

# TROLLEY BAR & TRACK ASSEMBLY

Trolley-bar, Festoon cable system

Design by Designstandard Tel: 010-4309-2602



 **CÔNG TY TNHH KCE HOIST & CRANE VINA**  
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www.trolleybar.com



# FOSTER INDUSTRY EUNCHANG T&C



## GREETINGS

We promise to manufacture the best HOIST CRANE products that keeps pace with the times.

In 1987, we have manufactured trolley bar which is power supply unit of HOIST CRANE and since then, Eun-chang has become Eun-chang T&C CO.,LTD. with customers' concern and care. Eun-chang T&C is located in Noksan industrial complex and is a manufacturing company of HOIST CRANE such as STEEL BASE COPPER HEAD RAILS, AL/CU HEAVY BAR, FESTOON CABLE SYSTEM. Eun-chang which started the new age of STEEL BASE COPPER HEAD RAILS 3000A first in Korea, has competitive power with its own quality and technology and try hard to open up the overseas markets. Eun-chang participated ZPSS CRANE PROJECT of POSCO China and has already challenged to the world. All the staff will try to satisfy the customers' demand by developing productivity and high quality products and will be the best in Korea to be the international company.

Thank you for your care and we Eun-chang hope we will continue to share our success with you together.



President JOUNG-YOUN KIM

We promise to manufacture the best HOIST CRANE products that keeps pace with the times.



## COMPANY HISTORY

- 1987. 01. 05 Establishment of Eun-chang technology (Jangrim industrial complex)
- 1987. 01. 30 Development of TROLLEY BAR 60A 90A 200A 300A 500A
- 1988. 04. 20 Development of TUMBLER RIGID-BAR 500A 800A 1000A
- 1989. 09. 10 Development of AL-HEAVY BAR 500A 1000A 1500A (INSULATED TYPE)
- 1991. 06. 13 Development of RIGID TROLLEY BAR 300A 500A 600A 800A
- 1993. 03. 05 Development of O.H.CRANE ALUMINUM TRACK for prevalent type  
Development of 5 types of CABLE HANGER SYSTEM for I-BEAM
- 1994. 09. 15 Development of RIGID TROLLEY BAR 800A 1000A 1200A
- 1995. 08. 25 Construction of the factory and moving to Rainbow industrial complex
- 1996. 06. 30 Development of H-TYPE TROLLEY-BAR 500A 1000A 1500A
- 1997. 08. 05 Development of O.H.CRANE STEEL, SUS TRACK for prevalent type  
Development of 10 types of CABLE HANGER SYSTEM for I-BEAM
- 1999. 10. 20 Development of CABLE HANGER for CONTAINER CRANE
- 2000. 08. 15 Development of RIGID TROLLEY BAR 1500A 1800A 2000A
- 2002. 06. 01 Conversion of a corporation into Eun-chang T&C CO.,LTD.  
(Moved to Noksan industrial complex)
- 2002. 07. 30 Development of RIGID TROLLEY BAR 2500A (RAIL TYPE)
- 2004. 05. 20 Development of CU HEAVY BAR 300A 500A 1000A (INSULATED TYPE)
- 2005. 04. 09 Certified of ISO 9001 : 2000/KS A 9001 : 2001
- 2006. 07. 28 Establishment the corporation in CHINA
- 2007. 01. 29 CCC (China Quality Certification Centre) Mark  
Trolley-Bar 300A ~1500A
- 2008. 03. 15 Development of CU Heavy bar 1800A 2000A 2500A (Insulated type)
- 2010. 03. 30 Registration of Electric Construction  
(Korea Electrical Contractors Association)
- 2010. 04. 01 Development of RIGID Trolley-bar 3000A (Rail type)
- 2010. 12. 07 Gost-R COC (Certificate Of Conformity), Russia
- 2011. 10. 02 Registration of Plant & Mechanical Construction
- 2012. 01. 02 Partner firm of Hyundai-steel Electric part
- 2012. 03. 05 Development of CABLE HANGER by Aluminum type
- 2015. 11. 02 Relocation of Company (Moved to Mieum industrial complex)
- 2020. 03 Established Ho Chi Minh agency in Vietnam





# TECHNICAL INSTITUTE

Our company manufactures the latest longitudinal and transverse current controlling equipments that are electrically safe, easy to install, easy to repair and easy to maintain.

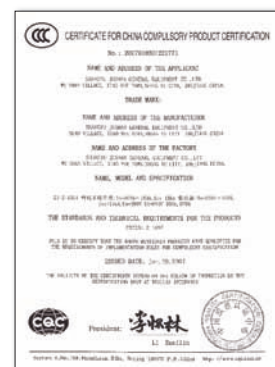
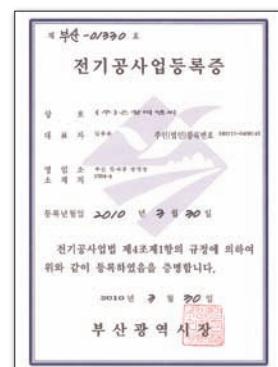
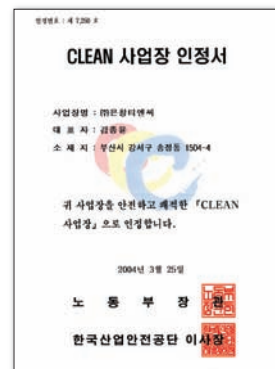
INSULATION AI HEAVY BAR is electrically safe and highly efficient. Due to its electrical safety and high efficiency it was selected and is currently used as the power supply equipment of cranes in ship building yard of prominent local ship manufacturers and DaewooChina ship building.

EUN CHANG STEEL BASE COPPER HEAD RAILS are durable and are suitable for installation and use in places exposed to high temperature. Its excellence as a power supply equipment for cranes has been tested in POSCO, INI STEEL, DKS, POSCO-China Manufacturing Plants and in other manufacturing plants. At present Eun Chang's steel base copper head rails has occupied 30% of the local market.

EUN CHANG FESTOON CABLE SYSTEM can be manufactured in different forms using different material depending on the capacity and material of the crane hoist. It may be in the form of I-beam type, H-beam type, Square bar type, rail type or track type depending on the requirement and request of the client. It can also be manufactured using different materials in the form of stainless steel, aluminum, steel and other materials. PEANUT TYPE TROLLEY BAR, H-TYPE TROLLEY BAR, COMPACT BAR are only some of our company's main products. As a company that specializes in the production of trolley bar, we will use the best technology and experience that we have gained in Korea as a background and we will do everything in our power to be to the world's best manufacturer of trolley bar through continuous development of new products and continuous technological innovation. We hope that you continuously support, guide and encourage our company in its quest to be the world's top-ranking hoist and crane manufacturer.



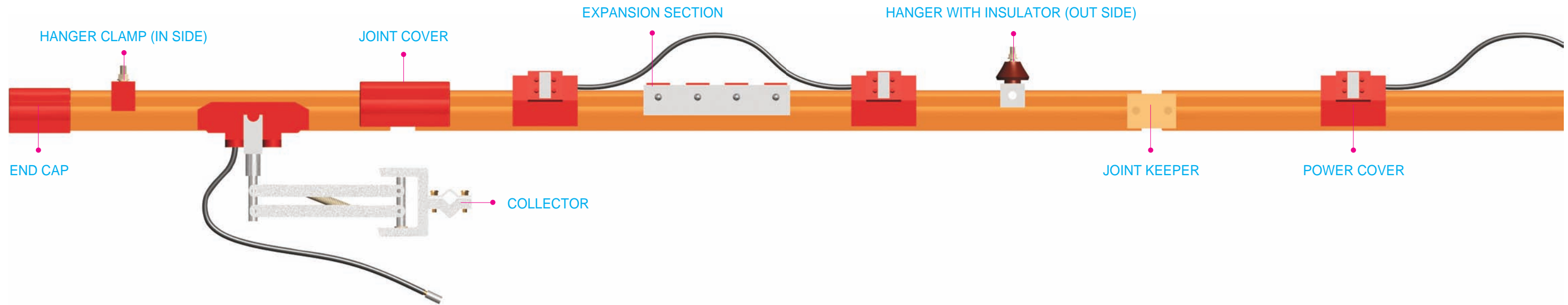
Succeed  
People  
and Technology  
EUNCHANG T&C



