



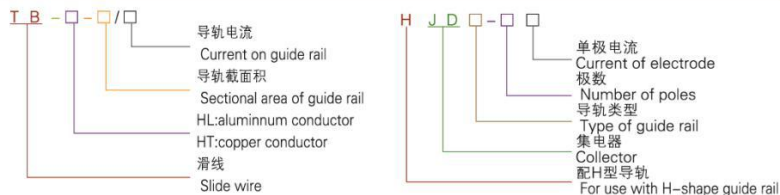
## TBHL、TBHT单极组合式滑线 TBHL、TBHT Single-pole combination-type slide wire

### 一、产品介绍 Introduction

TBHL、TBHT系列排式单极组合滑线导轨是我厂为冶金、造船、起重机、汽车制造、港口装卸等设计生产的一种高性能移动输电装置。对于多极供电、高速运行、大电流场合特别适用。

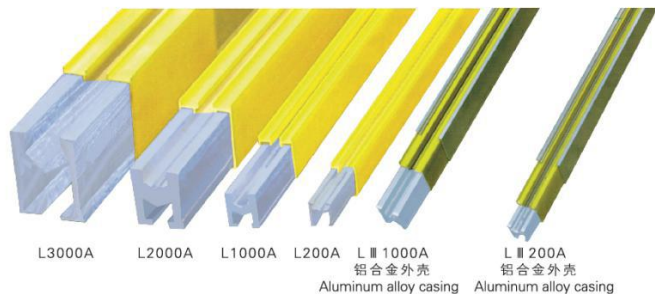
TBHL、TBHT series row-type single-pole combination-type slide-wire guide rail is a high-performance mobile power transmission device designed and manufactured by our plant for application in metallurgy, shipbuilding, crane, automobile manufacturing and loading and unloading at port etc. It is especially suitable for application in multi-pole power supply, high-speed operation and large current.

### 二、产品型号 Model of product



### 三、主要技术参数 Main Technical Parameters

铝滑线 Aluminum Conductor Bar



### 1、TB-HL安全滑触线 TB-HL Safe Slide-contact Wire

图例figure	型号 model	电流 (A) Current	标称电压 (V) max.voltage	外形尺寸 a x h Size	截面积 (mm <sup>2</sup> ) Cross section	相间距离 (mm) phase space	交流阻抗 Q/1000m Ac impedance	支架间距 (m) Support space	代码 (product Cat.)
	TBHL-150	150	660	20 x 26	130	80	0.285	1.2	68HL20150
	TBHL-200	200	660	24 x 32	142	80	0.279	1.5	68HL24200
	TBHL-250	250	660	24 x 32	160	80	0.270	1.5	68HL24250
	TBHL-300	300	660	32 x 42	210	80	0.266	1.5	68HL32300
	TBHL-400	400	660	32 x 42	278	100	0.251	1.5	68HL32400
	TBHL-500	500	660	32 x 42	343	100	0.237	2.0	68HL32500
	TBHL-630	630	660	32 x 42	438	100	0.223	2.0	68HL32630
	TBHL-800	800	660	32 x 42	556	100	0.210	2.0	68HL32800
	TBHL-1000	1000	660	32 x 42	674	100	0.194	2.0	68HL321000
	TBHL-1250	1250	660	32 x 42	842	100	0.185	2.5	68HL321250
	TBHL-1600	1600	660	52 x 68	1075	120	0.177	2.5	68HL521600
	TBHL-2000	2000	660	52 x 68	1348	120	0.170	2.5	68HL522000
	TBHL-2500	2500	660	52 x 68	1686	120	0.158	2.5	68HL522500
	TBHL-3150	3150	660	52 x 68	2133	120	0.144	2.5	68HL523150

### 2、TB-HT安全滑触线 TB-HT Safe Slide-contact Wire

图例figure	型号 model	电流 (A) Current	标称电压 (V) max.voltage	外形尺寸 a x h Size	截面积 (mm <sup>2</sup> ) Cross section	相间距离 (mm) phase space	交流阻抗 Q/1000m Ac impedance	支架间距 (m) Support space	代码 (product Cat.)
	TBHT-200	200	660	20 x 26	60	50	0.284	1.5	68HT20200
	TBHT-300	300	660	20 x 26	90	50	0.266	1.5	68HT24300
	TBHT-400	400	660	20 x 26	122	50	0.251	1.5	68HT24400
	TBHT-500	500	660	20 x 42	152	50	0.237	2.0	68HT32500
	TBHT-630	630	660	32 x 42	192	50	0.223	2.0	68HT32630
	TBHT-800	800	660	32 x 42	235	80	0.210	2.0	68HT32800
	TBHT-1000	1000	660	32 x 42	282	80	0.194	2.0	68HT321000
	TBHT-1250	1250	660	32 x 42	357	80	0.185	2.5	68HT321250
	TBHT-1600	1600	660	32 x 42	458	80	0.177	2.5	68HT321600
	TBHT-2000	2000	660	52 x 68	556	120	0.170	2.5	68HT322000
	TBHT-2500	2500	660	52 x 68	695	120	0.158	2.5	68HT522500
	TBHT-3150	3150	660	52 x 68	875	120	0.144	2.5	68HT523150
	TBHT-3500	3500	660	52 x 68	946	120	0.131	2.5	68HT523500
	TBHT-4000	4000	660	52 x 68	1080	120	0.116	2.5	68HT524000

