

产品概述

导管式滑触线是一款具有防意外冲击危害功能的滑线，室内外均可使用。结构为工程塑料绝缘外壳可装入不同截面面积的铜导线，其额定电流值为 35A 至 240A。集电器的运行是由牵引器引导的，主要是通过带弹簧的碳刷来传送。

配套的橡胶防尘条能有效提高滑线的 IP 防护等级，防护等级最高可达 IP 43。

该系列滑触线为 3 极 -16 极装置。56 系列为 3 极或 4 极装置。

HFP-R 型 R 型为弧型滑线，可制成 $R \geq 800\text{mm}$ 的弧型滑线。

通过以下认证 CCC、ISO9001 和 CE 认证。

General

Powerail Enclosed conductor rail system is a powerail, protected from contact (IP 23), For indoor and outdoor plants. They are conductor lines in a rigid green PVC housing with different copper cross sections for rated currents of 35 - 240A.

The current collectors, running in ball bearings, are guided by the housing.

The main is transferred by spring-stored carbon brushes.

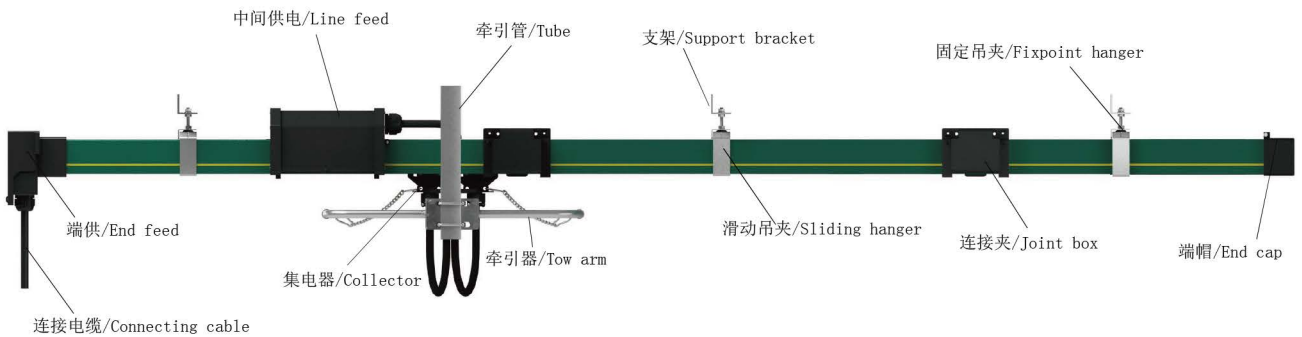
Type HFP-P: not include Sealing strip, with factory-mounted flat copper band and bolted-operated plug connectors.

Type HFP-R: Curves for $R \geq 800\text{mm}$, with factory-mounted flat copper band and screw connectors.

Approved and listed by CCC, ISO9001 and CE.

HFP56

系统图/System photo



技术参数/Technical data

电气参数/Electrical properties:		机械参数/Mechanical properties:	
最大电流/Max. current	240A	弯曲强度/Flexible strength	75N/mm ² ±10%
最大电压/Max. voltage	660V	抗张强度/Tensile strength	40N/mm ² ±10%
绝缘强度/Dielectric strength	30-40KV/mm	温度范围/Temperature range:	
特殊电阻/Spec. resistance	5 × 10 ¹⁵ Ωm×cm	标准导管/Standard Housing	-20℃ up to +70℃
表面电阻/Surface resistivity	10 ¹³ Ωm×cm	高温导管/High Temp. Housing	-10℃ up to +115℃
漏电阻/Leakage resistance	CTI600-2.7	低温导管/Low Temp. Housing	-40℃ up to +80℃
燃烧性/Combustibility:			
阻燃性/flame retardant	B1级-无火焰微粒, 自熄		
自动熄灭/self extinguishing	Class B1-no flaming particles, self-extinguishing		
抗化学性能/Resistance to chemicals: +45℃			
	汽油/Gasoline	50%硫酸/ Sulphuric acid 50 %	
	矿物油/Mineral Oil	腐蚀性苏打溶液25%和50% /Caustic soda 25%&50%	
	润滑油/Grease	浓缩氯化氢/Hydro-chloric acid, concentrated	