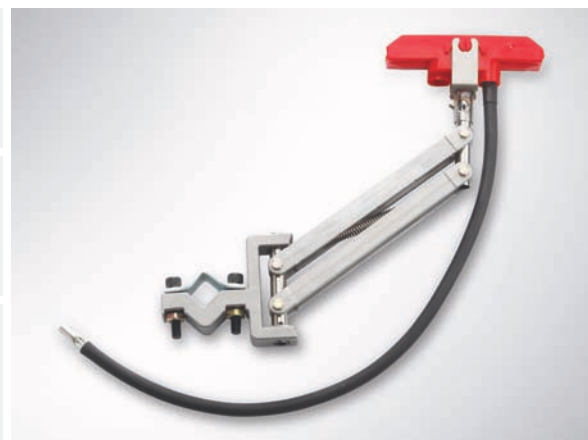


# COMPONENTS OF TROLLEY-BAR

EUNCHANG T&C



**END CAP**  
A end cover to put on end of TROLLEY-BAR.



**COLLECTOR**  
A collection device to deliver the power to loaded part.



**HANGER WITH INSULATOR**  
A hanger clamp to fix the TROLLEY-BAR in outdoors or the area that occurs the dust.

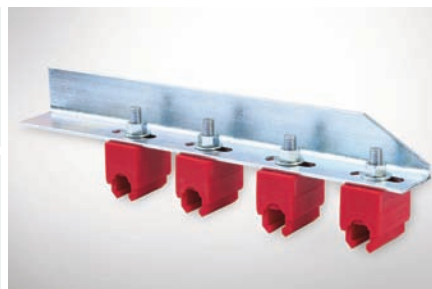


**POWER FEED & COVER**  
Electric supplier to feed the power into a TROLLEY-BAR.



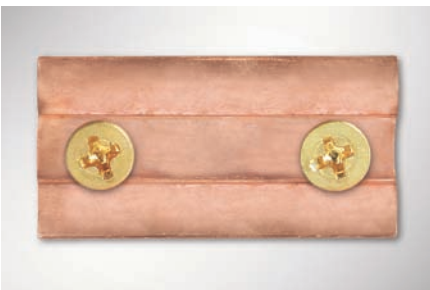
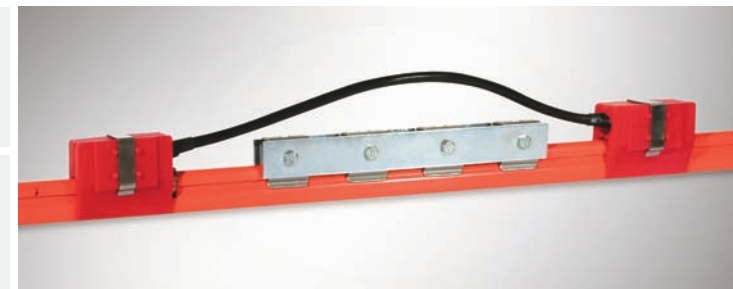
**HANGER CLAMP**  
A hanger clamp to fix the Bracket at TROLLEY-BAR.

**BRACKET**  
A hanger clamp - serves as equipment support.



**JOINT COVER**  
A insulated cover to insulate the exposed conductor on joint electrically.

**EXPANSION SECTION**  
A segregation device to absorb or to supplement the expansion or shrinking of conductor that is accompanied by surrounding temperature change.



**JOINT KEEPER**  
A keeper to connect Bar and Bar.

# COMPONENTS OF TROLLEY-BAR

- TROLLEY-BAR AMPERE KIND
- MATERIAL OF TROLLEY-BAR
- JOINT TYPE OF TROLLEY-BAR
- ACCESSORIES PARTS OF TROLLEY-BAR

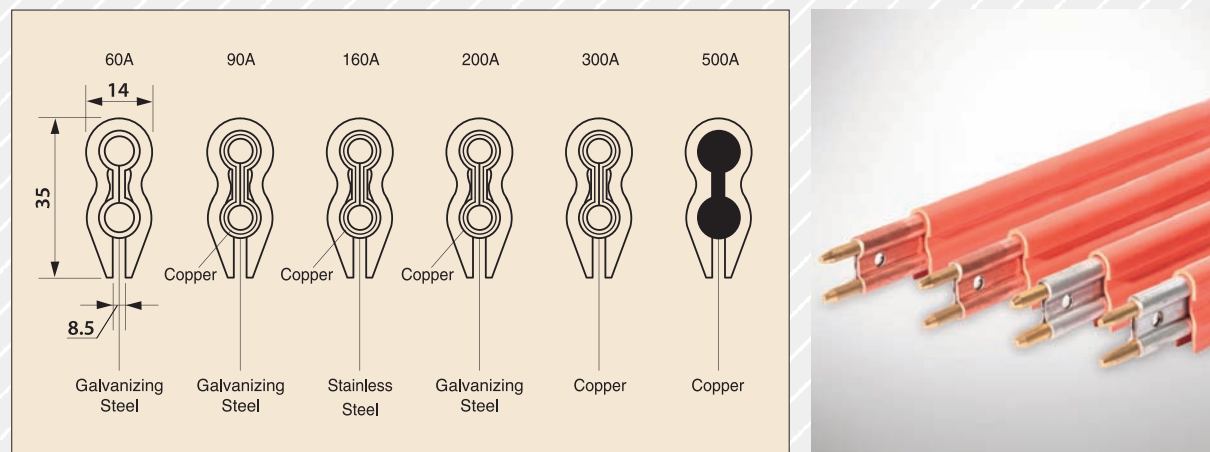
## TROLLEY-BAR AMPERE KIND

Rated Current (A)	Length (mm)	Weight (g)	Item No.		Material
			Standard Type (70°C Heatproof)	Special Type (110°C Heatproof)	
60	3,000	2,400	ET-1-007	ET-2-007	Galvanized Steel
90	3,000	2,750	ET-1-001	ET-2-001	Gal. Steel (85%) Copper
150	3,000	2,900	ET-1-008	ET-2-008	Steel (50%) Copper (50%)
200	3,000	3,000	ET-1-003	ET-2-003	Gal. Steel (40%) Copper (60%)
300	3,000	3,150	ET-1-005	ET-2-005	Copper
500	3,000	5,300	ET-1-011	ET-2-011	Copper (Solid)

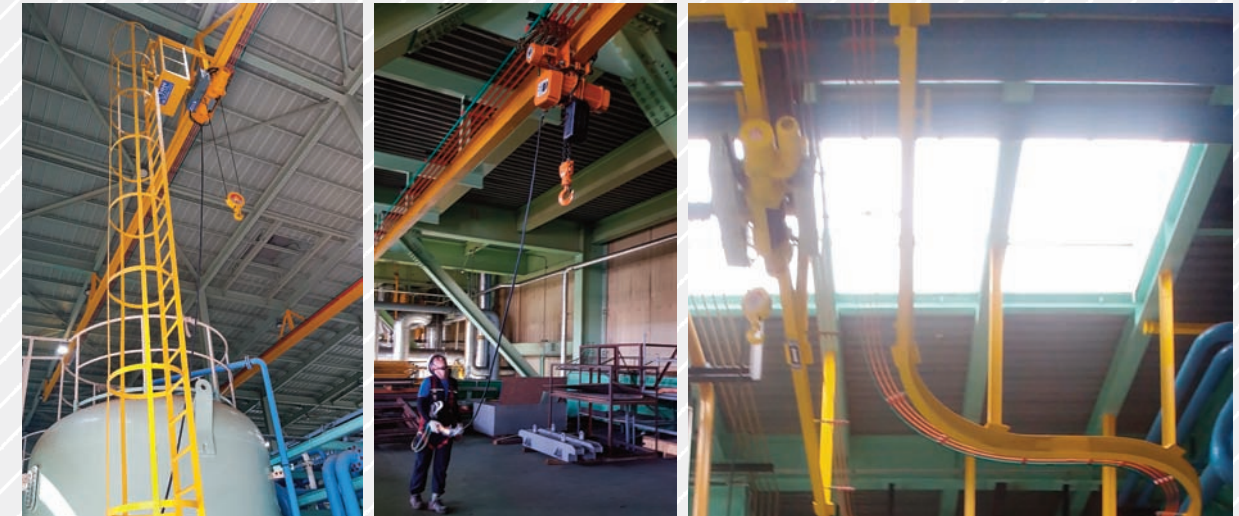
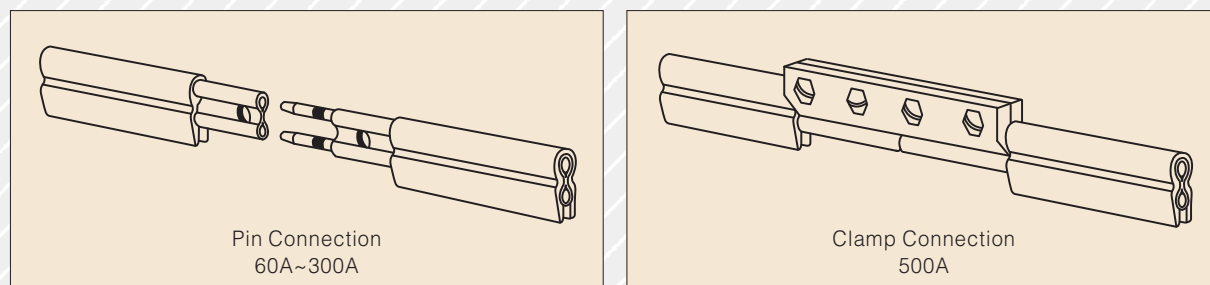
Rated Current (A)	Length (mm)	Weight (g)	Item No.		Material
			Standard Type (70°C Heatproof)	Special Type (110°C Heatproof)	
100	3,000	2,500	ET-1-002	ET-2-007	STS
160	3,000	3,000	ET-1-009	ET-2-009	STS(50%) Copper (50%)

100A, 160A type is the acid-proof TROLLEY-BAR for special area made of Stainless Steel.

