYPE(형상 및 암/수)로 방향 확인.

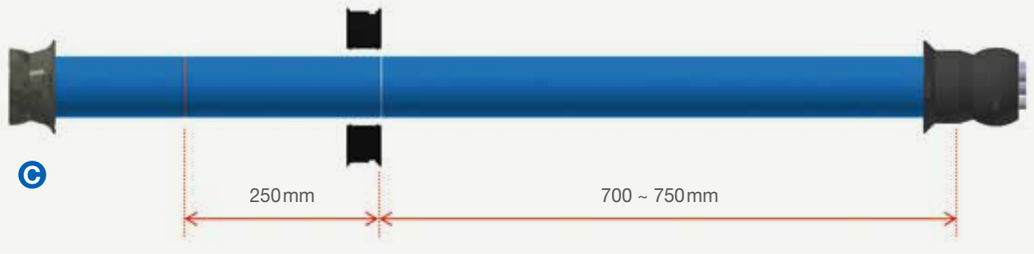
- Direction to the location of the OVAL DONUT installation.
- Check the orientation by the length of the CABLE and HOSE before and after the SINGLE TRUMPET (A, B).
- Check the orientation of CONNECTOR TYPE (Shape male / Female) when CONNECTOR has been assembled on the CABLE.

2. Installing TUBE ASSY on LSH3SD ASSY / LSH3SD ASSY에 TUBE ASSY 설치

- SINGLE BRACKET의 고정 볼트를 풀어서 SINGLE BRACKET을 모두 연다. Ⓐ
- SINGLE BRACKET 내에 있는 HALF SHELL을 분리한다. Ⓑ
- WHITE MARKER RING 위치에 HALF SHELL을 조립한다. Ⓒ
  WHITE MARKER RING은 튜브 끝단에서 750mm 위치에 맞추어 설치한 후 출고 된다. (권장 위치 : 700~750mm)
  WHITE MARKER RING을 다른 위치로 옮길 경우 RED MARKER RING과의 간격(250mm)을 유지하여야 한다.
- TUBE ASSY의 SINGLE TRUMPET, HALF SHELL, DOUBLE TRUMPET 각각 해당 SINGLE BRACKET에 삽입한 후 SINGLE BRACKET을 잠근다. Ⓓ

- Loosen the fixing bolts of the SINGLE BRACKET and open all of the SINGLE BRACKET. Ⓐ
- Disconnect the HALF SHELL within the SINGLE BRACKET. Ⓑ
- Assemble the HALF SHELL at the WHITE MARKER RING position. Ⓒ
  WHITE MARKER RING is installed in a 750mm position at the end of the tube and released.
  (Recommended location : 700 to 750mm)
  If the WHITE MARKER RING is moved to another position, the clearance (250mm) from the RED MARKER RING shall be maintained.
- Insert the SINGLE TRUMPET, HALF SHELL, and DOUBLE TRUMPET of the TUBE ASSY into the corresponding SINGLE BRACKET and then lock the SINGLE BRACKET. Ⓓ





※ TUBE ASSY 출고시 750mm에 설치
Install the TUBE ASSY at 750mm

3. Installing TUBE ASSY on TUBE CLAMP ASSY
TUBE CLAMP ASSY에 TUBE ASSY 설치

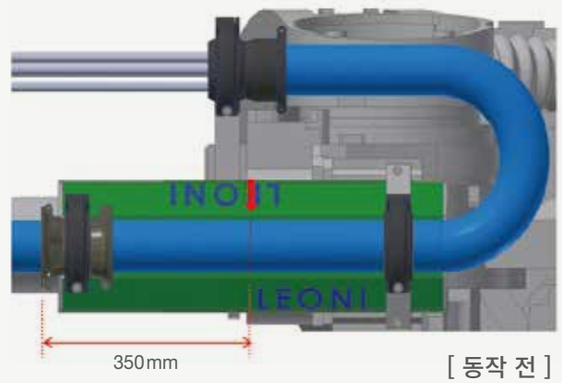
- TUBE ASSY에 SINGLE TRUMPET(6축 방향)을 TUBE CLAMP의 SINGLE BRAKET에 설치.
- Install SINGLE TRUMPET (Axis 6 Direction) on the TUBE ASSY to the SINGLE BRAKET on the TUBE CLAMP.

DPU Checkpoints DPU 체크 사항

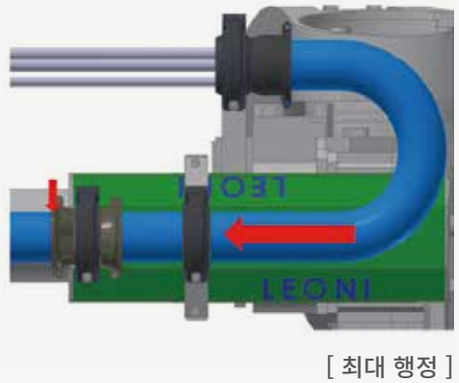
1. Travel Length of LSH3SD ASSY Operation / LSH3SD ASSY 동작 행정

- LSH3SD ASSY의 최대 행정 350mm, RED MARKER RING의 위치로 확인.
- RED MARKER RING이 DOUBLE TRUMPET 앞에 나타나면 최대 행정에 도달.
- 최대 행정을 초과하여 동작 시킬 경우 튜브 파손 ➡ 내부 케이블 및 호스 파손.

- LSH3SD ASSY maximum stroke of 350mm, confirmed by the location of the RED MARKER RING.
- When the RED MARKER RING appears before the DOUBLE TRUMPET, the maximum stroke is reached.
- If operating in excess of maximum travel, tubes broken ➡ Internal cables and hoses damaged



[동작 전]
Pre-operation



[최대 행정]
Maximum Travel length

2. DPU Adjustment (If LSH3SD ASSY Lack of Travel Length)
DPU 조정 (LSH3SD ASSY의 동작 행정이 부족한 경우)

- 로봇 TEACHING을 개선 한다.
- TUBE ASSY의 MAKER RING (적색, 백색) 위치를 3축 방향으로 이동후 TUBE ASSY를 재설치 한다.
- LSH3SD ASSY를 6축 방향으로 이동 설치 한다.
- TUBE CLAMP ASSY 각도 (INDEX PLATE 회전), 설치 위치를 조정한다.
- 동작 중 튜브와 로봇과 마찰이 심하게 발생하는 경우 OVAL DONUT의 위치를 변경 하거나 추가로 설치한다.

- Improve robot TEACHING.
- Move the MAKER RING (Red, White) position of the TUBE ASSY in a axis 3 direction and reinstall the TUBE ASSY.
- Install the LSH3SD ASSY by moving it in a axis 6 direction.
- TUBE CLAMP ASSY angle (INDEX PLATE Rotation), adjust the installation position.
- If there is lots of friction between the tube and the robot during operation, change the position of the OVAL DONUT or install it additionally.

