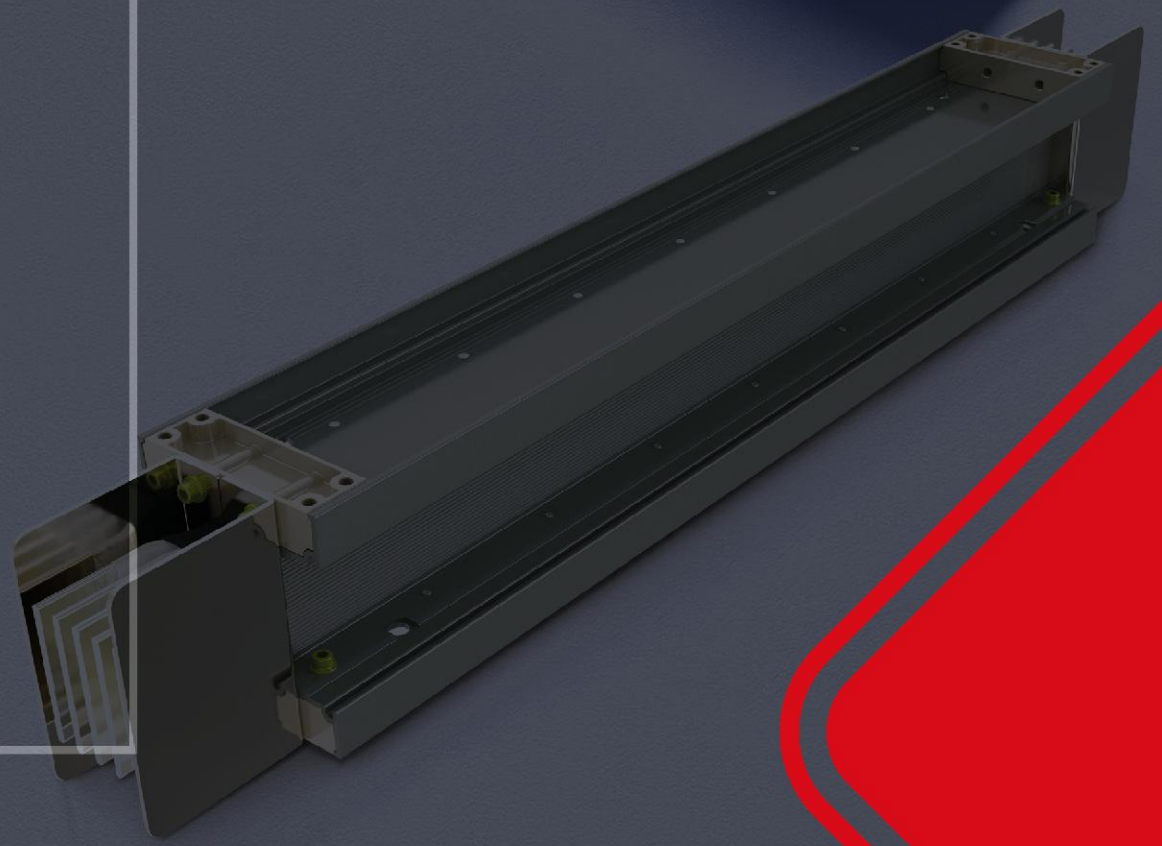
鼎圣集团
DINGSHENG GROUP

诚/信/如/鼎　品/质/为/圣

BUSWAY SYSTEM



01 BUSWAY INTRODUCTION

02 BUSWAY PRODUCTION

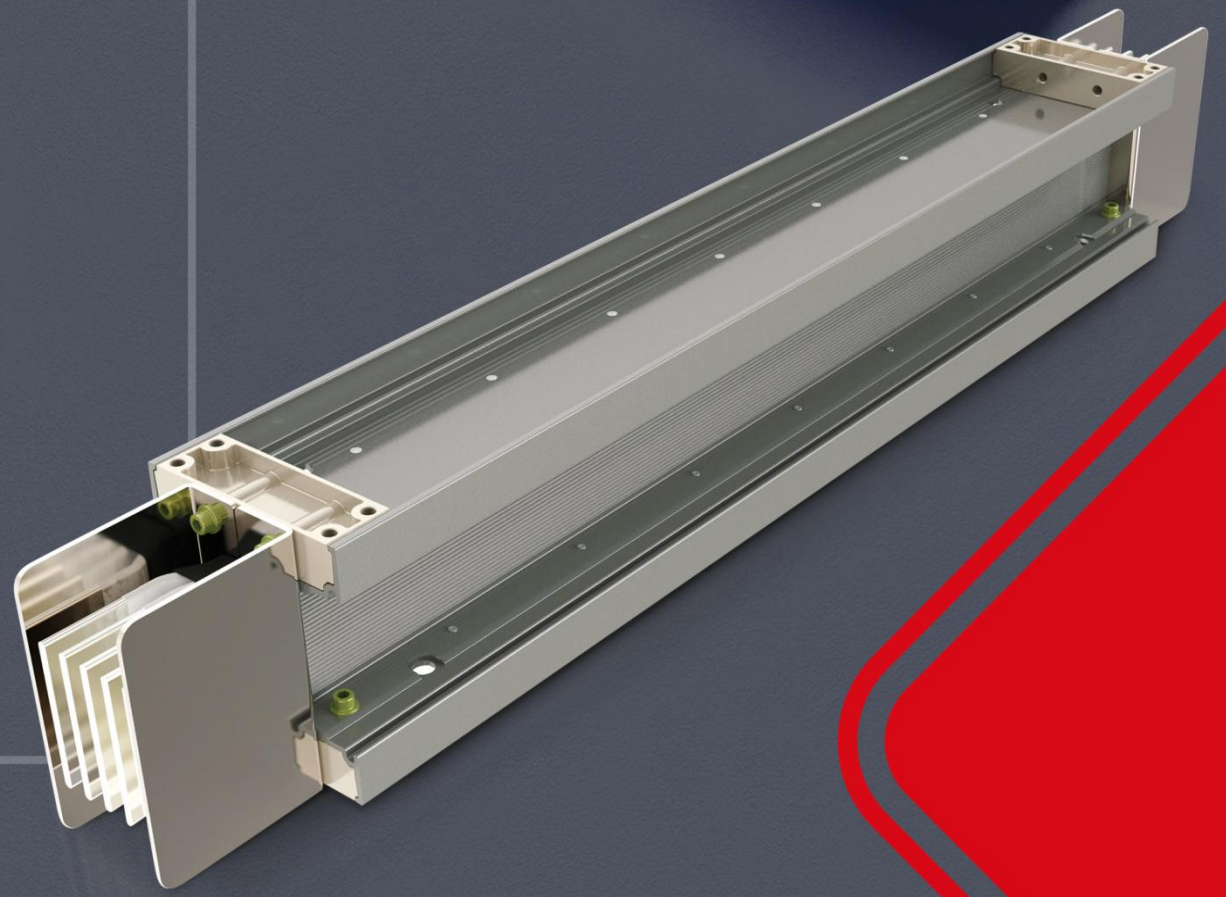
03 QUALITY CONTROL

04 PACKING

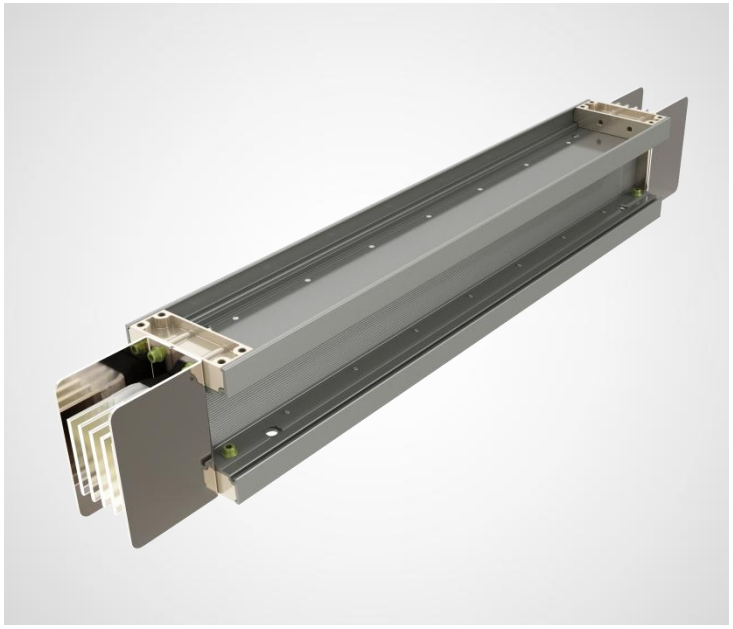
05 PROJECT

鼎圣集团
DINGSHENG GROUP

01 BUSWAY INTRODUCTION

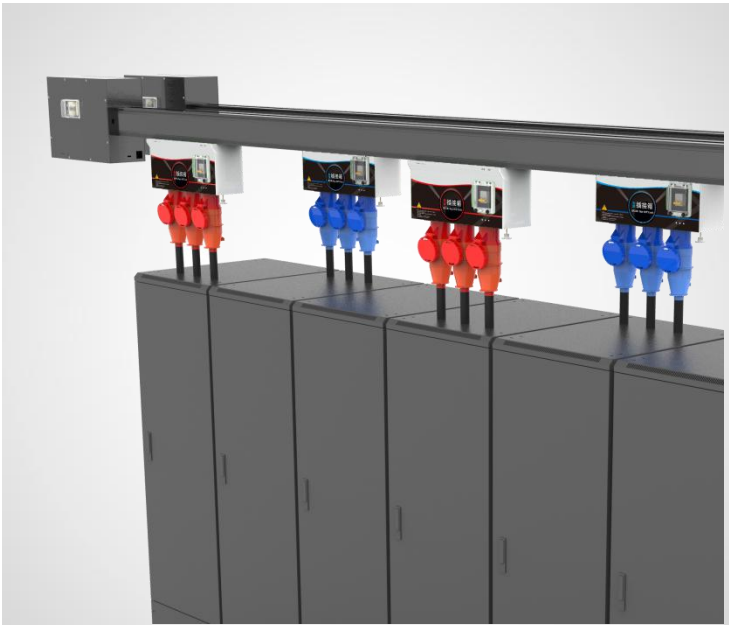


BUSWAY CLASSIFICATION



CCX3 Compact
Sandwich busbar

DCC Compact
Sanswich busbar



DCIB data center
intelligent busbar

BUSWAY CLASSIFICATION

FSMC Resin cast busbar

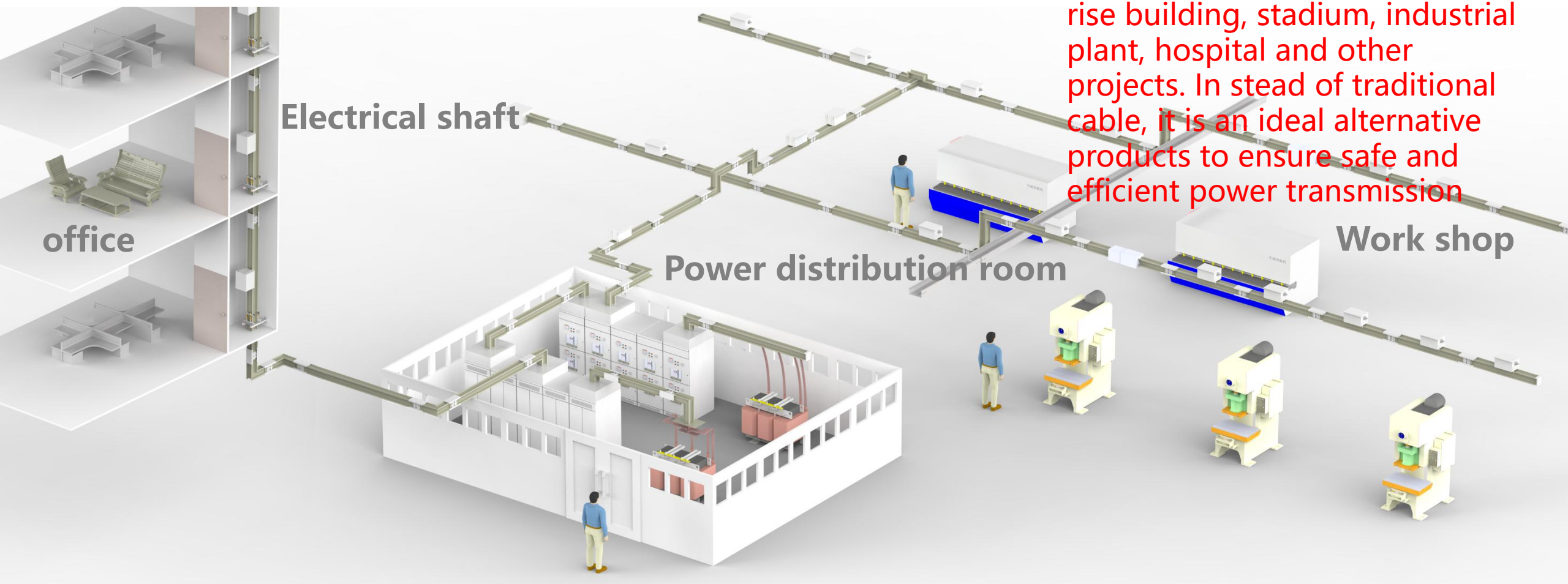
CFW air insulated busbar

NHCCX3 fireproof busbar