导管

工程塑料外壳, 3-4 极滑线。

标准长度 4 米, 也可以选择其他不超过 6 米的长度。

零线位置采用国际颜色代码黄色来标识。

集电器和外壳的设计可以防止相线与零线倒置。

连接夹

塑料连接夹, 啮合紧密。

供电点

中间供电或端部供电点。

端帽

1 路滑线末端使用 1 个端帽, 起保护作用。

吊夹

可提供将滑线固定在起重机行车大梁上的标准支架。可使用滑动吊夹和固定吊夹。标准间距为 1200mm。

膨胀节

膨胀节用于补偿滑线导体由于温度变化而引起的长度变化。膨胀节不会中断电流传输。

防冷凝段

防冷凝段用于防止从室内到室外的滑线遇冷收缩。保障滑线系统供电不中断。

供电工作段, 道岔

滑线接触段及道岔应用请查看第 33-34 页。

分段

滑线间隔气隙为 5mm, 保证集电器能通过该间隙。如用于电源线, 也可用于绝缘片 35mm。在此情况下, 绝缘片长于碳刷且每个滑线段可独立供电, 例如: 用于控制线。

集电器

集电器是由可防撞击的塑料件和防生锈的金属部分制造而成, 质地较轻。集电器弹簧能够确保使碳刷保持良好可靠的接触。集电器还包括连接电缆或端部接线盒以及铰链式或可变形的牵引臂。双集电器可用于导向装置或更高电流量的设备。

Housing

Color green, plastic housing for 3-4 conductors. Standard section 4 m. Other sections are available.

The ground conductor is identified by international color code.

Phase reversing prevented by design of the collector and housing.

Couplings

Through plastic joint caps.

Feed Sets

Line feeds or end feeds

End caps

The open ends of the powerail are closed by end caps for HFP56.

Hangers

Standard brackets for powerail attachment to crane girders are available.

Powerail with sliding and fixpoint hangers.

Standard distance between suspension points for indoor and outdoor installations : 1200 mm.

Expansion during temperature fluctuation

The Expansion sections are required to compensate the different expansions between copper conductors and steel- or concrete structures, in varying temperatures without interrupting electrical power.

Anti-condensation sections

These sections are used for transfer of the Powerail to outdoor areas to avoid condensation. The Powerail is not separated electrically

Contact sections and switches

Powerail for working areas and transfer applications see page 33 to 34.

Sectionalizing

Available as air gap version (5 mm), where the collector carbon bridges the gap, e. g. for mains. Also available as insulating piece version (35 mm). In this case the insulating piece is longer than the carbon and each Powerail section can be separated electrically, e.g. for control.

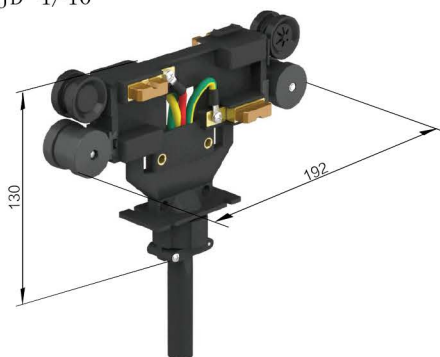
Collectors

The current collectors are made of re-inforced polyester fiberglass, for high strength and light weight. Spring loaded carbon brushes maintain uniform contact. Connecting cables and hinged or flexible towing arms included. Double collectors for transfer applications and higher amperage.

4极集电器/Collector for 4 poles Powerail

56JD-4/25

56JD-4/40



25A 集电器适合于35A-50A的滑线。 Collector 25A is used for 35A-50A.

40A 集电器适合于65A-120A的滑线。 Collector 40A is used for 65A-120A.

牵引器56BC/53和56BC/55均可配用。 Both 56BC/53&56BC/55 could use.

连接电缆/Connecting cable

25 A, $2.5 \text{ mm}^2/\text{core} \times 4$

40 A, $4.0 \text{ mm}^2/\text{core} \times 3 + 2.5 \text{ mm}^2/\text{core} \times 1$

0.8 m长, 可提供更长的电缆。 0.8 m long, longer cables on request.

56JD-4/60



60A 集电器适合于120A-170A的滑线。 Collector 60A is used for 120A-170A.