Dresspack System

DPI 설치

Install I3PLT ASSY I3PLT ASSY 설치

1. Installing BED SUPPORTER (Option) - Reference to DPU Installation
BED SUPPORTER 설치(Option) - DPU 설치 참고

2. Install I3PLT ASSY / I3PLT ASSY 설치

- BED SUPPORTER에 I3PLT ASSY를 설치한다.
- I3PLT의 홀 정보를 활용한다.
- 경우에 따라 BED SUPPORTER 없이 로봇에 직접 설치가 가능하도록 다양 규격의 홀이 I3PLT에 가공되어 있다.

- Install I3PLT ASSY on the BED SUPPORTER.
- Use hall information from I3PLT.
- In some cases, I3PLT machined holes of various specifications to allow direct installation of the robot without BED SUPPORTER.

[I3PLT]

[ROBOT INSTALLATION HALL]

- HYUNDAI ROBOTICS (100 x 70, Ø11 / BED SUPPORTER 설치 홀 (Installation Holes))
- HYUNDAI ROBOTICS (100 x 70, Ø9)
- NACHI (80 x 110, Ø9)
- NACHI (60 x 60, Ø9)
- NACHI (52 x 120, Ø9)
- YASKAWA (40 x 120, Ø9)
- FANUC (67 x 80, Ø11)
- KAWASAKI (150 x 90, Ø11)

HANDLING CLAMP ASSY HANDLING CLAMP ASSY

- 로봇 암(4축)에 HANDLING CLAMP BAND를 이용하여 HANDLING CLAMP를 설치 한다.
- 로봇 암이 원형이 아닌 경우 NO BAND 형식의 HANDLING CLAMP를 사용해야 한다.

- Install the HANDLING CLAMP using the HANDLING CLAMP BAND on the robot arm (Axis 4).
- HANDLING CLAMP in NO BAND format should be used if robot arms are not circular.

FRY PAN & TUBE CLAMP ASSY INSTALLATION
FRY PAN & TUBE CLAMP ASSY 설치

- DPU 설치 참고 / Reference to DPU INSTALLATION

Installing TUBE ASSY TUBE ASSY 설치

- SINGLE TRUMPET을 I3PLT ASSY와 TUBE CLAMP ASSY의 SINGLE BRACKET에 설치한다.
- I3PLT ASSY와 HANDLING CLAM ASSY 사이에 TUBE 길이가 여유 있도록 TUBE ASSY를 HANDLIMG CLAMP에 설치한다.

- Install the SINGLE TRUMPET on the I3PLT ASSY and the SINGLE BRACKET on the TUBE CLAMP ASSY.
- Install the TUBE ASSY in the HANDLIMG CLAMP so that the length of the TUBE between I3PLT ASSY and HANDLING CLAM ASSY is sufficient.

Dresspack System

DPA 설치

Install I3PLT ASSY I3PLT ASSY 설치

1. Installing BED SUPPORTER (Option) - Reference to DPU Installation
BED SUPPORTER 설치(Option) - DPU 설치 참고

2. Installing I3PLT ASSY - Reference to DPI Installation
I3PLT ASSY 설치 - DPI 설치 참고

- BED SUPPORTER에 I3PLT ASSY를 설치한다.
- I3PLT의 홀 정보를 활용한다.
- 경우에 따라 BED SUPPORTER 없이 로봇에 직접 설치가 가능하도록 다양 규격의 홀이 I3PLT에 가공되어 있다.

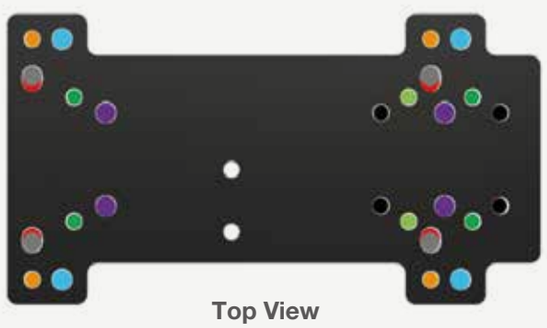
- Install I3PLT ASSY on the BED SUPPORTER.
- Use hole information from I3PLT.
- In some cases, I3PLT machined holes of various specifications to allow direct installation of the robot without BED SUPPORTER.

Install ASPTR ASSY ASPTR ASSY설치

- ASPTR ASSY를 로봇 암(4축)에 설치 한다.
- 다양한 로봇 기종에 적용 가능하도록 여러 규격의 홀이 ASPTR에 가공되어 있다.

- Install ASPTR ASSY on the robot arm (Axis 4).
- Holes of different sizes are machined in ASPTR as possible for different robot models.

[ASPTR-BSPLT]



J3 Side

Top View

[ROBOT INSTALLATION HALL]

- HYUNDAI ROBOTICS (200 x 76, Ø11)
- HYUNDAI ROBOTICS (200 x 80, Ø11)
- HYUNDAI ROBOTICS (200 x 116, Ø11)
- HYUNDAI ROBOTICS (200 x 116, Ø9)
- NACHI (32 x 60, Ø9)
- NACHI (200 x 60, Ø9)
- FANUC (170 x 45, Ø11)
- YASKAWA (60 x 45, Ø9)

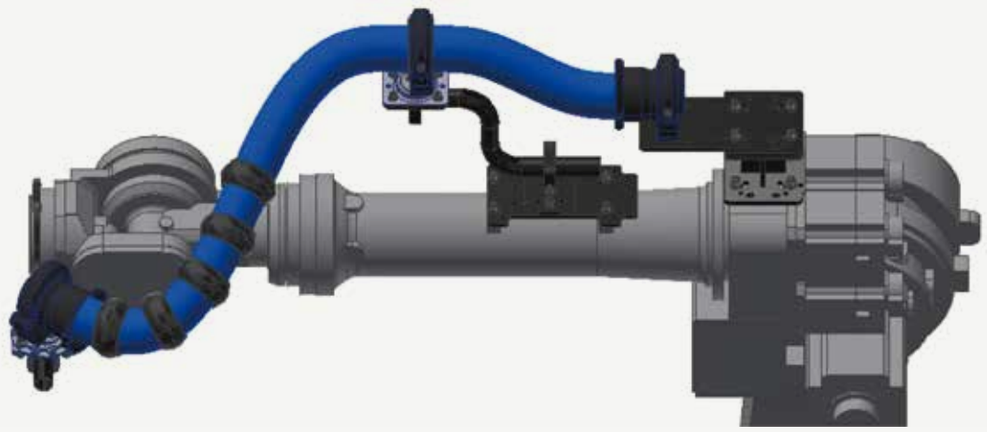
FRY PAN & TUBE CLAMP ASSY INSTALLATION
FRY PAN & TUBE CLAMP ASSY 설치

- DPU 설치 참고 / Reference to DPU INSTALLATION

Installing TUBE ASSY TUBE ASSY 설치

- SINGLE TRUMPET을 I3PLT ASSY와 TUBE CLAMP ASSY의 SINGLE BRACKET에 설치한다.
- I3PLT ASSY와 ASPTR ASSY 사이에 TUBE 길이가 여유 있도록 TUBE ASSY를 ASPTR에 설치한다.

- Install the SINGLE TRUMPET on the I3PLT ASSY and the SINGLE BRACKET on the TUBE CLAMP ASSY.
- Install the TUBE ASSY in the ASPTR so that the length of the TUBE is relaxed between I3PLT ASSY and ASPTR ASSY.