## MATERIAL OF TROLLEY-BAR

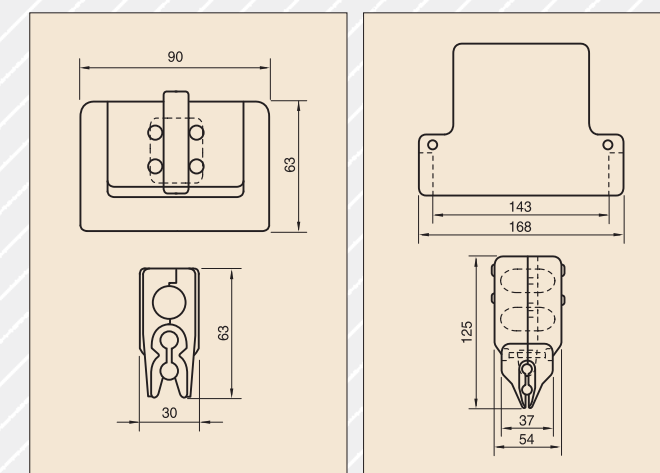


## JOINT TYPE OF TROLLEY-BAR



## ACCESSORIES PARTS OF TROLLEY-BAR

### POWER FEEDS & COVER

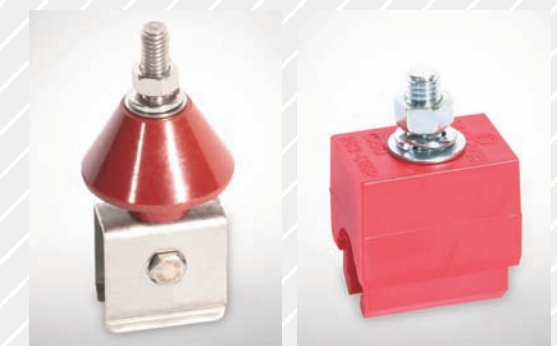


### Specification

Item No.	Ampere	Material
EP-1-001	60A~200A	Copper + PVC
EP-1-002	300A	Copper + PVC
EP-1-003	500A	Copper + PVC

Voltage dropping is necessarily occurred when traveling distance of conducting wire is lengthened. Power feeder should be possibly at the mid point of all conducting wires to make up for voltage dropping and extra power feeder is additionally attached in case of 3% and over voltage dropping rate.

### HANGER CLAMPS



### Specification

Item No.	Use	Material
EH-1-001	Indoors	Galvanized Steel
EH-2-001	Outdoors and dust area	Galvanized Steel + Epoxy Insulator
EH-4-001	indoors and outdoors	PVC

### JOINT COVER



### Specification

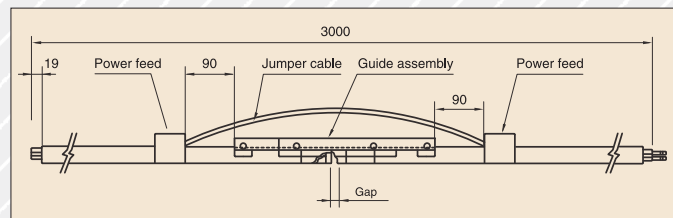
Item No.	Ampere	Material
EJC-1-001	60A~300A	PVC
EJC-1-002	500A	PVC



# COMPONENTS OF TROLLEY-BAR

- EXPANSION SECTION
- JOINT KEEPER
- CARBON BRUSH
- COLLECTORS
- END CAP / MOUNTING BAR

## EXPANSION SECTION

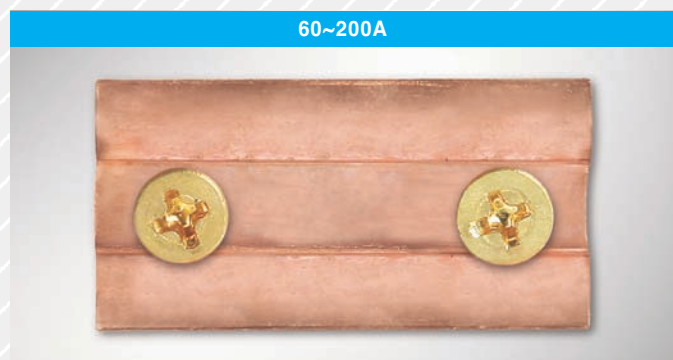


### Specification

Item No.	Ampere	Space between lines
ES-1-001	60A	80m/1point
ES-1-002	90A, 100A	80m/1point
ES-1-003	160A, 200A	80m/1point
ES-1-004	300A	30m/1point
ES-1-005	500A	30m/1point
ES-1-006	150A	80m/1point

A separate device to absorb and to complement the expansion and shrinking of conductor caused by surrounding temperature change as space is given on train rail and section to be installed and Gap are changed by surrounding temperature when it is installed with A capacity.

## JOINT KEEPER



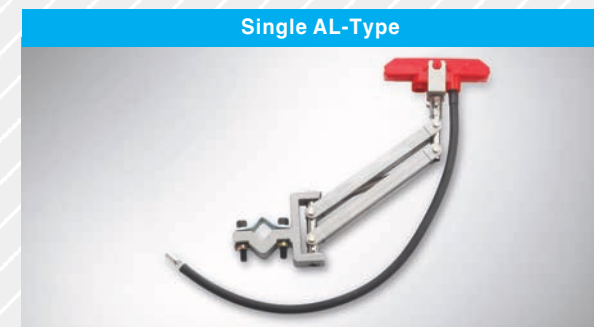
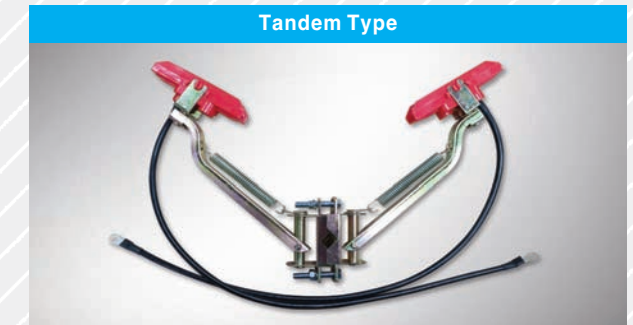
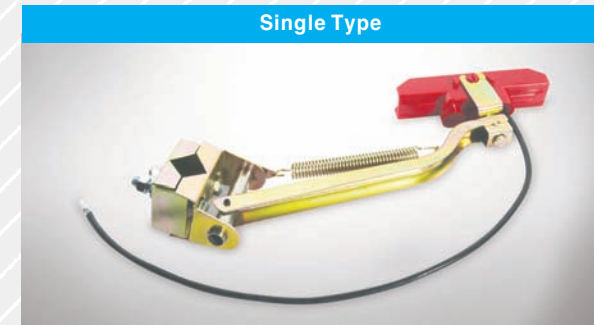
### Specification

Item No.	Ampere	Material
EJK-1-001	60A~200A	Copper
EJK-1-002	300A	Copper
EJK-1-003	500A	Copper

## CARBON BRUSH



## COLLECTORS



### Specification

Item No.	Collecting capacity(A)	Use	Weight(g)	Type	Arm Material
ECC-1-001	30	Going straight & rotating	810	Single	Steel
ECC-1-002	60	Going straight	850		
ECC-1-003	90	Going straight	900		
ECC-1-005	200	Going straight	1,000		

Item No.	Collecting capacity(A)	Use	Weight(g)	Type	Arm Material
ECC-1A-002	60	Going straight	1,370	Single	Aluminum
ECC-1A-003	90	Going straight	1,500		
ECC-1A-005	200	Going straight	1,600		

Item No.	Collecting capacity(A)	Use	Weight(g)	Type	Arm Material
ECT-1-001	120	Going straight	1,700	Double	Steel
ECT-1-002	180	Going straight	1,800		
ECT-1-003	400	Going straight	2,000		



## END CAP

Item No.	Ampere	Material
EEC-1-001	60A~500A	PVC

## MOUNTING BAR

Item No.	Use	Material
EMB-1-001	Collector Guide	Steel



# INSTALLATION PROCEDURES FOR TROLLEY-BAR

## Installation and inspection of the trolley bar

### 1. Prepare brackets for hanger installation

- Installation of a bracket is vital factor in trolley bar installation process, thus it is essential to maintain a horizontal & vertical, top & bottom and left and right level balance.  
All parts with surfaces which are to be welded, should be firmly welded on the run way girder.
- Brackets should have dimensions of L40×40×4t or greater.