牵引器56BC/53和56BC/55均可配用。 Both 56BC/53&56BC/55 could use.

连接电缆/Connecting cable

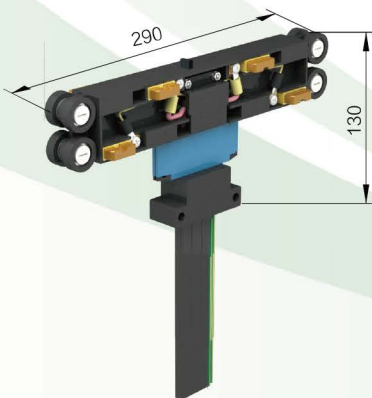
60 A, $4.0 \text{ mm}^2/\text{core} \times 6 + 2.5 \text{ mm}^2/\text{core} \times 2$

0.8 m长, 可提供更长的电缆。 0.8 m long, longer cables on request.

*可3只或3只以上并联使用, 但仅限于直线段使用

3 pcs or more collectors could parallel connect, but only for straight powerail

56JD-4/80



80A 集电器适合于140A-240A的滑线。 Collector 80A is used for 140A-240A.

只适用于56BC/53牵引器。 Only use with 56BC/53.

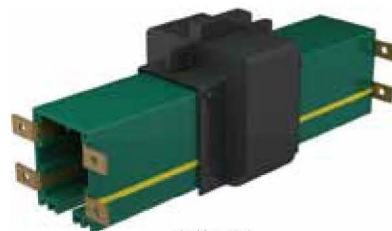
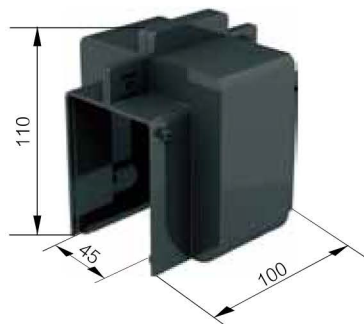
连接电缆/Connecting cable

80 A, $(6.0 \text{ mm}^2 \times 2/\text{core}) \times 3 + (3.0 \text{ mm}^2 \times 2/\text{core}) \times 1$

1m长, 可提供更长的电缆。 1m long, longer cables on request.

连接夹/Jointing box

适合于铜排弯连接系统/be used with bended joints



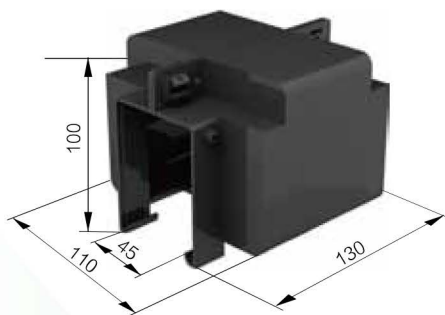
安装示例
ready installed

带有自锁功能，安装简便，啮合紧密。
self locking, and installed is very easy.

连接夹/Jointing box

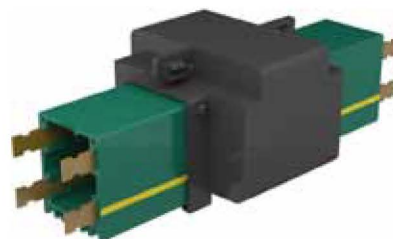
适合于带螺钉铜接头的滑线系统/be used with bolted joints

56LJ-5



56LJ-6

可选配 $\phi 3\text{mm}$ 橡胶防水条
Could use with $\phi 3\text{mm}$ rubber strip.



安装示例
ready installed

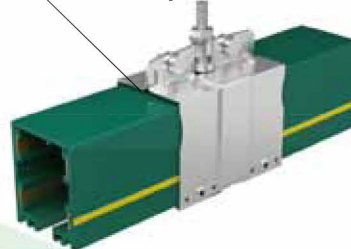
带有自锁功能，安装简便，啮合紧密。
self locking, and installed is very easy.

定位夹/Anchor hanger*

适合于铜排整穿的滑线系统/be used without any jointsystem



导管接缝处用绝缘胶布包裹
the connection parts with rubberized fabric.