Flexible Tube & Tube Accessory & ETC

KF TYPE | KFN TYPE | KFH TYPE | KFPP TYPE | KFNH TYPE | KFPH TYPE
KCS TYPE | KCE TYPE | KCM TYPE | KC TYPE | KTC TYPE | KST/R

CE RoHS

Flexible Tube & Tube Accessory & ETC

Flexible Tube 및 Connector는 RoHS(10대 유해물질) 규제를 만족하는 재질로 제작된 친환경 제품이다.
Flexible Tube는 V0~V1까지 난연등급을 가지고 있고 쉽게 절단이 가능하며 복원력 및 내구성이 우수하다.
Connector는 Flexible Tube와의 체결력이 뛰어나 주위 환경요인으로 인한 Tube의 이탈이 거의 없다.

Flexible Tube and Connector are eco-friendly products made of materials that follow RoHS (10 restricted materials) regulations. Flexible Tube has a flame retardant rating from V0 to V1, can be cut easily, and has excellent resilience and durability. Connectors have excellent clamping force with flexible tubes, so they rarely seperate the tube due to environmental factors.

Flexible Tube

Tube Accessory

ETC

Flexible Tube Features

Flexible Tube 특징

Flexible Tube는 폴리아미드6를 주재료로 하여
난연성이 뛰어나 V0~V1 까지 난연등급을 가지고 있으며
RoHS(10대 유해물질) 규제를 만족하는 환경친화적 제품이다.

Polyamide6 is main material of Flexible Tube.
It has excellent flame-resistance (V0~V1).
It satisfies regulations of RoHS (10 restricted materials).

쉽게 절단이 가능하여 길이 조정이 용이함.
It is easy to cut and adjust the length.

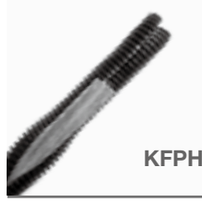
유연성이 뛰어나고 복원력 및 내구성이 우수함.
Excellent flexibility and restoring force and durability.

Order Form

(mm)

EX) **KF - 10/B - 1ROLL**

제품타입 Type	사이즈 Size	색상 Color

사양 Type	재질 Material	온도 Temperature	내약품성 Chemical Resistance	자기소화성 Self-extinguishability	색상 Color	적용 Application
 KF	폴리아미드6 (PA6) Polyamide6	-40~+105°C (순간최대온도 +150°C) Momentary Maximum Temperature +150°C	약산, 알카리, 아세톤, 벤젠, 알코올, 에스텔, 가솔린 Weak acid, alkali, acetone, benzene, alcohol, ester, gasoline	UL94-HB 할로겐 발생 없음 No Occur Halogen	검정색 회색 Black Gray	자동화기계 공작기계 반도체장비 산업기계 Automation machines, Machine tools, Semiconductor plant, Industrial machines
 KFN	폴리아미드6 + α (PA6 + α) Polyamide6 + α	-50~+115°C (순간최대온도 +160°C) Momentary Maximum Temperature +160°C	약산, 알카리, 아세톤, 벤젠, 알코올, 에스텔, 가솔린 Weak acid, alkali, acetone, benzene, alcohol, ester, gasoline	UL94-V0~V1 할로겐 발생 없음 No Occur Halogen	검정색 회색 밝은회색 Black Gray Light-Gray	자동화기계 공작기계 반도체장비 산업기계 철도차량 Automation machines, Machine tools, Semiconductor plant, Industrial machines, Railroad cars
 KFPP	폴리프로필렌 (PP) Polypropylene	-15~+60°C (순간최대온도 +80°C) Momentary Maximum Temperature +80°C	약산, 알카리, 유기용제 Weak acid, alkali, organic solvent	UL94-HB 할로겐 발생 없음 No Occur Halogen	검정색 회색 Black Gray	자동화기계 공작기계 반도체장비 산업기계 Automation machines, Machine tools, Semiconductor plant, Industrial machines
 KFH	폴리아미드6 (PA6) Polyamide6	-40~+105°C (순간최대온도 +150°C) Momentary Maximum Temperature +150°C	약산, 알카리, 아세톤, 벤젠, 알코올, 에스텔, 가솔린 Weak acid, alkali, acetone, benzene, alcohol, ester, gasoline	UL94-HB 할로겐 발생 없음 No Occur Halogen	검정색 회색 Black Gray	자동화기계 공작기계 반도체장비 산업기계 Automation machines, Machine tools, Semiconductor plant, Industrial machines
 KFNH	폴리아미드6 + α (PA6 + α) Polyamide6 + α	-50~+115°C (순간최대온도 +160°C) Momentary Maximum Temperature +160°C	약산, 알카리, 아세톤, 벤젠, 알코올, 에스텔, 가솔린 Weak acid, alkali, acetone, benzene, alcohol, ester, gasoline	UL94-V0~V1 할로겐 발생 없음 No Occur Halogen	검정색 회색 밝은회색 Black Gray Light-Gray	자동화기계 공작기계 반도체장비 산업기계 철도차량 Automation machines, Machine tools, Semiconductor plant, Industrial machines, Railroad cars
 KFPH	폴리프로필렌 (PP) Polypropylene	-15~+60°C (순간최대온도 +80°C) Momentary Maximum Temperature +80°C	약산, 알카리, 유기용제 Weak acid, alkali, organic solvent	UL94-HB 할로겐 발생 없음 No Occur Halogen	검정색 회색 Black Gray	자동화기계 공작기계 반도체장비 산업기계 Automation machines, Machine tools, Semiconductor plant, Industrial machines

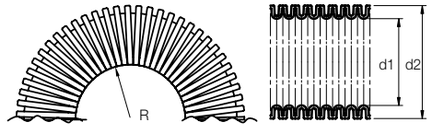
Flexible Tube

Flexible Tube CE

KF TYPE

- **Material :** Polyamide 6 (PA6)
- **Temperature Range :** -40 ~ +105℃ (Short term 150℃)
- **Protective :** IP67acc
- **Application :** Automation machines, Machine tools, Semiconductor plant, Industrial machines
- **Color :** Black, Gray

* Gray는 주문사양이므로 납기 협의 요망
Gray : As it is order, Please discuss the delivery date



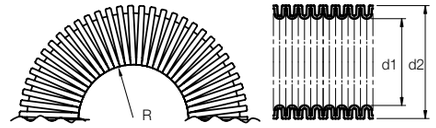
품번 Product No.		내경 (d1) Inner Diameter / ±0.5	외경 (d2) Outer Diameter / ±0.5	최소반경 (R) Bending Radius / ±10%	포장단위 Packing Standard	무게 Weight
Black	Gray	mm (inch)	mm (inch)	mm (inch)	1Roll	(M / g)
KF-07/B	KF-07/G	6.3 (0.248)	10 (0.394)	15 (0.591)	50M	20
KF-10/B	KF-10/G	9.6 (0.378)	13 (0.512)	20 (0.787)	50M	26
KF-12/B	KF-12/G	12 (0.472)	15.8 (0.622)	30 (1.181)	50M	34
KF-16/B	KF-16/G	16 (0.630)	21.2 (0.835)	40 (1.575)	50M	55
KF-22/B	KF-22/G	21.9 (0.862)	28.5 (1.122)	45 (1.772)	50M	87
KF-28/B	KF-28/G	27.8 (1.094)	34.5 (1.358)	50 (1.969)	50M	112
KF-36/B	KF-36/G	36 (1.417)	42.5 (1.673)	60 (2.362)	30M	155
KF-48/B	KF-48/G	46.7 (1.839)	54.5 (2.146)	70 (2.756)	30M	196