### 2. Install hanger brackets

- Brackets intervals should be under 1500 mm for linear sections, and under 750 mm for curved sections.
- All the sooted parts and sludges formed by welding process should be removed completely.  
To form a resistance against the rust, basic and over paint should be applied.

### 3. Connecting the Trolley bar sections

- (60A~300A) Insert "joint pins" into the end of one trolley bar section, then slip the end of a second trolley bar section over the "joint pins" until the two ends butt firmly together.
- In addition to the above, install joint keepers on sections.
- (60A~300A) Install the joint cover.
- (500A) Cut the respective end surfaces of trolley bar 500A products so that the two ends butt firmly together. Then clamp and bolt securely using the tool provided.
- The special joint cover for 500A trolley bar is installed by the use of screws and nuts.

### 4. Installation of power feeder

- Power feeder is a device component which is use to supply the current to a trolley bar.
- It should be formed with copper and should be designed to supply adequate current to a trolley bar.
- (60A~200A) Install the feed-in after cutting away about 52 mm of the insulation cover.
- (300A~500A) Cut away about 82 mm of the insulation cover before installation of the feed-in.

### 5. Installation of expansion joints

- (60A~200A) Use one expansion joint every 50m.
- (300A~500A) Use one expansion joint every 30m.

### 6. Installation of end caps

- Cut the portion where there are no joint pins.
- Deburr and smooth off the pin inlet with a file.
- Where there are no joint pins, install the end cap directly.

### 7. Installation of collector

- The center of the collector mounting bar should be 90 mm from the lower face of the trolley bar.
- Collector shoes must be replaced when wearing reaches the replacement line.

### 8. Inspection and test running of each section. Upon completion of the installation work, and inspection, carry out a test run to ensure the following.

- That there is no zigzag motion or torsioning of the trolley bar
- That trolley bar is installed parallel to the running rails.

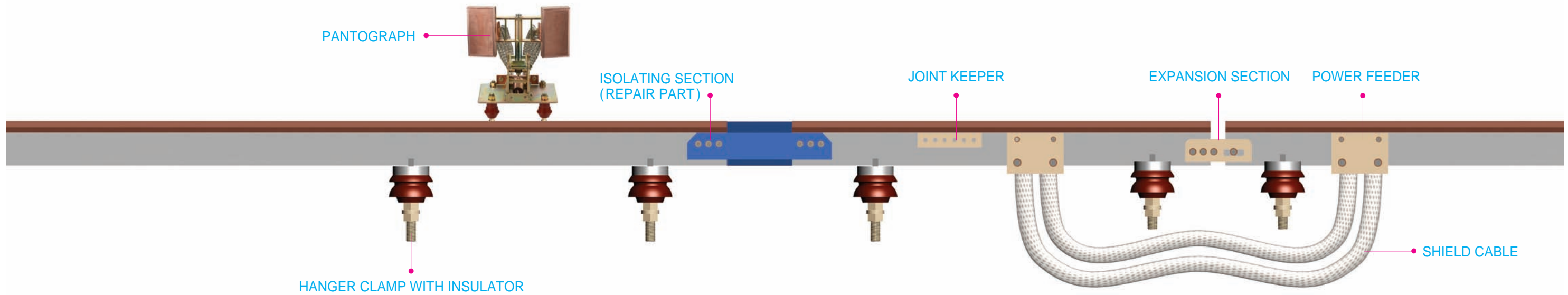
- That intervals of the trolley bar sections are uniform.
- That there are no clearances between of differences in level between section of the trolley bar.
- That there is no slackening of the hanger installation, bolts, or nuts.
- That the wiring is correct.
- That there is no slackening of the electric wiring connections for the feed-in.
- That end caps are installed on all line terminals.
- That the trolley bar conductors and collectors are connected correctly.
- That binding to the equipment is correct.
- That shoe wear is normal.

★ Periodic inspections (once a year) should be made on the above items.

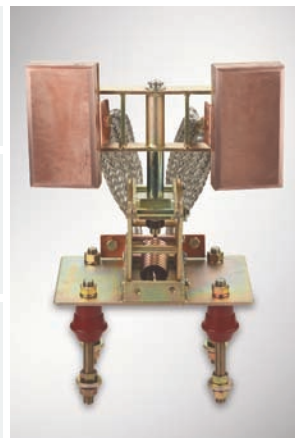




# EUNCHANG STEEL COPPER HEAD RAILS BAR SYSTEM



HANGER CLAMP WITH INSULATOR



PANTOGRAPH COLLECTOR



EXPANSION SECTION



ISOLATING SECTION (REPAIR PART)



JOINT KEEPER



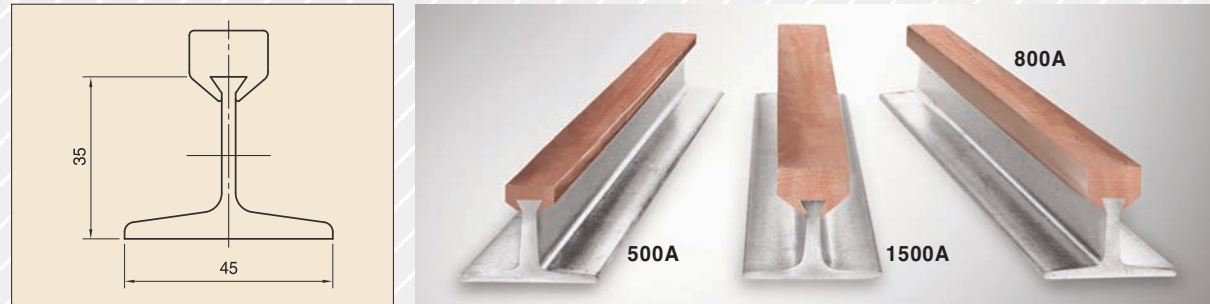
POWER FEEDER



# EUNCHANG STEEL COPPER HEAD RAILS BAR SYSTEM

- STEEL BASE COPPER HEAD RAILS
- JOINT KEEPER
- EXPANSION SECTION
- ISOLATING SECTION (REPAIR PART)