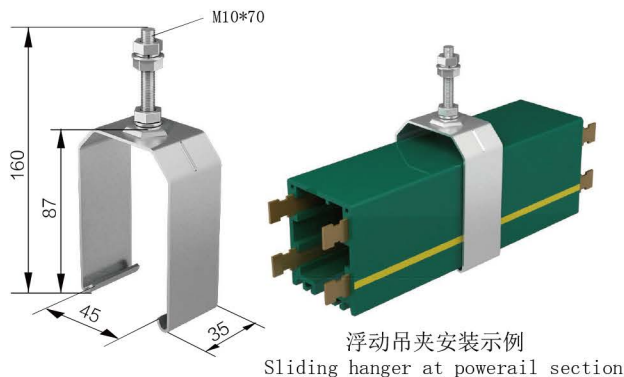
安装示例
ready installed

*可做连接夹使用 could be used for jointing box

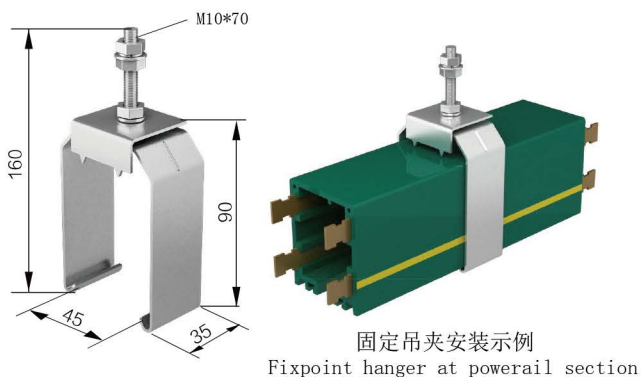
吊夹/Hangers

适合于带螺钉铜接头的滑线系统/be used with bolted joints

浮动吊夹/Sliding hanger



固定吊夹/Fixpoint hanger

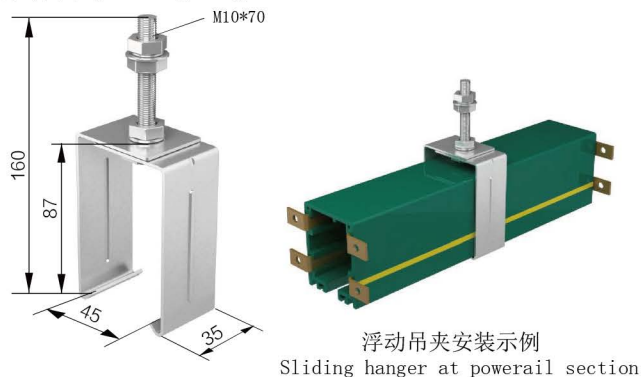


HFP56

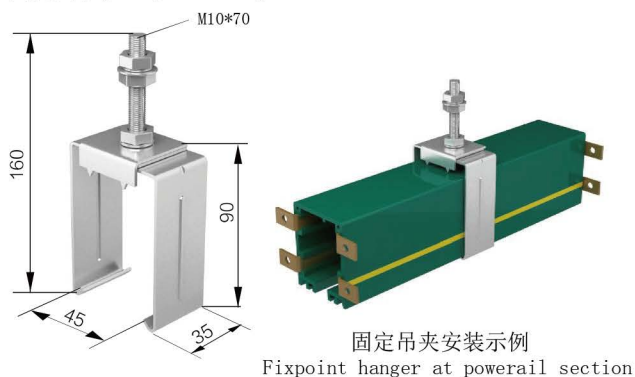
吊夹/Hangers

适合于铜排弯连接系统/be used with bended joints

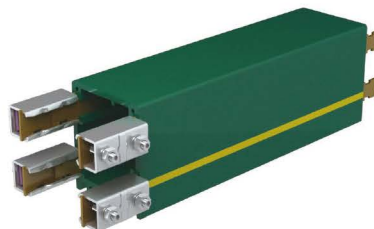
浮动吊夹/Sliding hanger



固定吊夹/Fixpoint hanger



螺钉式直接头/With bolted joints



螺钉式接头安装示例
Bolted joints at powerail section

注意!