铜滑线 Copper Conductor Bar





### 四、附件结构和基本参数 Structures and basic parameters of accessories

#### 1、悬吊夹与支撑臂 Suspension clamp and supporting arm

悬吊夹是悬吊导轨的重要组件，由于它是导轨与支撑臂之间的介电体，因此，它不但要有良好的绝缘性而且还要具有良好的刚性，从而来承受轨道的下垂重量，也要随集电器与轨道之间的压力，因此悬吊夹的质量优劣将会影响系统的布置和绝缘安全，所以我们将不可小视它的工作环境和作用。标准悬吊间距为1500mm，最大不得超过2500mm。

Suspension clamp is an important part of suspension guide rail. As it is dielectric substance between guide rail and supporting arm, it shall have sound insulation performance and rigidity to bear weight of guide rail and pressure between collector and guide rail. Therefore, quality of the suspension clamp will affect arrangement and insulation safety of the system, which requires use to pay great attention to its working environment and functions.

尺寸 Size mm	a	55	60	75
	b	45	60	75
	c	30	43	75
	m	8	10	10
使用范围Application	HXPnR-H(T)-150-1250		HXPnR-H(T)-300-1250	HXPnR-H(T)-1500-2000



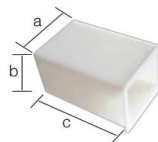
#### 2、耦合接头（连接器）Coupling (connector)

耦合接头是导轨与导轨之间的连接组件，它不但要承担导轨电流的正常传递而且还要担负一定的承受刚性，因此耦合接头的连接质量优劣将对整个滑线系统造成巨大影响，所以要求耦合接头的材料要与导轨本体材料一致，还要求它的接触电阻要绝对的小，同时要求耦合接头与导轨和有效接触面积大于导轨的横截面，从而保证整线电流正常传递。

As a component connecting guide rails, the coupling is required to bear normal transfer of current on guide rail and have certain rigidity. Therefore, the connection quality of the coupling will cause significant impact on the whole slide wire system. Thus, the normal transfer of current on the whole line may be ensured when material coupling is consistent with that of guide rail, contact resistance of coupling is absolutely small and effective contact area of coupling with guide rail is larger than sectional area.



#### 3、端帽 End cover

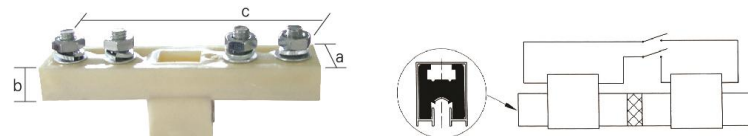


尺寸 Size mm			使用范围 Application
a	b	c	
26	32	50	HXPnR-H(T)-150-250
37	46	80	HXPnR-H(T)-300-1250
58	72	100	HXPnR-H(T)-1500-2000

#### 4、检修段 Maintenance section

检修段是滑线系统中用于在线运行行车或其它设备进行隔离维修的装置，它将一条馈电导轨隔离成一段或几段，从而以实现多台行车或其它设备在同一导轨系统中的正常运行。检修段的标准长度2000mm，可单独设计。

Maintenance section is a device in the slide-contact wire used for online operation of trolley or separation of equipment for maintenance purpose. It is separated into one or more sections by feed guide rail to achieve normal operation of several trolleys or other equipment in a guide rail system. With standard length of 2000mm, the maintenance section may be designed individually.



尺寸 Size mm			使用范围 Application
a	b	c	
26	37	130	HXPnR-H(T)-150-250
37	47	160	HXPnR-H(T)-300-1250
58	72	100	HXPnR-H(T)-1500-2000



### 5、膨胀段 Expansion section

膨胀段是根据滑触线在不同温度环境工作的情况下，对滑触线在热胀时所产生的直线形变（型材挤压对顶）和冷缩时（型材收缩拉开）而造成断电而设计的。它由两个可移动段与滑触线干线本体直接串联连接而成，相对的静态滑片和动态滑片叠插组成一个与滑触线本体截面相吻合的过渡体，在滑触线环境温度变化时可自由地进行直线移动。由于静态滑片和动态滑片叠插后，无论怎样伸展与收缩，它都能够给集电器的电刷一个直线过渡的平面，从而克服了较早时期老式膨胀接头而带来的膨胀范围窄，集电器电刷跨越困难而造成断电，接触面变小而跳火等弊端。由于静态滑片和动态滑片两端与滑线本体直截连接后，同时又由两根滑动导杆将静态滑片和动态滑片穿插导向，因此，它具有良好的同轴度。与此同时，在静态滑片和动态滑片两端上方还设置两根与滑接片相并联的软电缆，从而稳定和增加该膨胀段的载流量，使整个系统不至于因膨胀段的设置而影响整线额定载流量。