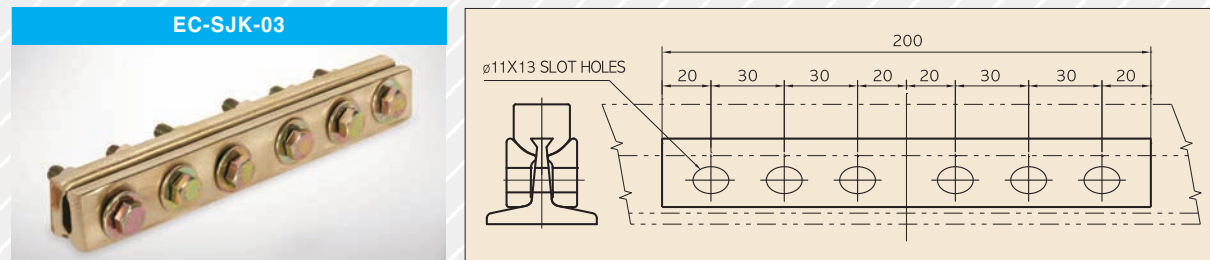
## STEEL BASE COPPER HEAD RAILS



### Specification

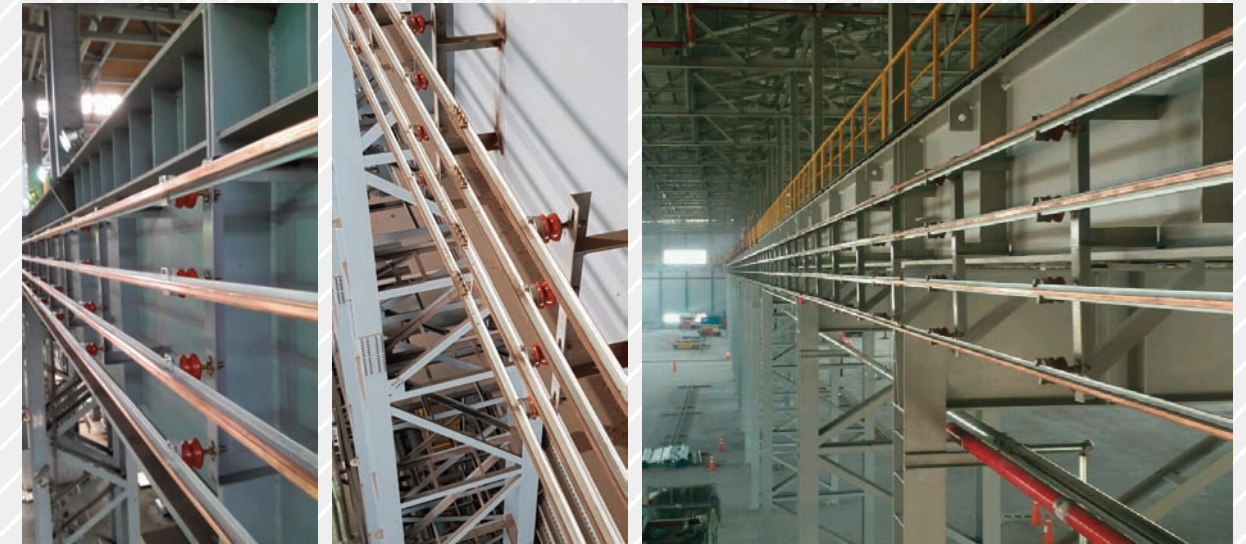
Item No.	Ampere	Material	Weight(Kg)	Length(mm)
ES-STB-03	300	SS400-Cu	24	6,000
ES-STB-05	500	SS400-Cu	26	6,000
ES-STB-06	600	SS400-Cu	28	6,000
ES-STB-08	800	SS400-Cu	30	6,000
ES-STB-10	1,000	SS400-Cu	36	6,000
ES-STB-12	1,200	SS400-Cu	41	6,000
ES-STB-15	1,500	SS400-Cu	51	6,000
ES-STB-18	1,800	SS400-Cu	53	6,000
ES-STB-20	2,000	SS400-Cu	58	6,000

## JOINT KEEPER

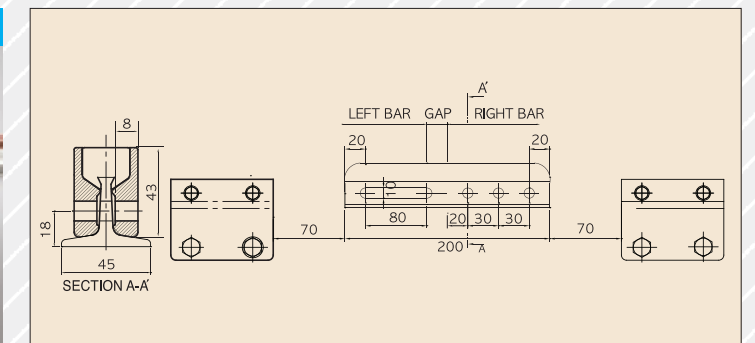


### Specification

Item No.	Ampere	Material
EC-SJK-01	300	BRASS
EC-SJK-02	500~600	BRASS
EC-SJK-03	800~1000	BRASS
EC-SJK-04	1200	BRASS
EC-SJK-05	1500	BRASS
EC-SJK-06	1800	BRASS
EC-SJK-07	2000	BRASS



## EXPANSION SECTION

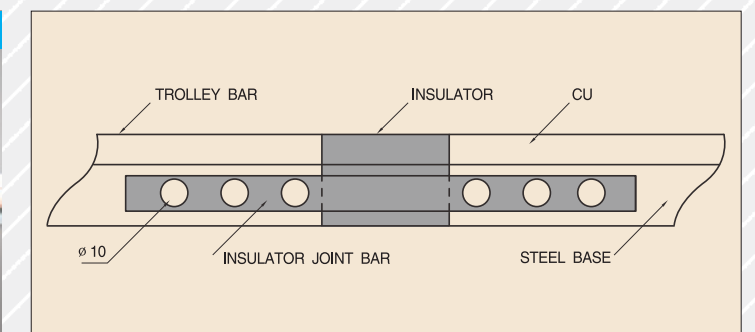


### Specification

Item No.	Ampere	Material
EC-SEC-03	300	BRASS
EC-SEC-05	500	BRASS
EC-SEC-06	600	BRASS
EC-SEC-08	800	BRASS
EC-SEC-10	1,000	BRASS
EC-SEC-12	1,200	BRASS
EC-SEC-15	1,500	BRASS
EC-SEC-18	1,800	BRASS
EC-SEC-20	2,000	BRASS

Surrounding temperature during installation(°C)	'G' GAP to surrounding temperature during normal operation		
	40°C	50°C	60°C
- 1 0 ~ 0	33	38	43
1 ~ 1 0	28	33	38
1 1 ~ 2 0	23	28	33
2 1 ~ 3 0	18	23	26
3 1 ~ 4 0	13	18	23

## ISOLATING SECTION (REPAIR PART)



### Specification

Item No.	Material	Length(mm)	Remark
EC-SIS-002	MC NYLON	100	INSULATOR

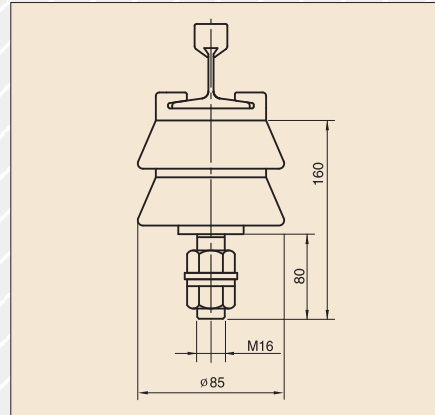
※ Custom make



# EUNCHANG STEEL COPPER HEAD RAILS BAR SYSTEM

- HANGER CLAMP WITH INSULATOR
- POWER FEEDER
- LOCATING CLAMP
- PANTOGRAPH

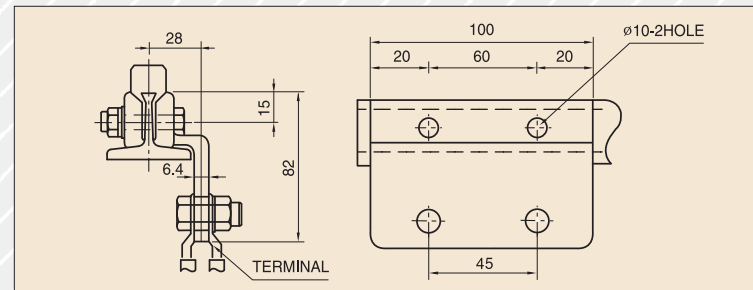
## HANGER CLAMP WITH INSULATOR



### Specification

Item No.	Material (1)	Weight(g)
EC-HC-1	Porcelain	1800
EC-HC-2	Epoxy	1000
EC-HC-3	Porcelain	2200

## POWER FEEDER

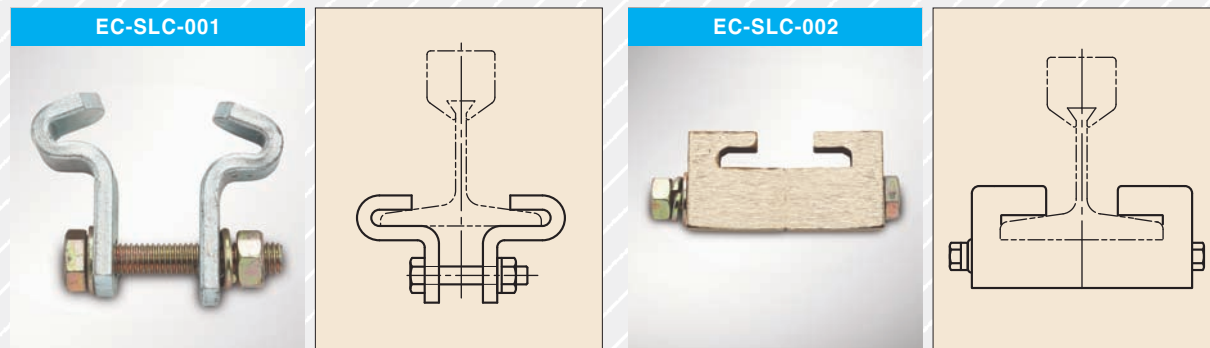


It is the device to compensate a voltage dropping that is caused by main power lengthening of main power feed or mileage.