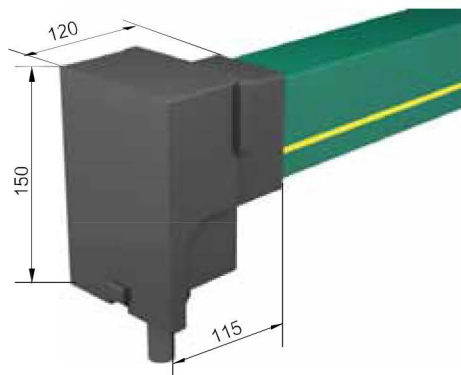
拧紧接头上的固定螺丝时, 最多不能超过 2 Nm 的力矩, 以避免损坏接头帽口。

Caution!

Tighten the setscrews with max. 2 Nm to avoid deforming the clip of the bolted j.

端部供电/End feed

适合于35A-240A的滑线。 Be used for 35A-240A.

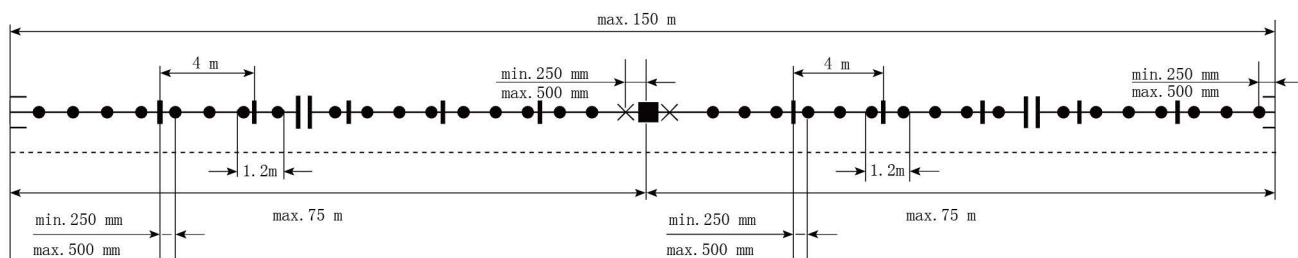


安装在整条滑线系统的左端或右端。
Left and right version

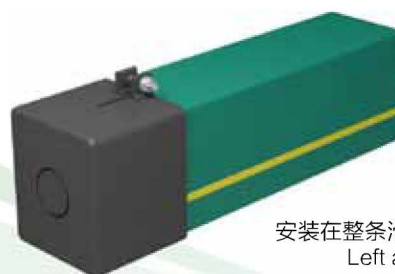
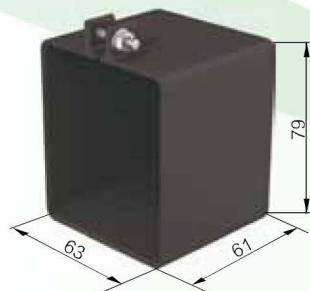
符号说明/Symbols

- 滑线/Powerail
- 轨道/Runway
- |— 连接夹/Jointing materia
- X— 固定吊夹/Fixpoint hanger
- 滑动吊夹/Sliding hanger
- [] 端帽/End cap
- 端供/End feed
- 中间供电/Line feed
- ||— 分段/Isolating assembly

* 滑动吊夹在实际运用中可以为固定吊夹所取代。
Each sliding hanger can be converted to a fixpoint hanger.



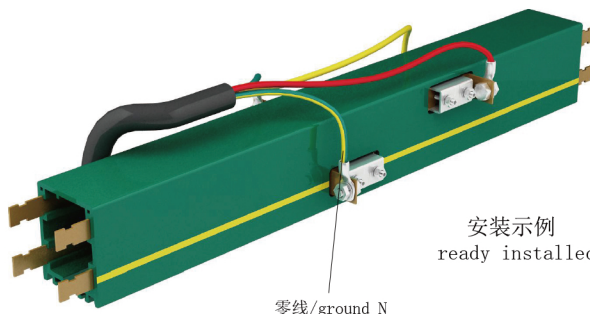
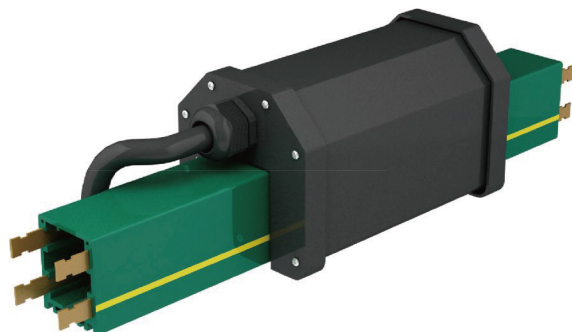
端帽/End cap