The expansion section is designed, according to different working environments of slide-contact wire, for power failure due to deformation (squeezing of sectional materials) and cold shrinkage (contraction of sectional materials) when slide-contact wire undergo thermal expansion. It is formed by connecting two movable sections with main wire of slide-contact wire in parallel. Relatively static and dynamic slip sheets are inserted to form a transition body matching cross-section of slide-contact wire and the transition body is able to freely move in straight direction. After insertion of static and dynamic slip sheets, a straight transition plan for brush of collector may be obtained regardless of expansion or shrinkage. As two ends of static and dynamic slip sheets are connected directly with slide wire and two the sheets are inserted by sliding guide bars, it has sound axially. Meanwhile, two flexible cables in parallel with sliding piece are provided above two ends of static and dynamic slip sheets, which will stabilize and increase intercepting capacity of expansion sections and prevent setting of expansion section in the whole system from affecting rated current carrying capacity of the whole line.



1  
L 200A ~ 3000A膨胀段  
Expansion section L 200A ~ 3000A



2  
T 200A ~ 3000A膨胀段  
Expansion section T 200A ~ 3000A



3  
L 200A ~ 3000A膨胀段 Expansion section L 200A ~ 3000A  
T 200A ~ 3000A膨胀段 Expansion section T 200A ~ 3000A



4  
L 200A ~ 3000A膨胀段  
Expansion section L 200A ~ 3000A

膨胀段设置参考表 Reference table for settings of expansion section

环境温度正负差 (°C) Ambient temperature difference "+/-" (°C)	< 50	50 < 60	60 < 70	70 < 80
铝体滑线不设膨胀段最大长度 (m) Maximum length of expansion section is not specified for aluminum slide wire (m)	120	105	90	72
铜体滑线不设膨胀段最大长度 (m) Maximum length of expansion section is not specified for copper slide wire (m)	150	132	114	96

### 6、集电器 Collector

#### ● 基本概念 Basic concepts

集电器是滑触线系统中集电侧拾取电能的主要装置之一，它通过集电刷与导轨的滑动接触，将电能直接传至用电器，从而实现系统的移动供电。集电器由机械结构的张力装置和直接与导轨滑动接触的集电刷两部分组成，机械结构的张力装置决定集电刷与导轨的滑动接触压力和机构的稳定性，集电刷则是与导轨滑动接触拾取电能的导体，它的性能和导电质量以及材料结构成分的优劣，将直接影响整个系统设备的安全运行质量，因此集电器是整个滑线系统中最主要的部件之一。

Collector is a main device to collect electric energy at current collection side in slide-contact wire system. It directly transfers electric energy to electric devices through sliding contact of brush with guide rail, thus achieving mobile power supply of system. The collector consists of tension device of mechanical structure and collector brush which directly contacts guide rail in sliding manner. The tension device of mechanical structure depends on sliding contact pressure between collector brush with guide rail and stability of mechanism. Collector brush is the conductive body to collect electric energy through sliding contact with guide rail. Its performance, conductivity and material composition will affect safe operation of equipment in the whole system. Therefore, collector is one of the most important parts in the whole slide wire system.

#### ● 集电器的选型 Selection of collector

集电器按滑线类型和用电设备所需载流量大小确定，当一套集电器不能满足使用时可以增加一套或多套使用，当同一条线上有多套集电器时建议采用同一型号的集电器。HJD型适用于HXPnR—HL和HXPnR—HT型滑线，详见各集电器技术参数。

The collector is determined according to type of slide wire and current-carrying capacity required by electric equipment. When one set of collector is not able to meet requirements, more than one set of collector may be used. When several sets of collector operate on same line, it is recommended to use collectors of same type. Type-HJD is suitable for YDPnR—HL and YDPnR—HT slide wire, as detailed in technical parameters of collector.

注：当集电器静止工作超过30min时，应按额定载流量的50%选用。

Note: when the collector stops to work for more than 30min, selection shall be made according to 50% of rated current-carrying capacity.

#### ● 集电器的技术参数 Technical parameters of collector

主体材料 Material of main body	粉末冶金(铜与石墨) 粉末冶金(铜与石墨) Powder metallurgy (copper and graphite)
环境温度 Ambient temperature	-40°C~115°C
运行速度 Operating speed	≤360m/min
工作电压 Working voltage	不超过交流660V或直流1000V Not more than AC 660V or DC 1000V
电刷接触压降 Contact voltage drop of brush	0.15~0.3V
电刷有效磨损量 Effective wearing of brush	4~6mm
牵引力 Traction	F≤20N
吸收运动Absorption movement	水平方向 Horizontal direction
误差 mmError (mm)	垂直方向 Vertical direction
	±40
	±30



### 集电器图片 Current Collector



1  
HJD-150A~250A集电器  
HJD-150A~250A collector

2  
HJD-1000A~1250A集电器  
HJD-1000A~1250A collector

3  
HJD-500A集电器  
HJD-500A Collector



4  
300A-800A集电器  
300A-800A Collector



5  
2000A集电器  
2000A Collector



6  
600A集电器  
600A Collector



7  
700A集电器  
700A Collector



8  
100A集电器 (铜滑线)  
100A collector (copper slide wire)