Flexible Tube CE

KFPP TYPE

- **Material :** Polypropylene (PP)
- **Temperature Range :** -15 ~ +60℃ (Short term 80℃)
- **Protective :** IP67acc
- **Application :** Automation machines, Machine tools, Semiconductor plant, Industrial machines
- **Color :** Black, Gray

* Gray는 주문사양이므로 납기 협의 요망
Gray : As it is order, Please discuss the delivery date



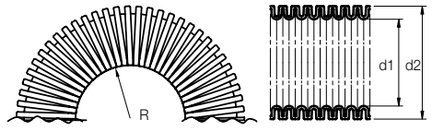
품번 Product No.		내경 (d1) Inner Diameter / ±0.5	외경 (d2) Outer Diameter / ±0.5	최소반경 (R) Bending Radius / ±10%	포장단위 Packing Standard	무게 Weight
Black	Gray	mm (inch)	mm (inch)	mm (inch)	1Roll	(M / g)
KFPP-07/B	KFPP-07/G	6.3 (0.248)	10 (0.394)	15 (0.591)	50M	16
KFPP-10/B	KFPP-10/G	9.6 (0.378)	13 (0.512)	20 (0.787)	50M	22
KFPP-12/B	KFPP-12/G	12 (0.472)	15.8 (0.622)	30 (1.181)	50M	27
KFPP-16/B	KFPP-16/G	16 (0.630)	21.2 (0.835)	40 (1.575)	50M	51
KFPP-22/B	KFPP-22/G	21.9 (0.862)	28.5 (1.122)	45 (1.772)	50M	72
KFPP-28/B	KFPP-28/G	27.8 (1.094)	34.5 (1.358)	50 (1.969)	50M	92
KFPP-36/B	KFPP-36/G	36 (1.417)	42.5 (1.673)	60 (2.362)	30M	132
KFPP-48/B	KFPP-48/G	46.7 (1.839)	54.5 (2.146)	70 (2.756)	30M	157

Flexible Tube CE

KFN TYPE

- **Material :** Polyamide 6 + α (PA6 + α)
- **Temperature Range :** -50 ~ +115℃ (Short term 160℃)
- **Protective :** IP67acc
- **Application :** Automation machines, Machine tools, Semiconductor plant, Industrial machines, Railroad cars
- **Color :** Black, Gray, Light Gray

* Gray, Light Gray는 주문사양이므로 납기 협의 요망
Gray, Light Gray : As it is order, Please discuss the delivery date

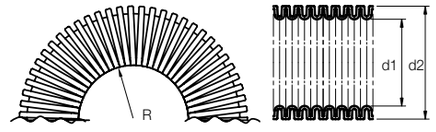


품번 Product No.			내경 (d1) Inner Diameter / ±0.5	외경 (d2) Outer Diameter / ±0.5	최소반경 (R) Bending Radius / ±10%	포장단위 Packing Standard	무게 Weight
Black	Gray	Light Gray	mm (inch)	mm (inch)	mm (inch)	1Roll	(M / g)
KFN-07/B	KFN-07/G	KFN-07/LG	6.3 (0.248)	10 (0.394)	15 (0.591)	50M	25
KFN-10/B	KFN-10/G	KFN-10/LG	9.6 (0.378)	13 (0.512)	20 (0.787)	50M	28
KFN-12/B	KFN-12/G	KFN-12/LG	12.5 (0.492)	15.8 (0.622)	30 (1.181)	50M	36
KFN-16/B	KFN-16/G	KFN-16/LG	16 (0.630)	21.2 (0.835)	40 (1.575)	50M	60
KFN-22/B	KFN-22/G	KFN-22/LG	21.9 (0.862)	28.5 (1.122)	45 (1.772)	50M	88
KFN-28/B	KFN-28/G	KFN-28/LG	27.8 (1.094)	34.5 (1.358)	50 (1.969)	50M	116
KFN-36/B	KFN-36/G	KFN-36/LG	36 (1.417)	42.5 (1.673)	60 (2.362)	30M	157
KFN-48/B	KFN-48/G	KFN-48/LG	46.7 (1.839)	54.5 (2.146)	70 (2.756)	30M	198

Flexible Tube CE

KFH TYPE

- **Material :** Polyamide 6 (PA6)
- **Temperature Range :** -50 ~ +105℃ (Short term 150℃)
- **Protective :** IP67acc
- **Application :** Automation machines, Machine tools, Semiconductor plant, Industrial machines
- **Color :** Black, Gray * Gray는 주문사양이므로 납기 협의 요망
- **H Type is for open type, it is easy to install.**
  후렉시블튜브 한쪽이 컷팅, Open되어 있어 설치, 보수가 쉬움.

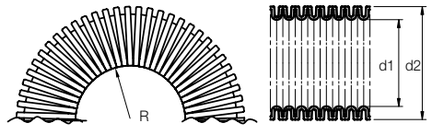


품번 Product No.		내경 (d1) Inner Diameter / ±0.5	외경 (d2) Outer Diameter / ±0.5	최소반경 (R) Bending Radius / ±10%	포장단위 Packing Standard	무게 Weight
Black	Gray	mm (inch)	mm (inch)	mm (inch)	1Roll	(M / g)
KFH-07/B	KFH-07/G	6.3 (0.248)	10 (0.394)	15 (0.591)	50M	20
KFH-10/B	KFH-10/G	9.6 (0.378)	13 (0.512)	20 (0.787)	50M	26
KFH-12/B	KFH-12/G	12.5 (0.492)	15.8 (0.622)	30 (1.181)	50M	34
KFH-16/B	KFH-16/G	16 (0.630)	21.2 (0.835)	40 (1.575)	50M	55
KFH-22/B	KFH-22/G	21.9 (0.862)	28.5 (1.122)	45 (1.772)	50M	87
KFH-28/B	KFH-28/G	27.8 (1.094)	34.5 (1.358)	50 (1.969)	50M	112
KFH-36/B	KFH-36/G	36 (1.417)	42.5 (1.673)	60 (2.362)	30M	155
KFH-48/B	KFH-48/G	46.7 (1.839)	54.5 (2.146)	70 (2.756)	30M	196

Flexible Tube

KFNH TYPE

- **Material :** Polyamide 6 + α (PA6 + α)
- **Temperature Range :** -50 ~ +115℃ (Short term 160℃)
- **Protective :** IP67acc
- **Application :** Automation machines, Machine tools, Semiconductor plant, Industrial machines, Railroad cars
- **Color :** Black, Gray, Light Gray * Gray, Light Gray는 주문사양이므로 납기 협의 요망
- **H Type is for open type, it is easy to install.**
  후렉시블튜브 한쪽이 컷팅, Open되어 있어 설치, 보수가 쉬움.