安装在整条滑线系统的左端或右端。
Left and right version

端帽安装示例
End cap ready installed

中间供电器(带0.5米滑线段)/Line feeding (with 0.5 meter powerail)*



安装示例
ready installed

零线/ground N

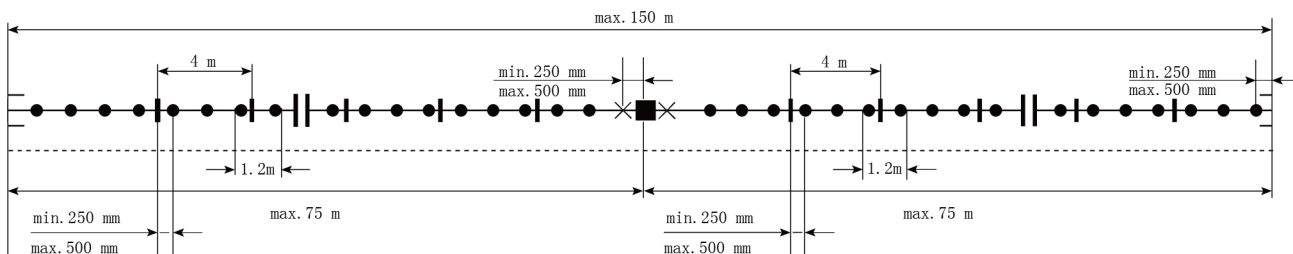
HFP56

* 标准设置为带 0.5 米滑线,也可以组装在不超过 4 米的滑线上。

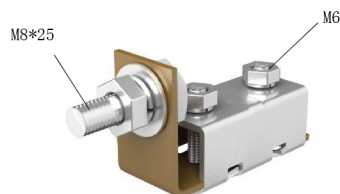
with 0.5 meter powerail is standard length, other lengths are available, but not be exceeding 4 meter.

**X/m: 表示具体的滑线型号,如 56ZG/500-4/50A,则表示用于 4 极 50A 的滑线

X/m means type of powerail, for example, 56ZG/500-4/50A, it means 4 poles, 50 Amp powerail.



供电接头/Feeding joints



LED指示灯/Led light

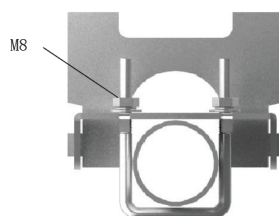
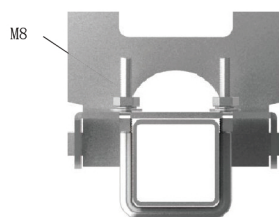
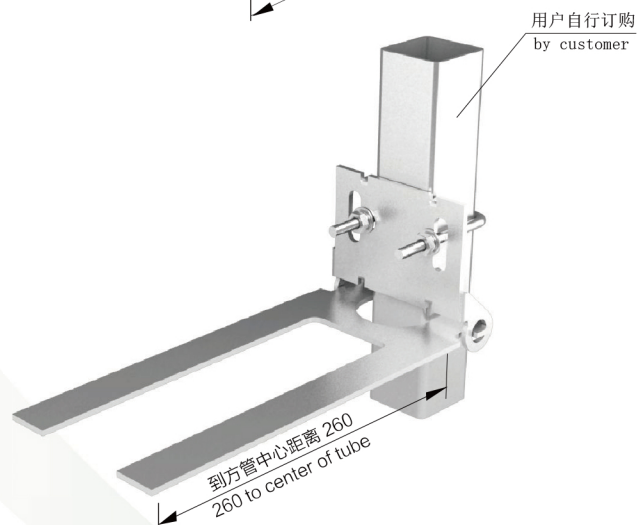
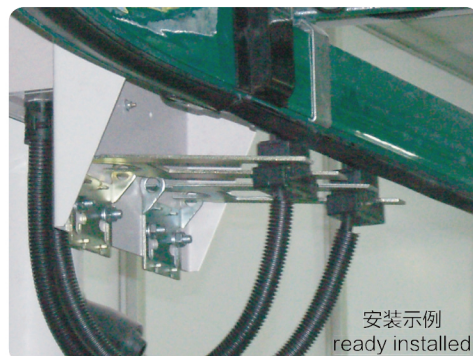
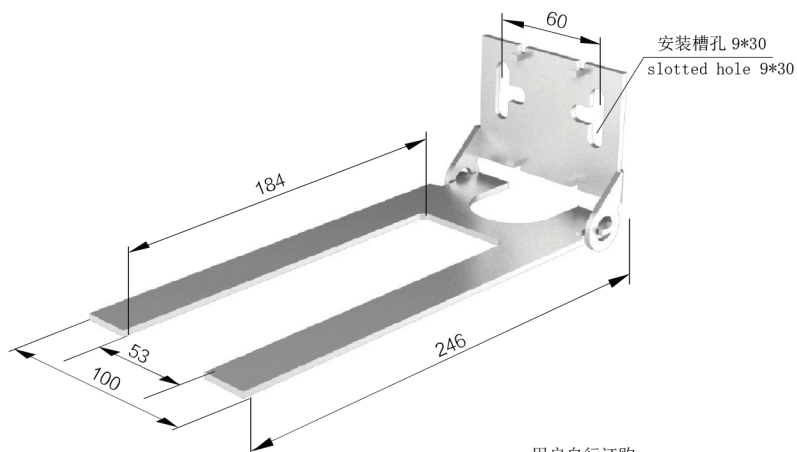
适用于安能的所有滑线。
Be used for all ANNENG powerail.