9  
150A集电器  
150A Collector



10  
300A集电器 (WH)  
300A Collector (WH)



11  
拨叉  
Shift fork

### 7、供电接头与护套 Power supply coupling and sheath

供电接头是滑线系统的供电点连接组件，它不但给导轨馈入电能，而且还要保证电能正常传递，同时还要担负一定的承受刚性，因此供电接头的连接质量优劣将对整个滑线系统造成巨大影响，所以供电耦合接头的材料与导轨本体材料一致，还要求它的接触电阻要绝对的小，同时要求供电接头与导轨的有效接触面积能够满足系统电流的需要，从而保证系统的正常运行。

Power supply coupling is a part connecting power supply points in slide wire system. It shall feed electric energy into guide rail and ensure normal transfer of electric energy while bearing certain rigidity. Therefore, the connection quality of the power supply coupling will cause significant impact on the whole slide wire system. Thus, the normal operation of system may be ensured when material coupling is consistent with that of guide rail, contact resistance of coupling is absolutely small and effective contact area of coupling with guide rail meets needs by system current.

护套是供电接头的外层保护和绝缘体，它在整个系统中的重要作用是显而易见的，它对系统的安全运行起着决定性的作用，因此，它的质量优劣将直接影响整个系统的安全运行，所以对护套材料的要求将是重要的，我们必须对材料的抗腐蚀性、耐高温性、防火阻燃性加以控制和规范。

Sheath is the outer protection and safety insulation body of power supply coupling. Its importance in the whole system is obvious. It determines safe operation of system. Therefore, its quality will directly affect safe operation of the whole system. Thus, it is important to specify requirements on materials of sheath. We must control and standardize anti-corrosion performance, resistance against high temperature, fire-proof and flame-retarding of materials.



### 8、安装支架 (悬吊支架) Mounting bracket (suspension bracket)

悬吊支架：安装于水泥预制件上或钢轨压板下，悬吊组装臂的结构单元。

Suspension bracket: as a structural unit to suspend assembly arm, it is installed above cement fabricated parts or below pressing plate of steel rail.



一字型支架 Linear-type bracket T型支架 T-type bracket 二字型支架 I-type bracket



金属型组装臂  
Metal-type assembly arm

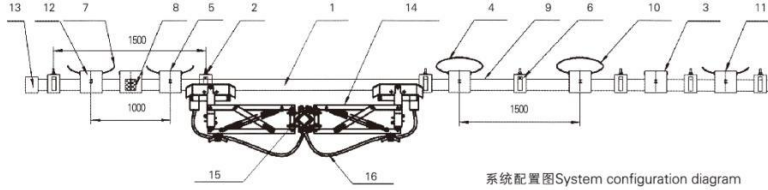
绝缘型组装臂  
Insulation-type assembly arm



### 9、系统组成 Composition of system

滑线轨道输电系统由滑线轨道、悬吊夹、固定夹、轨道连接器、接头护套、膨胀段、绝缘段、供电器、端帽以及集电器等单元组件集合而成。

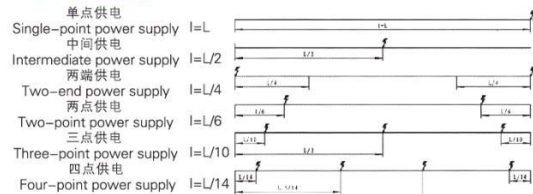
Power transmission system of slide-wire guide rail consists of slide-wire guide rail, suspension clamp, guide rail connector, coupling sheath, expansion section, insulation section, power source, end cover and collector etc.



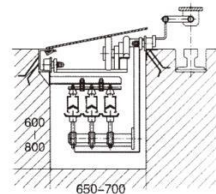
系统配置图 System configuration diagram

- 1、滑线轨道 Slide-wire guide rail
- 2、悬吊夹 Suspension clamp
- 3、接头护套 Coupling sheath
- 4、连接导线 Connecting conductor
- 5、供电器 Power source
- 6、固定夹 Clamp
- 7、电源输入线 Input line of power source
- 8、绝缘段 Insulation section
- 9、膨胀段 Expansion section
- 10、连接导线 Connecting conductor
- 11、供电器 Power source
- 12、供电器 Power source
- 13、端帽 End cover
- 14、双头双臂集电器 Double-head double-arm collector
- 15、集电器驱动臂 Actuating arm of collector
- 16、电源输出线 Output line of power source