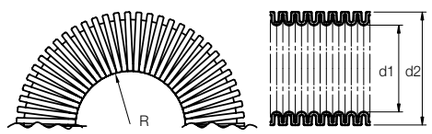


품번 Product No.			내경 (d1) Inner Diameter / ±0.5	외경 (d2) Outer Diameter / ±0.5	최소반경 (R) Bending Radius / ±10%	포장단위 Packing Standard	무게 Weight
Black	Gray	Light Gray	mm (inch)	mm (inch)	mm (inch)	1Roll	(M/g)
KFNH-07/B	KFNH-07/G	KFNH-07/LG	6.3 (0.248)	10 (0.394)	15 (0.591)	50M	25
KFNH-10/B	KFNH-10/G	KFNH-10/LG	9.6 (0.378)	13 (0.512)	20 (0.787)	50M	28
KFNH-12/B	KFNH-12/G	KFNH-12/LG	12.5 (0.492)	15.8 (0.622)	30 (1.181)	50M	36
KFNH-16/B	KFNH-16/G	KFNH-16/LG	16 (0.630)	21.2 (0.835)	40 (1.575)	50M	60
KFNH-22/B	KFNH-22/G	KFNH-22/LG	21.9 (0.862)	28.5 (1.122)	45 (1.772)	50M	88
KFNH-28/B	KFNH-28/G	KFNH-28/LG	27.8 (1.094)	34.5 (1.358)	50 (1.969)	50M	116
KFNH-36/B	KFNH-36/G	KFNH-36/LG	36 (1.417)	42.5 (1.673)	60 (2.362)	30M	157
KFNH-48/B	KFNH-48/G	KFNH-48/LG	46.7 (1.839)	54.5 (2.146)	70 (2.756)	30M	198

Flexible Tube

KFPH TYPE

- **Material :** Polypropylene (PP)
- **Temperature Range :** -15 ~ +60℃ (Short term 80℃)
- **Protective :** IP67acc
- **Application :** Automation machines, Machine tools, Semiconductor plant, Industrial machines
- **Color :** Black, Gray * Gray는 주문사양이므로 납기 협의 요망
- **H Type is for open type, it is easy to install.**
  후렉시블튜브 한쪽이 컷팅, Open되어 있어 설치, 보수가 쉬움.



품번 Product No.		내경 (d1) Inner Diameter / ±0.5	외경 (d2) Outer Diameter / ±0.5	최소반경 (R) Bending Radius / ±10%	포장단위 Packing Standard	무게 Weight
Black	Gray	mm (inch)	mm (inch)	mm (inch)	1Roll	(M/g)
KFPH-07/B	KFPH-07/G	6.3 (0.248)	10 (0.394)	15 (0.591)	50M	16
KFPH-10/B	KFPH-10/G	9.6 (0.378)	13 (0.512)	20 (0.787)	50M	22
KFPH-12/B	KFPH-12/G	12 (0.472)	15.8 (0.622)	30 (1.181)	50M	27
KFPH-16/B	KFPH-16/G	16 (0.630)	21.2 (0.835)	40 (1.575)	50M	51
KFPH-22/B	KFPH-22/G	21.9 (0.862)	28.5 (1.122)	45 (1.772)	50M	72
KFPH-28/B	KFPH-28/G	27.8 (1.094)	34.5 (1.358)	50 (1.969)	50M	92
KFPH-36/B	KFPH-36/G	36 (1.417)	42.5 (1.673)	60 (2.362)	30M	132
KFPH-48/B	KFPH-48/G	46.7 (1.839)	54.5 (2.146)	70 (2.756)	30M	157

CE RoHS

Connector 특징

- Connector는 폴리아미드6를 주재료로 하여 어떠한 환경에서도 적용될 수 있으며 RoHS(10대 유해물질) 규제를 충족하는 환경친화적인 제품임.
- Connector는 Flexible Tube와 원터치 결합방식으로 조립 해체가 편리함.
- Connector는 PF, PG, UNEF 등 다양한 나사규격을 구비하고 있음.

- Connector can be applied in any environment using polyamide 6 as the main imaterial and is an eco-friendly product that satisfies regulations on RoHS (10 restricted materials).
- Connector and flexible tubing are one-touch connecting and easy to assembly and disassembly.
- Have various screw specifications (PF, PG, UNEF)

How to assemble connectors and flexible tubes 컨넥터와 후렉시블 튜브 조립방법

튜브를 콘넥터에 연결한다.
Push into connector completely.

콘넥터 핀이 확실히 잠겨있는지 확인한다.
Check the body and ring is fixed.

How to disassemble connectors and fiexble tubes 컨넥터와 후렉시블 튜브 해체방법

콘넥터 핀을 당겨서 연다.
Pull the pin to release.

튜브와 콘넥터를 분리한다.
After inserting the tube, make a 90'turn to fix the pin.

Order Form Connector, Clamp, End cap

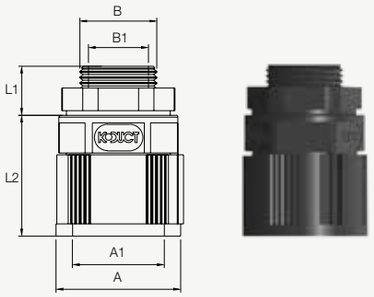
(mm)

EX) **KCS10 - G10/B - 1EA**

제품타입 Type	나사탭 Scew	사이즈 Size	색상 Color

Connector

KCS TYPE



- **Material :** Polyamide 6 (PA6)
- **Temperature Range :** -40 ~ +125℃
- **Protective :** IP67acc
- **Application :** Automation machines, Machines, Machine tools, Industrial chemical
- **Color :** Black, Gray, Light Gray
  * Gray, Light Gray는 주문사양이므로 납기 협의 요망
    Gray, Light Gray : As it is order, Please discuss the delivery date

PF Thread

(1mm = 0.03937 inch)

Product No.			Thread	L1	L2	A	A1	B	B1	Applicable Tube	Packing Standard
Black	Gray	Light Gray		mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)		1Box/EA
KCS10-G10/B	KCS10-G10/G	KCS10-G10/LG	G1/2 "	13 (0.512)	27.5 (1.083)	24 (0.945)	15.4 (0.606)	20.9 (0.823)	15.9 (0.626)	10	120
KCS12-G12/B	KCS12-G12/G	KCS12-G12/LG	G1/2 "	13 (0.512)	29 (1.142)	28 (1.102)	19.3 (0.760)	20.9 (0.823)	15.9 (0.626)	12	100
KCS16-G16/B	KCS16-G16/G	KCS16-G16/LG	G1/2 "	13 (0.512)	32 (1.260)	33(1.299)	24.3 (0.957)	20.9 (0.823)	15.9 (0.626)	16	80
KCS22-G22/B	KCS22-G22/G	KCS22-G22/LG	G3/4 "	15 (0.591)	37 (1.457)	42 (1.654)	31.8 (1.252)	26.4 (1.039)	19.6 (0.772)	22	50
KCS28-G28/B	KCS28-G28/G	KCS28-G28/LG	G1 "	15 (0.591)	37 (1.457)	46 (1.811)	35 (1.378)	33.2 (1.307)	27 (1.063)	28	24
KCS36-G36/B	KCS36-G36/G	KCS36-G36/LG	G1 1/4 "	19 (0.748)	43 (1.693)	55.5 (2.185)	43 (1.693)	41.9 (1.650)	37 (1.457)	36	15
KCS48-G42/B	KCS48-G42/G	KCS48-G42/LG	G1 1/2"	19 (0.748)	48 (1.890)	67.5 (2.657)	55 (2.165)	47.2 (1.858)	41 (1.614)	48	10
KCS48-G48/B	KCS48-G48/G	KCS48-G48/LG	G2 "	19 (0.748)	48 (1.890)	67.5 (2.657)	55 (2.165)	59.5 (2.343)	54 (2.126)	48	10