牵引器/Tow arm

可配置方管或方形沟槽/could with tube or square hollow profile

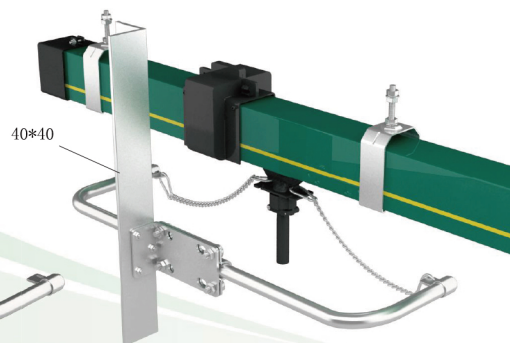
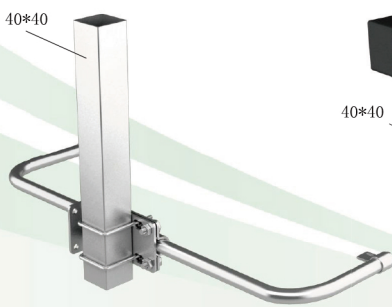
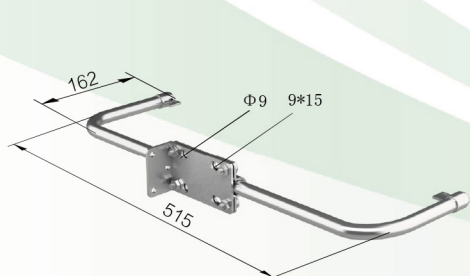
HFP56



牵引杆/Tow arm

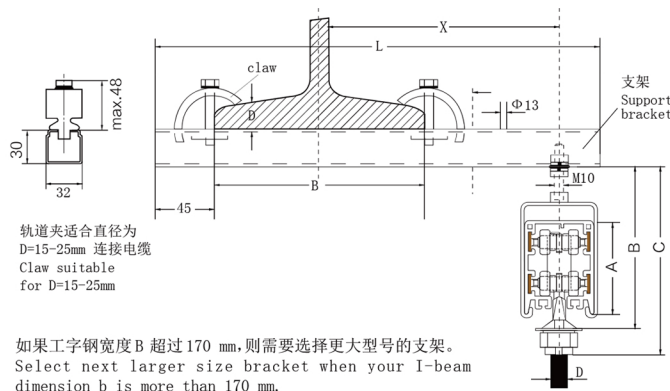
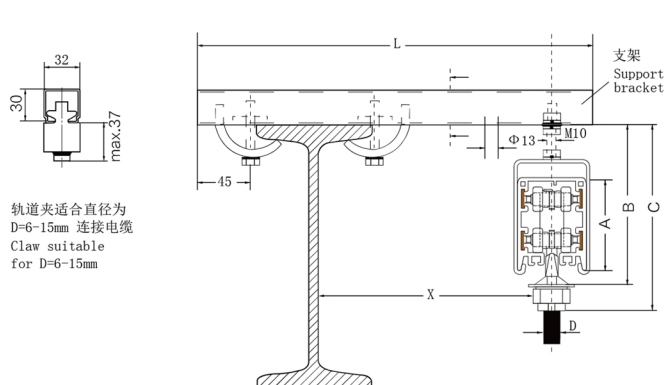
用于方管牵引
with square hollow profile