### Specification

Item No.	Ampere	Material
EC-SPF-01	300~1000	BRASS
EC-SPF-12	1200	COPPER
EC-SPF-15	1500	COPPER
EC-SPF-18	1800	COPPER
EC-SPF-20	2000	COPPER

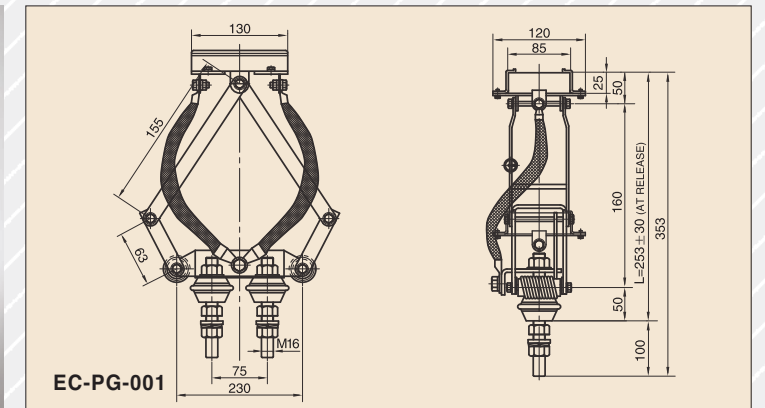
## LOCATING CLAMP



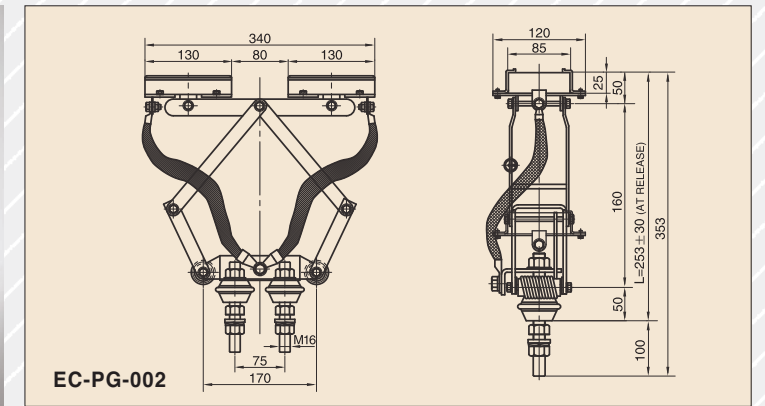
Item No.	Material	Weight(g)
EC-SLC-001	SS400	190
EC-SLC-002	BRASS	360



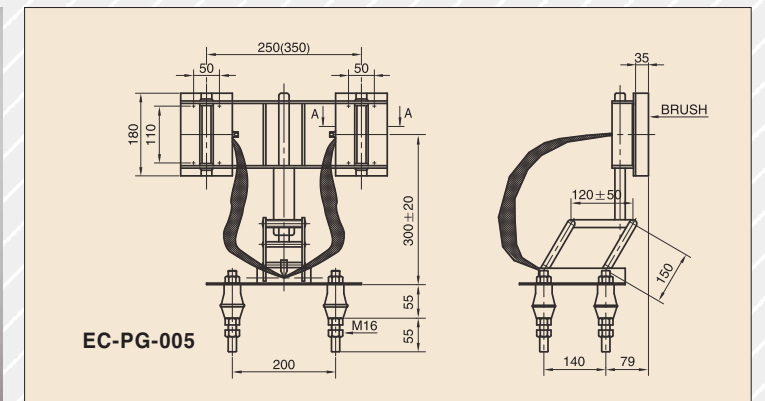
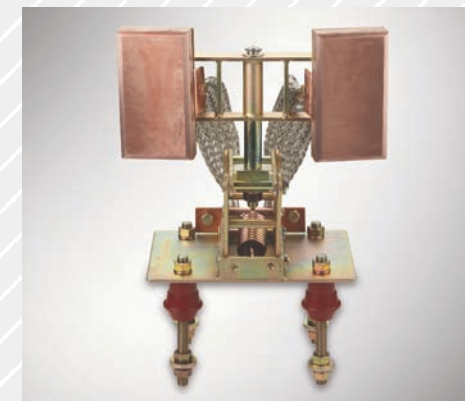
## PANTOGRAPH (Single Type for side Wall)



## PANTOGRAPH (Double Type for side Wall)



## PANTOGRAPH (Type for downward pressure)



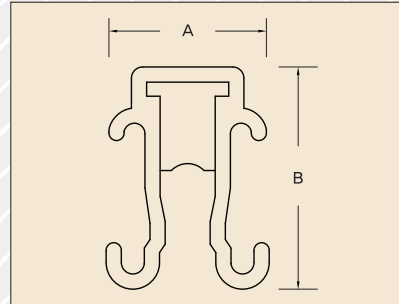


# CONSTRUCTION OF UB-BAR

UB-BAR consists of the following parts

- UB-BAR
- JOINT KEEPER
- JOINT COVER
- EXPANSION SECTION
- HANGER CLAMP
- POWER FEEDER / COVER
- COLLECTOR
- END CAP

## UB-BAR



### Specification

Item No.	Ampere	Material	A(mm)	B(mm)
EC-U30-2	200A	Copper	21	40
EC-U30-3	300A	Copper	21	40
EC-U30-5	500A	Copper	21	40
EC-U40-8	800A	Copper	32	55
EC-U40-10	1000A	Copper	32	55
EC-U50-15	1500A	Copper	37	65
EC-U50-18	1800A	Copper	37	65
EC-U50-20	2000A	Copper	37	65

## JOINT KEEPER



### Specification

Item No.	Capacity	Material
EC-UJK-003	200A - 500A	BRASS
EC-UJK-004	800A - 1000A	BRASS
EC-UJK-005	1500A - 2000A	BRASS

## JOINT COVER



### Specification

Item No.	Capacity	Material
EC-UJC-003	200A - 500A	P.V.C
EC-UJC-004	800A - 1000A	P.V.C
EC-UJC-005	1500A - 2000A	P.V.C

## EXPANSION SECTION



### Specification

Item No.	Capacity	Material
EC-UES-003	200A - 500A	BRASS
EC-UES-004	800A - 1000A	BRASS
EC-UES-005	1500A - 2000A	BRASS



## HANGER CLAMP



### Specification

Item No.	Capacity	Material
EC-UHC-002	200A - 500A	P.V.C
EC-UHC-003	200A - 500A	STEEL + EPOXY
EC-UHC-003	800A - 1000A	STEEL + EPOXY
EC-UHC-004	1500A - 2000A	STEEL + EPOXY



## POWER FEEDER / COVER



### Specification

Item No.	Capacity	Material
EC-UDF-003	200A - 500A	BRASS
EC-UDF-004	800A - 1000A	BRASS
EC-UDF-005	1500A - 2000A	BRASS

## COLLECTOR



### Specification

Item No.	Capacity	Material
ECCC-UC-001	300A S	AL
ECCC-UC-002	300A T/D	AL
ECCC-UC-003	500A S	AL
ECCC-UC-004	500A T/D	AL



## END CAP

### Specification

Item No.	Capacity	Material
EC-UEC-003	200A - 500A	RUBBER
EC-UEC-004	800A - 1000A	RUBBER
EC-UEC-005	1500A - 2000A	RUBBER

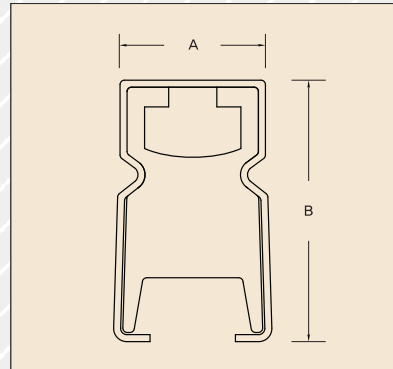


# CONSTRUCTION OF H-BAR

H-BAR consists of the following parts

- H-BAR
- JOINT KEEPER
- JOINT COVER
- HANGER CLAMP
- EXPANSION SECTION
- POWER FEEDER
- COLLECTOR
- END CAP

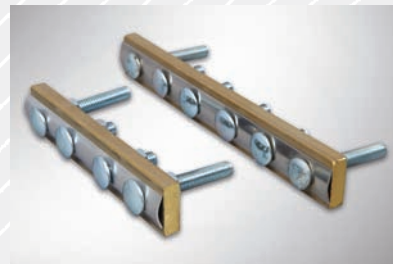
## H-BAR



### Specification

Item No.	Ampere	Material	A(mm)	B(mm)
EC-H-3	300A	AL - SUS	24	34
EC-H-5	500A	AL - CU	24	34
EC-H-8	800A	AL - SUS	36	51
EC-H-10	1000A	AL - CU	36	51
EC-H-15	1500A	AL - SUS	36	61