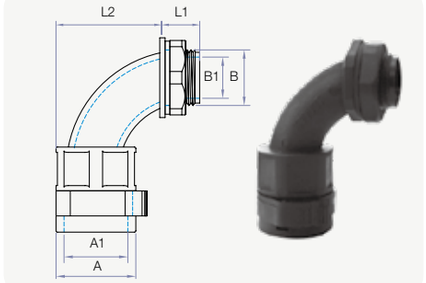
PG Thread

(1mm = 0.03937 inch)

Product No.			Thread	L1	L2	A	A1	B	B1	Applicable Tube	Packing Standard
Black	Gray	Light Gray		mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)		1Box/EA
KCS07-P077/B	KCS07-P077/G	KCS07-P077/LG	PG07	13 (0.433)	24 (0.945)	21 (0.827)	12.8 (0.504)	12.5 (0.492)	8.8 (0.346)	7	30
KCS07-P097/B	KCS07-P097/G	KCS07-P097/LG	PG09	13 (0.512)	24 (0.945)	21 (0.827)	12.8 (0.504)	15.2 (0.598)	8.8 (0.346)	7	30
KCS07-P117/B	KCS07-P117/G	KCS07-P117/LG	PG11	13 (0.512)	24 (0.945)	21(0.827)	12.8 (0.504)	18.6 (0.732)	8.8 (0.346)	7	30
KCS07-P137/B	KCS07-P137/G	KCS07-P137/LG	PG13.5	13 (0.512)	24 (0.945)	21 (0.827)	12.8 (0.504)	20.4 (0.803)	8.8 (0.346)	7	30
KCS10-P070/B	KCS10-P070/G	KCS10-P070/LG	PG07	13 (0.512)	27.5 (1.083)	24 (0.945)	15.4 (0.606)	12.5 (0.823)	8.8 (0.346)	10	120
KCS10-P09/B	KCS10-P09/G	KCS10-P09/LG	PG09	13 (0.512)	27.5 (1.083)	24 (0.945)	15.4 (0.606)	15.2 (0.598)	11.5 (0.453)	10	120
KCS10-P110/B	KCS10-P110/G	KCS10-P110/LG	PG11	13 (0.512)	27.5 (1.083)	24 (0.945)	15.4 (0.606)	18.6 (0.732)	11.5 (0.453)	10	120
KCS10-P130/B	KCS10-P130/G	KCS10-P130/LG	PG13.5	13 (0.512)	27.5 (1.083)	24 (0.945)	15.4 (0.606)	20.4 (0.803)	11.5 (0.453)	10	120
KCS10-P160/B	KCS10-P160/G	KCS10-P160/LG	PG16	13 (0.512)	27.5 (1.083)	24 (0.945)	15.4 (0.606)	22.5 (0.886)	11.5 (0.453)	10	120
KCS12-P0912/B	KCS12-P0912/G	KCS12-P0912/LG	PG09	13 (0.512)	29 (1.142)	28 (1.102)	19.3 (0.760)	15.2 (0.823)	11.5 (0.453)	12	100
KCS12-P11/B	KCS12-P11/G	KCS12-P11/LG	PG11	13 (0.512)	29 (1.142)	28 (1.102)	19.3 (0.760)	18.6 (0.732)	12 (0.472)	12	100
KCS12-P132/B	KCS12-P132/G	KCS12-P132/LG	PG13.5	13 (0.512)	29 (1.142)	28 (1.102)	19.3 (0.760)	20.4 (0.803)	12 (0.472)	12	100
KCS12-P162/B	KCS12-P162/G	KCS12-P162/LG	PG16	13 (0.512)	29 (1.142)	28 (1.102)	19.3 (0.760)	22.5 (0.886)	14.5 (0.571)	12	100
KCS16-P136/B	KCS16-P136/G	KCS16-P136/LG	PG13.5	13 (0.512)	32 (1.260)	33 (1.299)	24.3 (0.957)	20.4 (0.823)	16 (0.630)	16	80
KCS16-P16/B	KCS16-P16/G	KCS16-P16/LG	PG16	13 (0.512)	32 (1.260)	33 (1.299)	24.3 (0.957)	22.5 (0.886)	16 (0.630)	16	80
KCS16-P216/B	KCS16-P216/G	KCS16-P216/LG	PG21	13 (0.512)	32 (1.260)	33 (1.299)	24.3 (0.957)	28.3 (1.114)	16 (0.630)	16	80
KCS22-P163/B	KCS22-P163/G	KCS22-P163/LG	PG16	13 (0.512)	37 (1.457)	42 (1.654)	31.8 (1.252)	22.5 (1.039)	18 (0.709)	22	50
KCS22-P21/B	KCS22-P21/G	KCS22-P21/LG	PG21	13 (0.512)	37 (1.457)	42 (1.654)	31.8 (1.252)	28.3 (1.114)	23 (0.905)	22	50
KCS28-P29/B	KCS28-P29/G	KCS28-P29/LG	PG29	15 (0.591)	37 (1.457)	46 (1.811)	35 (1.378)	37 (1.307)	30.5 (1.201)	28	24
KCS36-P36/B	KCS36-P36/G	KCS36-P36/LG	PG36	19 (0.748)	43 (1.693)	55.5 (2.185)	43 (1.693)	47 (1.650)	39 (1.535)	36	15
KCS48-P48/B	KCS48-P48/G	KCS48-P48/LG	PG48	21 (0.827)	48 (1.890)	67.5 (2.657)	55 (2.165)	59.3 (2.343)	52.5 (2.067)	48	10

Connector

KCE TYPE



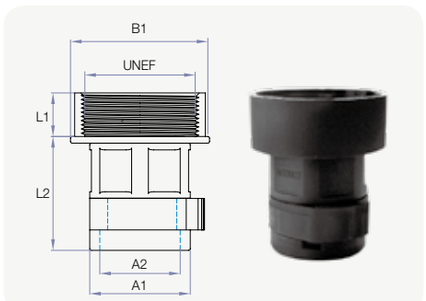
- **Material :** Polyamide 6 (PA6)
- **Temperature Range :** -40 ~ +125℃
- **Protective :** IP67acc
- **Application :** Automation machines, Machines, Machine tools, Industrial chemical
- **Color :** Black, Gray, Light Gray
  * Gray, Light Gray는 주문사양이므로 납기 협의 요망
    Gray, Light Gray : As it is order, Please discuss the delivery date