### 10、系统安装 System installation



供电点分布图 Profile of power supply points



地沟尺寸由滑线型号确定 Dimension of ditch is determined according to model of slide wire

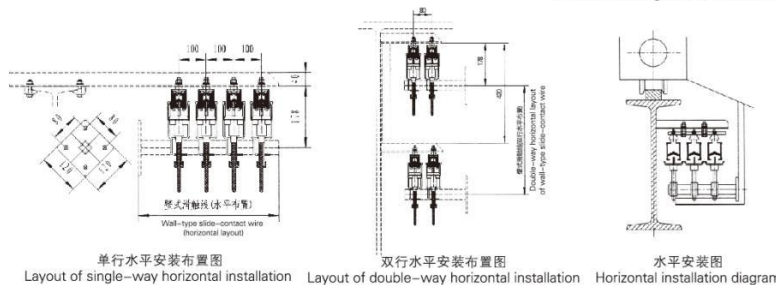


Table HXPnR-1

类别 Type	现象特征 Phenomenon and features	故障表现 Fault representation	解决方法 Solutions
	集电器拉簧拉力不够和扭簧的扭力偏小。 Insufficient tension of spring of collector and smaller torque force of torsional spring;	拉簧的拉力不够将导致集电器刷片与滑触线的接触电阻增大、发热、弯曲，严重时缺相。扭簧的扭力偏小将导致集电器的滑靴回位不好、偏离中心线，严重时将重度磨损滑触线绝缘护套。 Insufficient tension of torsional spring will result in increase of contact resistance between collector brush and slide-contact wire, heating, bending or even open phase. Smaller torque force of torsional spring will result in poor return of slipper of collector, deviation from centerline or even significant abrasion of insulation sheath of slide-contact wire.	检测集电器拉簧的拉力与扭力，重新配置拉簧与扭簧，使其拉力与扭力符合出厂时的技术指标。（注：拉力与扭力过小将导致集电器的刷片的电力磨损，过大将导致集电器刷片的机械磨损）。 Check tension and torque force of tension spring of collector and re-arrange them so as to make tension and torque force meet ex-factory technical indexes. (Note: smaller tension and torque force will result in electric abrasion of collector brush and larger tension and torque force will result in mechanical abrasion of collector).
滑触线部分 Slide-contact wire	集电器的刷片容量偏离额定负载较大。 Large deviation of brush capacity of collector from rated load;	用电设备大电流启动时，集电器刷片与滑触线打火甚至拉弧，严重时瞬间烧焦集电器刷片或使集电器刷片变形。 During start-up of electric equipment under large-current condition, arcing or arc discharge may exist in collector brush and slide-contact wire. In serious cases, the collector brush may be instantaneously burn out or the collection brush will deform.	检查集电器刷片的截面积是否与用电设备适配，一般情况下集电器的载流量应大于用电设备的1.5-2倍并选用双向运行式集电器安装方式。 Check if sectional area of collector brush matches the electric equipment. Generally, current carrying capacity of collector shall be 1.5-2 times larger than that of electric equipment, and the collector is installed in the manner of double-direction operation.
	集电器刷片发热变形。 Heating and deformation of collector;	集电器刷片发热变形及超量磨损打火拉弧现象等发生，严重时刷片与滑触线绝缘护套开口处磨损甚至刷片滑出轨道。 Heating or deformation of collector brush, excessive abrasion, arcing or arc discharge occurs. In serious cases, opening of insulation sheath of brush and slide-contact wire is abraded or brush slide out of rail.	根据集电器的最大载流量选择引出线的截面积和集电器的最大电流，对用螺丝紧固的地方需重新紧固。 Check contact pressure between collector and slide-contact wire, measure contact voltage drop between brush and slide-contact wire and increase capacity of current passing through brush.
	集电器刷片的引出线易烧伤或烧掉。 Collector brush does not match sectional area of outgoing line and maximum current of collector according to maximum current carrying capacity of electric equipment, and fasten joints with bolted connection again.	集电器的刷片与引出线的截面积不匹配，线截面积偏小。集电器刷片与引出线的接触不良，严重时发热、打火。 Collector brush does not match sectional area of outgoing line and the sectional area of line is too small. Undesirable contact between collector brush and outgoing line will cause heating and arcing.	根据用电器的最大载流量选择引出线的截面积和集电器的最大电流，对用螺丝紧固的地方需重新紧固。 Select sectional area of outgoing line and maximum current of collector according to maximum current carrying capacity of electric equipment, and fasten joints with bolted connection again.
	集电器跳出滑触线。 Collector jumping out of slide-contact wire;	集电器跳出滑触线主要是滑触线变形和运行设备瞬时启动冲击所致。 Collector jumping out of slide-contact wire and shock due to instantaneous start-up of equipment.	检查滑触线的直线度和垂直度以及滑触线的开口处是否变形，同时检查运行设备是否有瞬间启动现象。 Check straightness and perpendicularity of slide-contact wire and inspect if opening of slide-contact wire deforms and if there is instantaneous overturning in operating equipment.