## JOINT KEEPER



### Specification

Item No.	Ampere	Material
EC-HJK-003	300A	BRASS
EC-HJK-005	500A	BRASS
EC-HJK-008	800A	BRASS
EC-HJK-010	1000A	BRASS
EC-HJK-015	1500A	BRASS

## JOINT COVER



### Specification

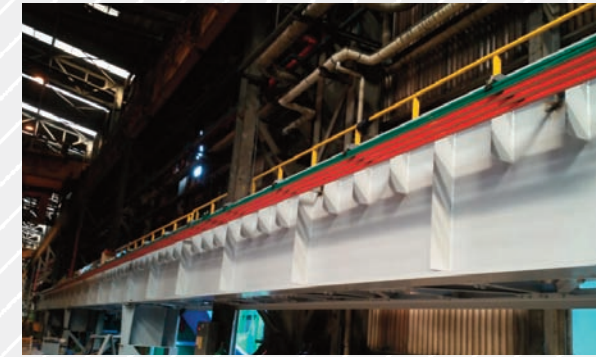
Item No.	Ampere	Material
EC-HJC-003	300A - 500A	PVC
EC-HJC-005	800A - 1000A	PVC
EC-HJC-090	1500A	PVC

## HANGER CLAMP



### Specification

Item No.	Ampere	Material
EC-HHC-001	300A - 500A	PVC
EC-HHC-002	800A - 1500A	PVC
EC-HHC-003	800A - 1500A	STEEL + EPOXY



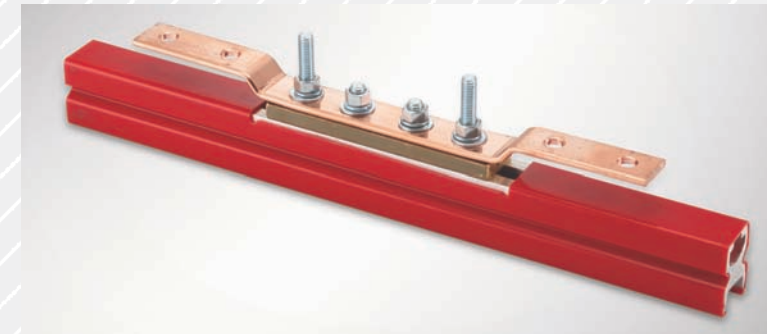
## EXPANSION SECTION



### Specification

Item No.	Ampere	Material
EC-HES-003	300A	BRASS
EC-HES-005	500A	BRASS
EC-HES-008	800A	BRASS
EC-HES-010	1000A	BRASS
EC-HES-010	1500A	BRASS

## POWER FEEDER



### Specification

Item No.	Capacity	Material
EC-HPF-001	common	Copper

## COLLECTOR



### Specification

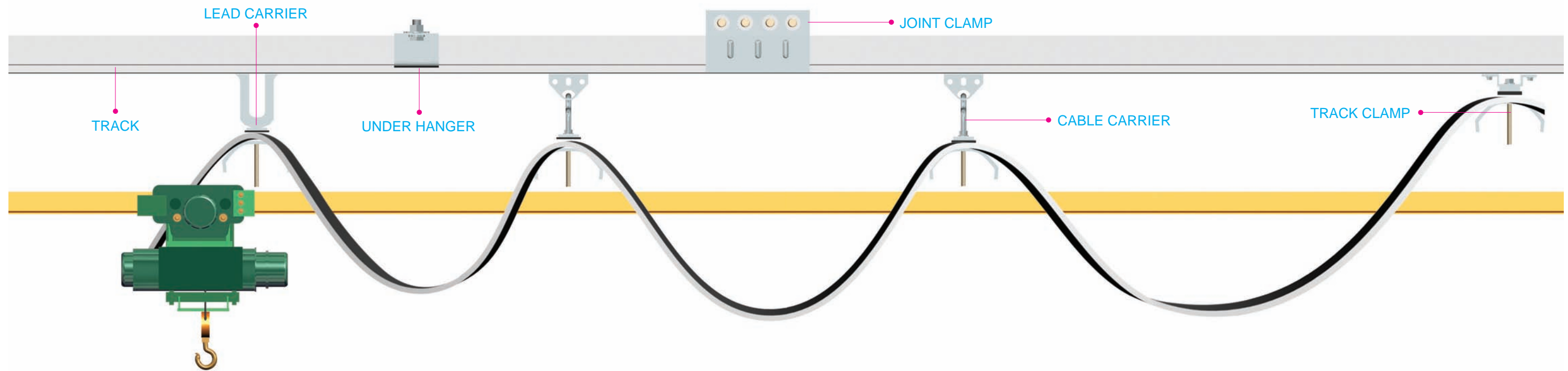
Item No.	Capacity	Material	Weight(kg)
EHT - 001	500A	AL	1.5
EHT - 002	1000A	AL	3

## End Cap

Item No.	Capacity	Material
EC-HEC-005	500A-800A	RUBBER
EC-HEC-090	1000A	RUBBER



# FESTOON CABLE SYSTEM



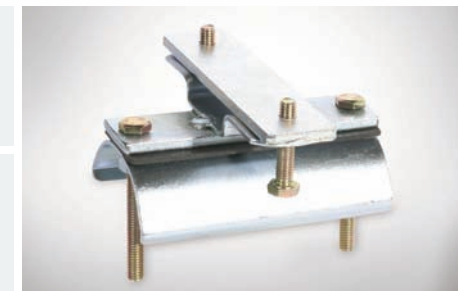
TRACK



UNDER HANGER



JOINT CLAMP



TRACK CLAMP



LEAD CARRIER



CABLE CARRIER

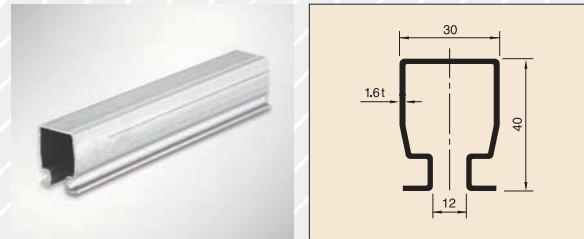


CONTROL CARRIER



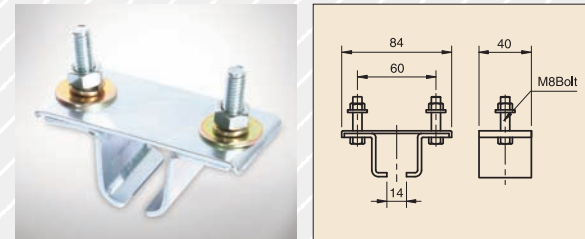
# FESTOON CABLE SYSTEM

## TRACK



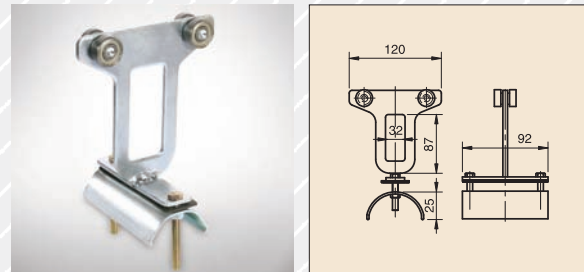
- Type: EC-SST-35
- Material: Steel, Aluminum, STS
- The load of maximum section: 60kg
- Length bracket: 1.5m
- Length per piece: Max-5m

## UNDER HANGER



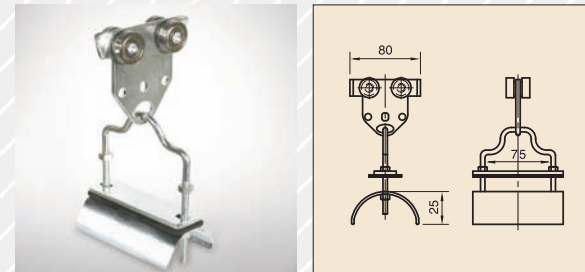
- Type: EUH-1
- Material: Steel
- Surface treatment: Galva
- Capacity needed: 1.5m
- AL Track hanger is option (EUH-1-AL)