用于角铁或槽钢牵引
with angel steel or channel beam



工字钢梁安装示意图/View with I-beam

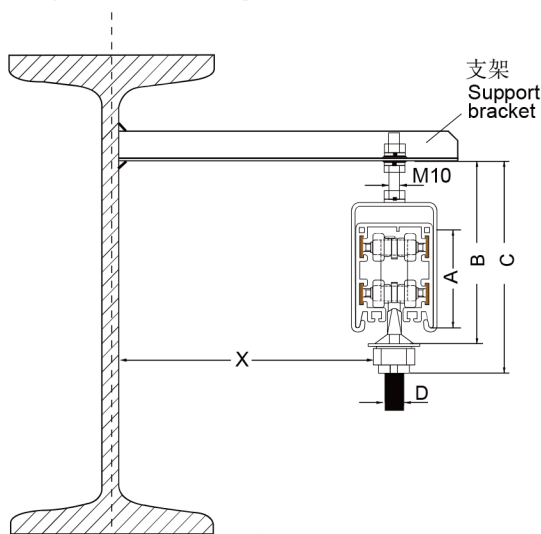
C型钢支架组装机安装/Ready installed on C-Track bracket (for split)



HFP56

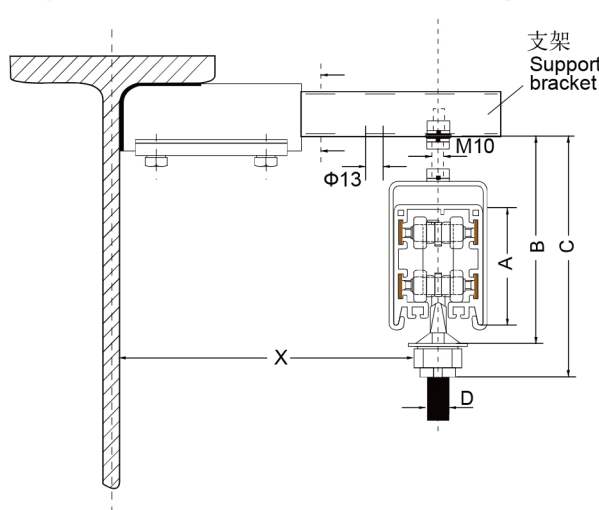
角钢支架焊接式安装

Ready installed on Angle steel bracket (for welding)



C型钢支架焊接式安装

Ready installed on C-Track bracket (for welding)



滑线的维护/Maintenance

——安装结束后,必须进行滑线的调直检查,确保支架及吊夹的上下、左右位移在牵引器的位移范围内: 检查支架焊接部分是否牢固: 检查吊夹螺丝是否紧密或有锈蚀现象发生。

——滑线正式运行前,需进行滑线接头处的检查,当集电器运行至接头处,声音过大且有异响时,请检查接头是否松动或磨损情况,及时维修。

——每 3 至 12 个月,根据使用的频率和运行的距离,检查集电器碳刷和机械部分的磨损,当达到磨损指标警戒线时,请及时更换集电器的碳刷,以免因碳刷过短引起跳火花现象而降低滑线的使用寿命。

——After installation, Make sure that the sliding hangers are straight (in a perpendicular position) after nuts have been tightened to guarantee free sliding of the powerail. The powerail must be installed exactly straight and parallel to the machinery track.

——Before running the powerail. Check the system for easy running of the current collector trolleys. i.e. there may be no resistance by an excessively narrow slot or pull by the connecting cable.

——Every 3 up to max. 12 months, depending on the frequency of operation and travel distance-, check the carbon brushes and mechanical components for wear and replace them if necessary.