GFM High Voltage box busbar

BUSBAR SYSTEM DIAGRAM

CCX3 Busway system can be widely used in data center, large commercial plaza, high-rise building, stadium, industrial plant, hospital and other projects. In stead of traditional cable, it is an ideal alternative products to ensure safe and efficient power transmission



STRUCTURE CHARACTERISTICS

◆The compact sandwich busar has the technical characteristics of small volume, low impedance, small loss, fast heat radiation and thermal stability and has a broad development prospect.
◆Compared with air insulated busbar, compact sandwich insulated busbar it has competitive price and is favored by customers.
◆It is a new developed system which is more suitable for Chinese market demand. It optimized the system configuration with a higher degree of automation production which can meet the power distribution requirements of different customers.

STRUCTURE CHARACTERISTICS

■ The Busway conductors are closely arranged, with overall heat dissipation and lower temperature rise. The whole length is dense and without "chimney effect". The current carrying capacity is not affected by the installation position and installation mode. The structure is compact, the width is only 128mm and the occupied building space is smaller.

■ The unique anti wrong phase device facilitates the installation between bus ducts, and effectively eliminates the wrong installation caused by human factors.

SHELL MATERIAL

■ The shell is Aluminum alloy which is light in weight and high in mechanical strength.

■ It can effectively avoid the influence of eddy current and hysteresis loss on the busbar system.

■ All aluminum shell has excellent conductivity and the whole shell has more than 50% grounding capacity.

■ The unique serrated heat sink greatly improves the heat dissipation capacity of the busbar system.