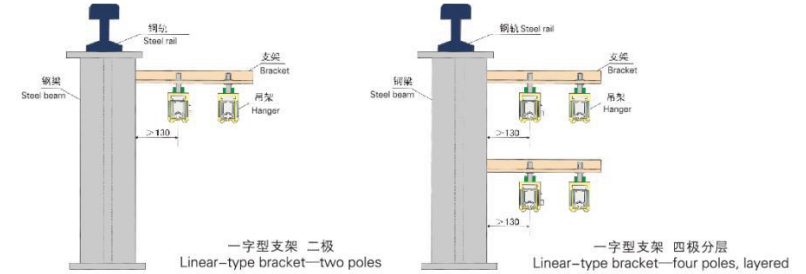
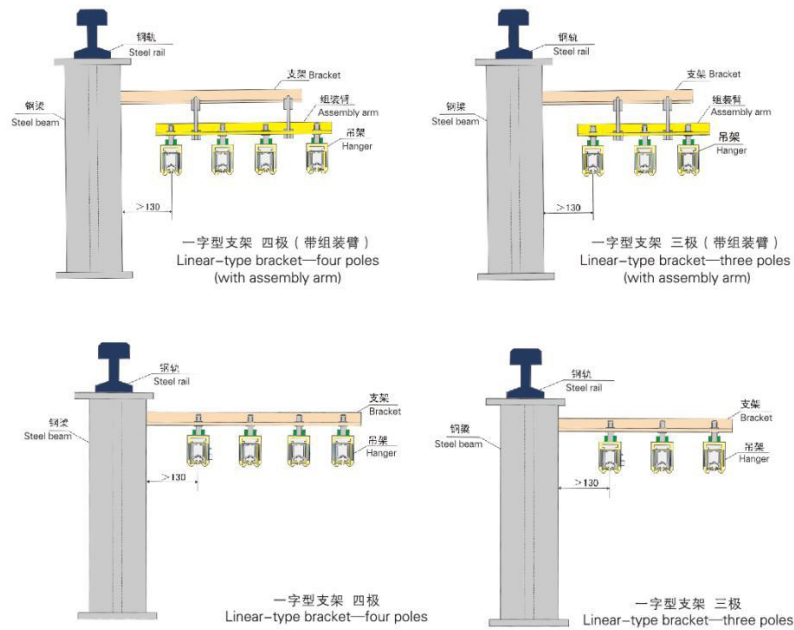


五、安装形式 Type of Installation

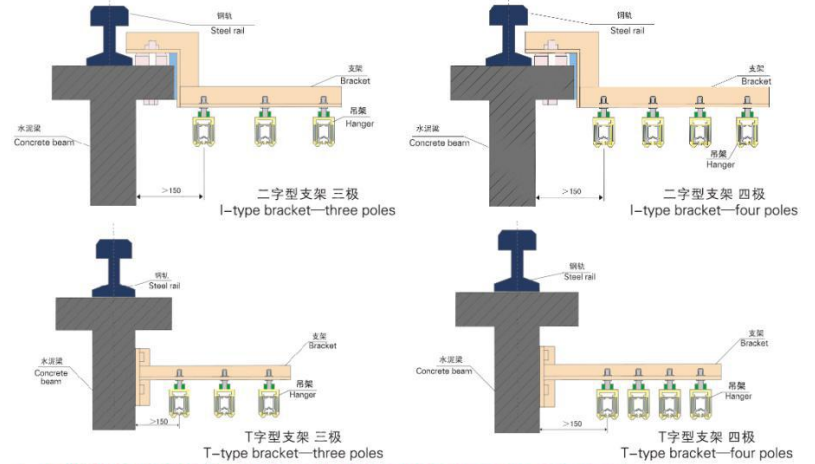
1、安装示意图 Installation schematic



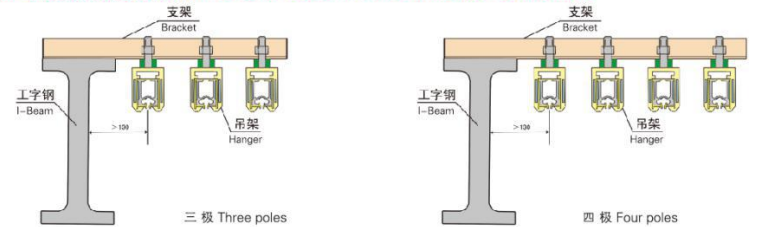
2、钢梁安装滑触线断面图 Profile for steel beam installed with slide-contact wire



3、水泥梁安装滑触线断面图 Profile for cement beam installed with slide-contact wire

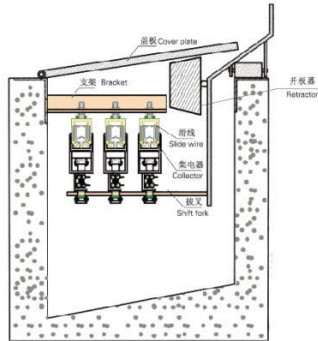


4、工字钢安装滑触线断面图 Profile for I-beam installed with slide-contact wire





5、地沟安装滑触线断面图 Profile for ditch installed with slide-contact wire



HXTS.HXTL多极管式滑线

HXTS, HXTL Multi-pole Enclsoid conductor rail

一、产品概述 Product overview

HXTS系列多极管式滑线是在高强度、高绝缘性能半封闭工程塑料导管内，嵌入多极铜排作为输电母线。

HXTS series carbon-brush current-collecting slide-wire guide rail is used as power transmission busbar when it is embedded with multi-pole copper bars under semi-enclosed engineering plastic pipes with high strength and high insulation performance.