(1mm = 0.03937 inch)

Product No.			Thread	L1	L2	A	A1	B	B1	Applicable Tube	Packing Standard	Weight
Black	Gray	Light Gray		mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)		1Box/EA	1EA/g
KCE-P07/B	KCE-P07/G	KCE-P07/LG	PG7	11 (0.433)	25 (0.984)	19.5 (0.768)	10.5 (0.413)	12.5 (0.492)	9 (0.354)	7	120	13.7
KCE-G10/B	KCE-G10/G	KCE-G10/LG	G1/2 "	13 (0.512)	28 (1.102)	22 (0.866)	13.5 (0.532)	20.9 (0.823)	11 (0.433)	10	80	17.2
KCE-G12/B	KCE-G12/G	KCE-G12/LG	G1/2 "	13 (0.512)	36.5 (1.437)	26 (1.024)	17 (0.669)	20.9 (0.823)	14 (0.551)	12	50	20.4
KCE-G16/B	KCE-G16/G	KCE-G16/LG	G1/2 "	13 (0.512)	41 (1.614)	30 (1.181)	22 (0.866)	20.9 (0.823)	16 (0.63)	16	40	23.9
KCE-G22/B	KCE-G22/G	KCE-G22/LG	G3/4 "	15 (0.591)	49.5 (1.949)	40 (1.575)	29.5 (1.161)	26.4 (1.039)	20.6 (0.811)	22	20	41.5
KCE-G28/B	KCE-G28/G	KCE-G28/LG	G1 "	15 (0.591)	59.5 (2.343)	46 (1.811)	35 (1.378)	33.2 (1.307)	27 (1.063)	28	10	59.3
KCE-G36/B	KCE-G36/G	KCE-G36/LG	G1 1/4 "	19 (0.748)	76 (2.992)	55.5 (2.185)	43 (1.693)	41.9 (1.65)	35 (1.378)	36	6	101.0
KCE-G42/B	KCE-G42/G	KCE-G42/LG	G1 1/2"	19(0.748)	91(3.583)	67.5(2.657)	55(2.165)	47.2(1.858)	41(1.614)	48	4	200
KCE-G48/B	KCE-G48/G	KCE-G48/LG	G2 "	19 (0.748)	91 (3.583)	67.5 (2.657)	55 (2.165)	59.5 (2.343)	49.7 (1.957	48	4	140.0

Connector

KCM (MS) TYPE



- **Material :** Polyamide 6 (PA6)
- **Temperature Range :** -40 ~ +125℃
- **Protective :** IP67acc
- **Application :** Automation machines, Machines, Machine tools, Industrial chemical
- **Color :** Black, Gray
  * Gray는 주문사양이므로 납기 협의 요망
    Gray : As it is order, Please discuss the delivery date

(1mm = 0.03937 inch)

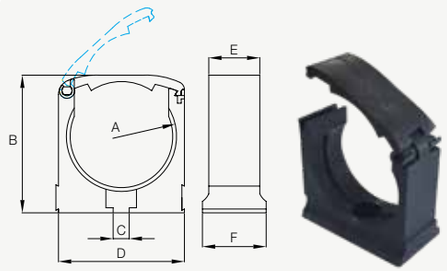
Product No.		Screw Thread (UNEF)	Sheel Size	L1	L2	A1	A2	B1	Applicable Tube	Packing Standard	Weight
Black	Gray			mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)		1Box/EA	1EA/g
KCM-1616/B	KCM-1616/G	7/8-20UNEF	16, 16S	15 (0.59)	30 (1.18)	30 (1.18)	22 (0.87)	26 (1.02)	16 (0.63)	70	14.8
KCM-1618/B	KCM-1618/G	1-20UNEF	18	15 (0.59)	30 (1.18)	30 (1.18)	22 (0.87)	29.4 (1.16)	16 (0.63)	70	15.8
KCM-1620/B	KCM-1620/G	1 3/16-18UNEF	20, 22	15 (0.59)	30 (1.18)	30 (1.18)	22 (0.87)	3 4(1.33)	16 (0.63)	70	16.4
KCM-1628/B	KCM-1628/G	1 7/16-18UNEF	24, 28	15 (0.59)	30 (1.18)	30 (1.18)	22 (0.87)	40.5 (1.60)	16 (0.63)	60	18.1
KCM-2222/B	KCM-2222/G	1 3/16-18UNEF	20, 22	17 (0.67)	32 (1.26)	40 (1.57)	29.5 (1.161)	34.5 (1.36)	22 (0.87)	30	25.8
KCM-2228/B	KCM-2228/G	1 7/16-18UNEF	24, 28	17 (0.67)	32 (1.26)	40 (1.57)	29.5 (1.161)	40.5 (1.60)	22 (0.87)	30	28.1
KCM-2828/B	KCM-2828/G	1 7/16-18UNEF	24, 28	17 (0.67)	37 (1.46)	46 (1.81)	35 (1.38)	40.5 (1.60)	28 (1.10)	25	32.4
KCM-2832/B	KCM-2832/G	1 3/4-18UNEF	32	17 (0.67)	35 (1.38)	46 (1.81)	35 (1.38)	48.5 (1.91)	28 (1.10)	24	32.9
KCM-3636/B	KCM-3636/G	2-18UNS	36	17 (0.67	35 (1.38)	55.5 (2.19)	43.5 (1.71)	55.8 (2.20)	36 (1.42)	15	49.6

Clamp

KC TYPE

- **Material :** Polyamide 6 (PA6)
- **Temperature Range :** -40 ~ +125℃
- **Application :** Automation machines, Machines, Machine tools, Industrial chemical
- **Color :** Black, Gray

  * Gray는 주문사양이므로 납기 협의 요망
  Gray : As it is order, Please discuss the delivery date



(1mm = 0.03937 inch)

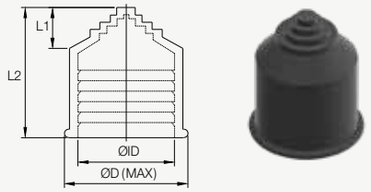
Product No.		A	B	C	D	E	F	Weight
Black	Gray	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	1EA/g
KC-07/B	KC-07/G	10 (0.394)	20 (0.787)	4 (0.157)	17 (0.669)	16 (0.63)	20 (0.787)	3.9
KC-10/B	KC-10/G	13.2 (0.52)	20 (0.787)	4 (0.157)	20 (0.787)	16 (0.63)	20 (0.787)	3.7
KC-12/B	KC-12/G	16.2 (0.638)	26 (1.024)	5 (0.197)	22 (0.866)	16 (0.63)	20 (0.787)	4.7
KC-16/B	KC-16/G	21.7 (0.854)	33 (1.299)	5 (0.197)	25 (0.984)	16 (0.63)	20 (0.787)	5.7
KC-22/B	KC-22/G	29.2 (1.15)	40 (1.575)	6 (0.236)	35 (1.378)	16 (0.63)	20 (0.787)	8.8
KC-28/B	KC-28/G	35(1.378)	46 (1.811)	6 (0.236)	40 (1.575)	20 (0.787)	25 (0.984)	14.3
KC-36/B	KC-36/G	43.2 (1.701)	54 (2.126)	6 (0.236)	50 (1.969)	20 (0.787)	25 (0.984)	18.2
KC-48/B	KC-48/G	54.8 (2.157)	67 (2.638)	6 (0.236)	65 (2.559)	20 (0.787)	25 (0.984)	27.7