## LEAD CARRIER



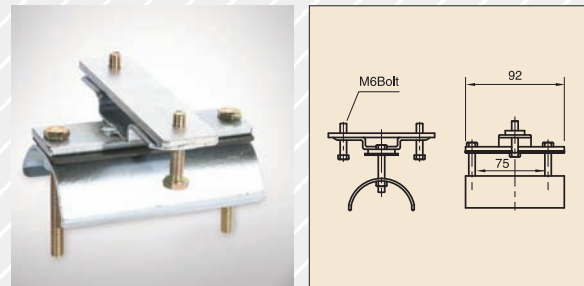
- Type: ELC-1
- Material: Steel
- The load of maximum section: 30kg
- Surface treatment: Galva(Steel)
- Capacity needed: 1ea/Line

## CABLE CARRIER



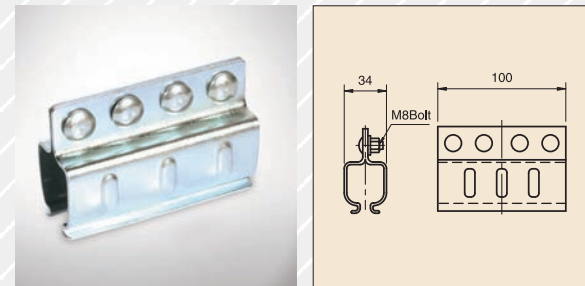
- Type: ECC-1
- Material: Steel
- Limited load: 30kg
- Surface treatment: Galva(Steel)
- Capacity needed: 1ea/2m

## TRACK CLAMP



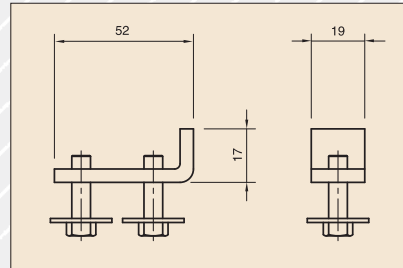
- Type: ETC-1
- Material: Steel
- Limited load: 30kg
- Capacity needed: 1ea/Line

## JOINT CLAMP



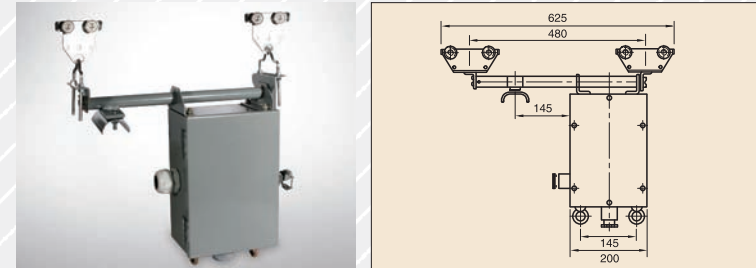
- Type: EJC-1
- Material: Steel
- Surface treatment: Galva
- Capacity needed: 1ea/Line

## STOPPER



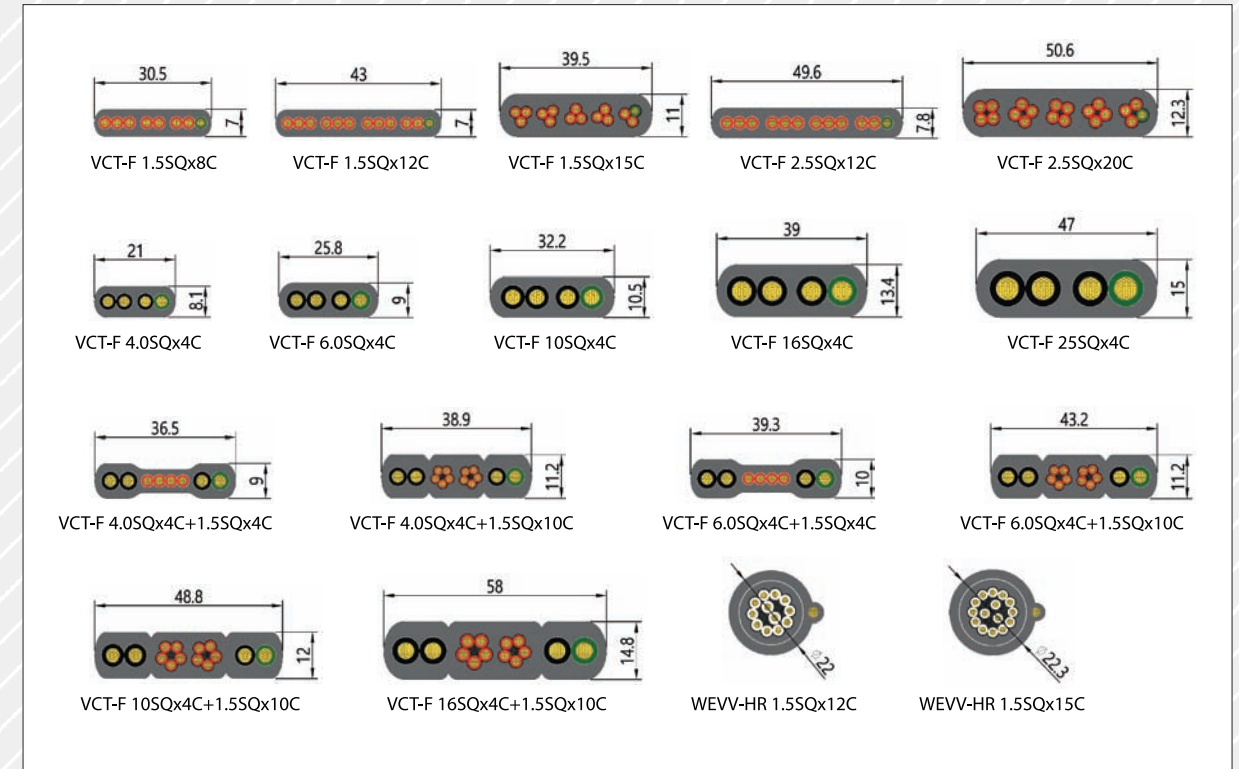
- Type: EST-1
- Material: Steel
- Surface treatment: Galva
- Capacity needed: 1ea/Line

## CONTROL CARRIER



- Type: E-CON-1
- Material: Steel
- Surface treatment: Galva & Paint
- Use: A carrier that connects the Push Button when Pendent Push Button disjoined from Hoist is separately installed.

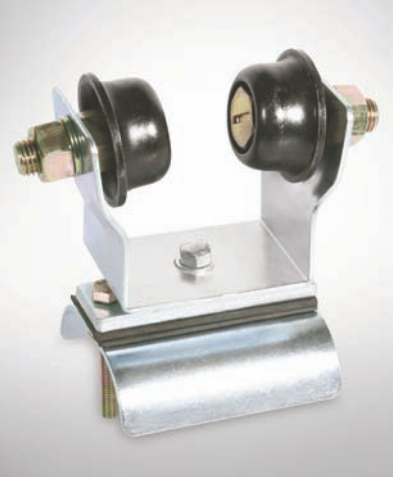
# VCT-F CABLE





# I-BEAM TROLLEY

EC-CMH-075



EC-CH-05N



EC-CH-05



EC-CH-1



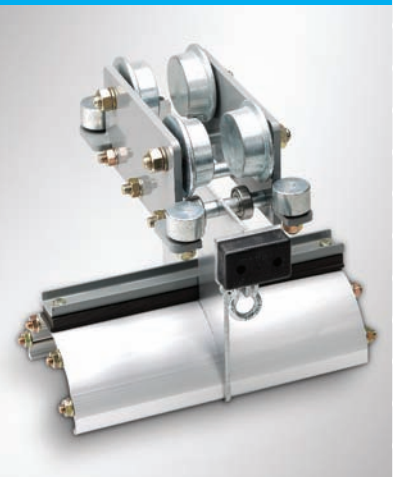
EC-CH-2



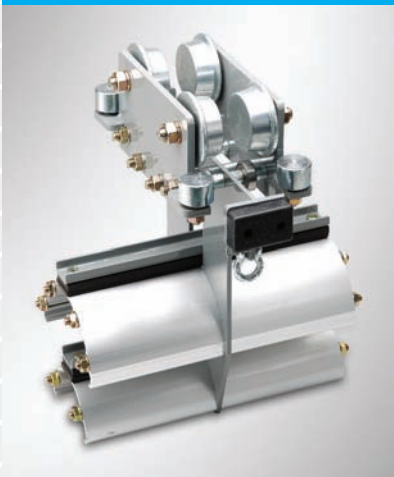
EC-CH-1 (STS)



EC-CHDS-1H



EC-CHDS-2H



EC-CHDS-3H