HXTL系列多极管式滑线是在高强度铝合金管内，嵌入带高绝缘性能工程塑料的铜排作为输电母线。是我厂在消化国外先进技术基础上研制生产的该系列产品。

HXTL series carbon-brush current-collecting slide-wire guide rail is used as power transmission busbar when it is embedded with copper bars with high insulation performance in high-strength aluminum alloy pipes. They are developed and manufactured by our plant by combining international advanced technology.

HXTL系列产品由于采用铝合金外壳、坚固、耐用，使用寿命长，耐高温、辐射、而且有输电线路屏蔽功能。

HXTL series products adopt hard and durable aluminum alloy enclosure, which makes the products feature longer service life, resistance against high temperature, radiation resistance and screening of transmission line.

HXTL、HXTS的导管内装有配合紧凑、移动灵活的集电器小车，在移动受电设施的推动下，同步移动。同时通过在集电器上配置的多极电刷在导轨上的滑动接触，将导轨上的电源可靠地输给移动受电设施。

Conduits of HXTL and HXTS are installed with compact and flexible collector trolley which can carry out simultaneous movement when it is driven by mobile powered equipment. Meanwhile, installation of collector with multi-pole brush to achieve sliding contact on guide rail will transmit power source from guide rail into mobile powered facilities in a reliable manner.

二、产品的特点及用途 Features and applications of products

● HXTS、HXTL系列产品的外壳防护等级为IP23，半封闭结构对操作维护人员接触导管外部无任何伤害。

The protection class of enclosure for HXTS and HXTL series products is IP23. the semi-enclosed structure will cause no harm to operators and maintenance personnel who contact outer parts of conduit.

● 输电铜排母线电流密度高、阻抗低、线路损失小。电刷具有良好的柔性和自润滑性，集电器移动灵活、定向性好、接触性好，有效地控制了接触电弧我串弧现象。

Copper busbar for power transmission features high density of current, low impedance and low line loss. The brush has good flexibility and self-lubricating performance and the collector has flexible movement, good positioning and sound contact, which effectively controls contact arc and arc spread.

● 多极输电母线集中于一个导管内，安装十分简便。其固定支架、连接、悬吊装置，均以标准提供、装拆、调整，维修十分方便。

The multi-pole power transmission busbars concentrate in a conduit, which offers convenient installation. The fixing brackets, connections and suspension devices are provided according to standard, which offers convenience for loading, folding, adjustment and maintenance.

六、订货及储运 Order, storage and transportation

● 订货：注明型号、规格、滑线数量，附件由本厂提供

Order: models, specifications and quantity of slide wire. Accessories are supplied by our plant.

● 成套件：产品出厂包含下列部件和资料：

Kit: the ex-factory products include the following parts and data:

- 1、产品及附件 按订货要求 Products and accessories according to order requirements
- 2、装箱单Packing list 1份set
- 3、产品质量合格证Product qualification certificate 1份set
- 4、产品使用说明书Instruction manual 1份set
- 5、用户意见反馈单Client feedback sheet 1份set

● 保用期：用户遵循本说明书原则，安装、操作符合要求，保用期一年(刷片、集电器易损件不在保用范围)。

Guarantee period: one year (wearing parts such as brush and collector are not included) when users comply with the instruction manual and installation and operation conform to requirements.

● 产品储运 Storage and transportation of product

- 1、长途运输，应有包装箱，短途可由汽车装运。

Long-distance transportation shall be provided with packing box. Transportation by truck is allowed for short-distance transport.

- 2、运输过程中不得剧烈撞击、跌落。

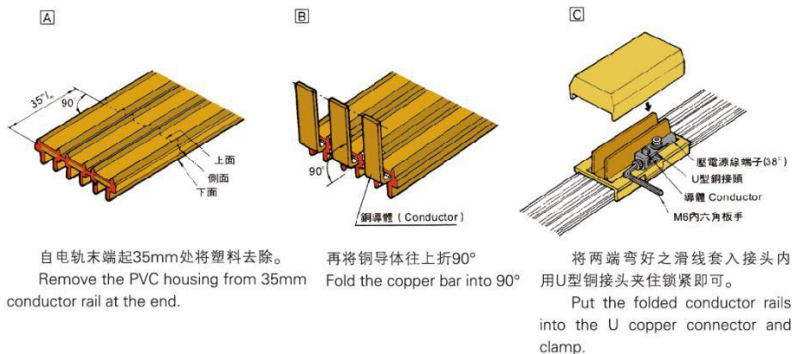
Severe hit and falling in transit are not allowed.

- 3、储运时应水平放置，不得在产品上压放重物，远离高温发热源。

The products shall be placed horizontally during storage and transportation. Heavy objects are not allowed to be placed on the products. The products shall be placed far from heat source.