End Cap

KTC TYPE

- **Material :** N.B.R (Nitrile butadiene Rubber)
- **Purpose of use :** Tube end finishing
- **How to use :** Just put on tube end
- **For tube type :** Corrugated tubes
- **Color :** Black, Gray

  * Gray는 주문사양이므로 납기 협의 요망
  Gray : As it is order, Please discuss the delivery date



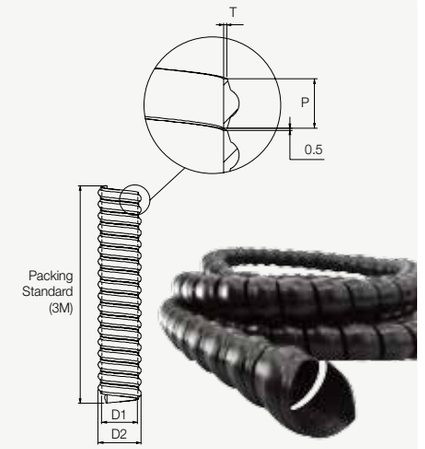
(1mm = 0.03937 inch)

Product No.		ID	D	L1	L2	Applicable Tube	Packing Standard	Weight
Black	Gray	mm (inch)	mm (inch)	mm (inch)	mm (inch)		1Box/EA	1EA/g
KTC-07/B	KTC-07/G	10 (0.39)	16.9 (0.67)	28.3 (1.11)	8.8 (0.35)	7	150	2.1
KTC-10/B	KTC-10/G	13 (0.51)	20.2 (0.8)	32 (1.26)	10.8 (0.43)	10	100	2.5
KTC-12/B	KTC-12/G	16 (0.63)	25 (0.98)	35 (1.38)	15 (0.59)	12	200	5.5
KTC-16/B	KTC-16/G	21.5 (0.85)	29.5 (1.16)	35 (1.38)	12.5 (0.49)	16	120	7.4
KTC-22/B	KTC-22/G	29 (1.14)	37 (1.46)	39 (1.54)	12.2 (0.48)	22	70	12.2
KTC-28/B	KTC-28/G	34.5 (1.36)	44 (1.73)	41 (1.61)	14.2 (0.56)	28	50	16.3
KTC-36/B	KTC-36/G	43 (1.69)	54 (2.13)	57 (2.24)	22 (0.87)	36	20	25.9
KTC-48/B	KTC-48/G	54.5 (2.15)	64 (2.52)	57 (2.24)	22 (0.87)	48	15	34.9

Spring Tube

KST/R TYPE

- **Material :** HDPE
- **Color :** Black
- Spring Tube는 빠르고 쉽게 케이블을 정리하고 관리 할 수 있음.
- 여러종류의 많은 케이블이 한 묶음으로 깔끔하게 정리됨.
- 외부의 충격이나 꼬임으로 인한 케이블 단선을 방지함.
- Spring Tube is a quick and easy to organize and manage cables.
- Clean and arrange many different cables in a bundle.
- Prevent cable disconnection due to external shock or twist.



(1mm = 0.03937 inch)

Product No.	D1	D2	P	T	Weight
	mm	mm	mm	mm	1m/Kg
KST/R-12	12.2	18	18.5	1	0.08
KST/R-14	14.6	20.5	18.6	1	0.09
KST/R-15	15	21	19	1	0.09
KST/R-16	16	22.5	20.3	1.1	0.10
KST/R-17	17.5	24	20	1.1	0.11
KST/R-19	20	27	20.7	1.1	0.12
KST/R-22	22	30	20	1.2	0.14
KST/R-24	24	31	19.3	1.2	0.15
KST/R-26	26	33	21	1.25	0.16
KST/R-28	28.5	35.3	21.8	1.25	0.17
KST/R-30	30	36.5	21	1.3	0.19
KST/R-32	32	39	20.5	1.4	0.23
KST/R-36	37.5	44.5	21.8	1.5	0.26
KST/R-38	43.6	52.5	24.6	1.5	0.35
KST/R-45	45	54	25.3	1.75	0.43
KST/R-55	53.5	63	26.6	2	0.60
KST/R-65	63.8	74	28.6	2	0.71

Order Form

(mm)

EX) **KST/R - 17 - 1EA**

제품타입 Type — 사이즈 Size

KOCE **코세** (KOduct Cable Insert End Cap)

KOCE TYPE

기존 케이블 글랜드 및 Cap에 비해 케이블의 삽입 방법이 간단하고 다양한 케이블을 적용할 수 있는 혁신제품입니다.

- 기존 제품보다 높은 강건성
- Bone Frame 구조로 인한 유지보수 최소화
- 내부 HOLE 돌출구조로 인한 이중 방수, 방진 가능
- 케이블의 밀봉과 고정이 동시에 이루어짐

Innovative products that can conveniently apply a variety type of cables. It is simpler and easier to insert cables than cable glands and Cap.

- More durable than existing products
- Minimize maintenance due to Bone Frame structure
- Double waterproofing and dustproof due to extrusion HOLE structures
- Cables are sealed and secured simultaneously

Product Details 제품 상세정보

제품 이미지 Structure	제품 사용 예시 Installation	품번 Model No.	KOCE-모양-홀, 단-파이 KOCE-Shape-Hole, Stap-Diameter	삽입허용 전선규격 Insertion Allow Standard Wire
		KOCE-S07230	KOCE-Step-07단-23.0 Ø KOCE-Step-07Stap-23.0 Ø	Step1 : 23.0 ~ 28.0 Ø Step2 : 28.0 ~ 33.0 Ø Step3 : 33.0 ~ 38.0 Ø Step4 : 38.0 ~ 43.0 Ø Step5 : 43.0 ~ 48.0 Ø Step6 : 43.0 ~ 53.0 Ø Step7 : 53.0 ~ 55.0 Ø
		KOCE-B07075	KOCE-Box-07홀-7.5 Ø KOCE-Box-07Hole-7.5 Ø	7.5 ~ 12.0 Ø
		KOCE-C35032	KOCE-Circle-35홀-3.2 Ø KOCE-Circle-35Hole-3.2 Ø	3.2 ~ 6.5 Ø
		KOCE-CH03090 / 10050	KOCE-Circle & Hybrid -3홀-9.2Ø / 10홀-5.0 Ø KOCE-Circle & Hybrid -3Hole-9.2Ø / 10Hole-5.0 Ø	9.0 ~ 16.2 Ø 5.0 ~ 10.2 Ø
		KN080	장착 홀 직경 : 80 Ø Installation Hole Diameter : 80 Ø	1.0 ~ 70.0 Ø

Memo

Memo

Memo

A company creating values win-win global partnership KODUCT