### 十五、中间电源供电安装图 Middle power Feeding Installation Diagram



### 十六、滑触线及配件清单

序号No	名称 name	单位unit	配置Parameter
1	无缝滑触线 Flexible conductor rail	米 M	任意长度，根据客户要求而定 No joint, according to customer's requirements
2	支架 Bracket	只 Piece	0.5~1.0米（视工况条件而定） One piece each 0.5~1 m
3	滑线夹 Hanger clamp	只 Piece	支架数×1 The same to the bracket
4	中间供电 Line feed	付 set	实际需要而定 According to customer's requirements
5	拉紧器 End feed	付 set	每条线工作数量×2 Two set for one power line
6	集电器 Current collector	付 set	视行车台数、线数而定 Accordinging the number of mobile devices
7	拨叉 Fix square bar (tow arm)	只 Piece	集电器×1 The same to the current collector

具体所配数量可根据实际需要参见导轨技术参数表，或联系本公司列出详细设计方案及附件清单  
The quantity of the accessories is according to the standard configuration or customer's requirements.

### TBW安全滑触线系列

#### TBWL、TBWT Single-pole combination-type slide wire

#### 一、产品概述 Product overview

工矿企业的各类起重机、电动葫芦的移动供电，如：各种发电厂、钢铁厂、石油化工厂、汽车厂、港口码头、机械制造厂、造船厂、造纸厂、纺织厂、车辆厂、铁路、糖厂、酒厂、化工厂、家电制造厂、仓库及货场等。

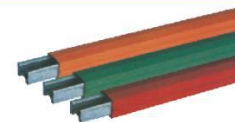
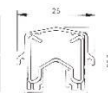
Supplying power to all kinds of cranes and electrical gourd used in many industries: Power Plants, Steel Industry, Oil & Chemical Industry, Auto Industry, Port, Plating Works, Shipbuilding Industry, Paper Mills, Textile Mills, Transportation System, Sugar & Wine Plants, Cement Plants, Warehouse and Material handling system

一些专用设备的移动供电，如：自动化生产线、游乐场的旋转或移动游乐车、飞机维修机库大门、厂房自动门、钢结构桥梁的维护小车、摄影厂、自来水厂设备的移动供电等。

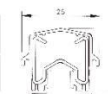
Providing power to some special equipments in such places as Robotics, Amusement Parks, Airport, Bridges, Studio, Sewage & Water Treatment Plants.

#### 二、产品型号 Model of product

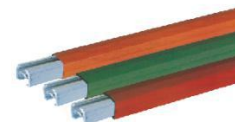
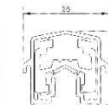
规格型号 Model and specification	TBWG 60A	TBWG 100A	TBWG 125A
重量(kg) L=4.5m	2.34	3.76	4.76



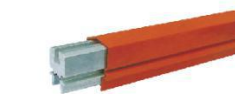
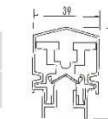
规格型号 Model and specification	TBWT 160A	TBWT 250A	TBWT 400A
重量(kg) L=4.5m	2.76	3.04	4.40



规格型号 Model and specification	TBWL 160A	TBWL 200A	TBWL 250A	TBWL 315A	TBWL 400A	TBWL 500A
重量(kg) L=4.5m	2.15	2.17	2.24	2.39	2.61	3.02



规格型号 Model and specification	TBWG 630A	TBWG 800A	TBWG 1000A	TBWG 1250A
重量(kg) L=6m	10.36	12.66	17.28	20.58







三、产品配件Accessories

1、膨胀段系列 Expansion section

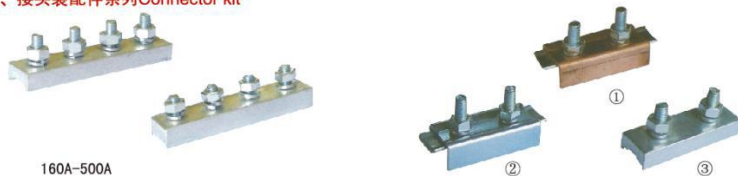


TBWG-4.5#  
60A-400A

TBWL-4.5#  
60A-500A

TBWL-6#  
630A-1250A

2、接头装配件系列 Connector kit



160A-500A

3、接头护套系列 Splice cover kit

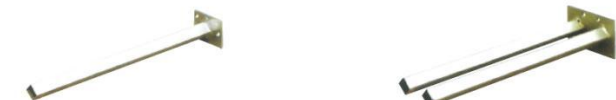


60A-500A

2\*120mm<sup>2</sup>

2\*120mm<sup>2</sup>

4、集电器支架系列 Tow arm



0.75kg

1.50kg

5、动力输入系列 Power feeding kit



端部  
End power feeding

端头  
End cap

中间件  
middle power feeding

6、提挂装配件系列 Hanger



0.06kg

0.03kg

0.04kg

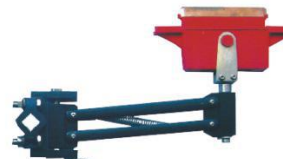
0.05kg 0.06kg 0.08kg 0.09kg

7、通用集电器系列 Safe Slide-contact Wire

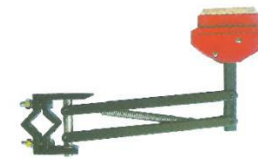


2\*250A集电器  
2\*250A Current collector

100A双绝缘集电器  
100A Double insulation current collector



250A集电器  
250A Current collector



100A集电器  
100A Current collector