Surface electrostatic powder spraying

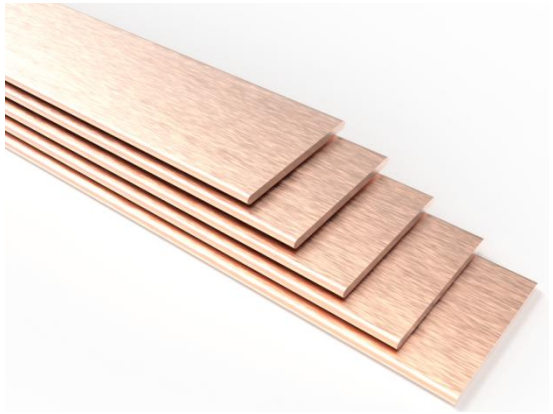
■ Corrosion resistance

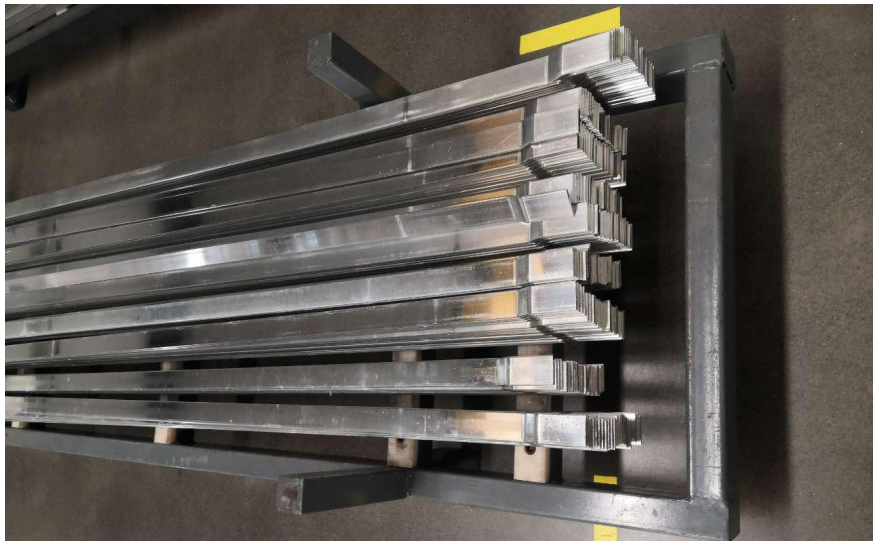
■ Salt fog prevention

■ antioxidant

CONDUCTOR CONFIGURATION

导体配置





■ High speed smooth sawing without burr, high sawing accuracy, ensuring the flatness of cross section, reducing the temperature rise of busbar joint.

■ The copper conductor is treated with A-level standard copper by special process.

■ The copper content of the conductor is more than 99.97% and under the same section the loss of the busbar reduces by 3% ~ 5%.

■ Conductor surface treatment is unique alloy plating process which lower contact resistance. Tinning and silver plating is optional.

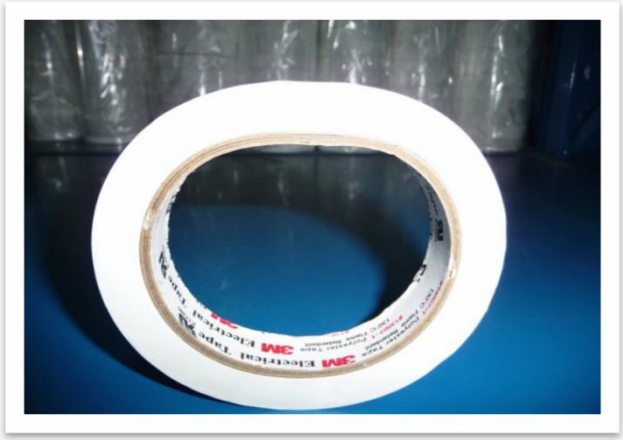
INSULATING MATERIALS

绝缘材料

Dupont Polyester film

The insulation heat-resistant grade of the material is Level B 130 ℃ and the flame-retardant performance meets the requirements of UL94 standard.It is a safe and environmental friendly halogen-free insulation material, which improves the insulation reliability. Wrapping four layers greatly improves the insulation strength and impact strength of the busbar.

3M insulating tape



3M insulation, reaching the US UL standard V0 grade, excellent anti-aging performance and longer service life which up to 50 years.

SOCKET UNIT

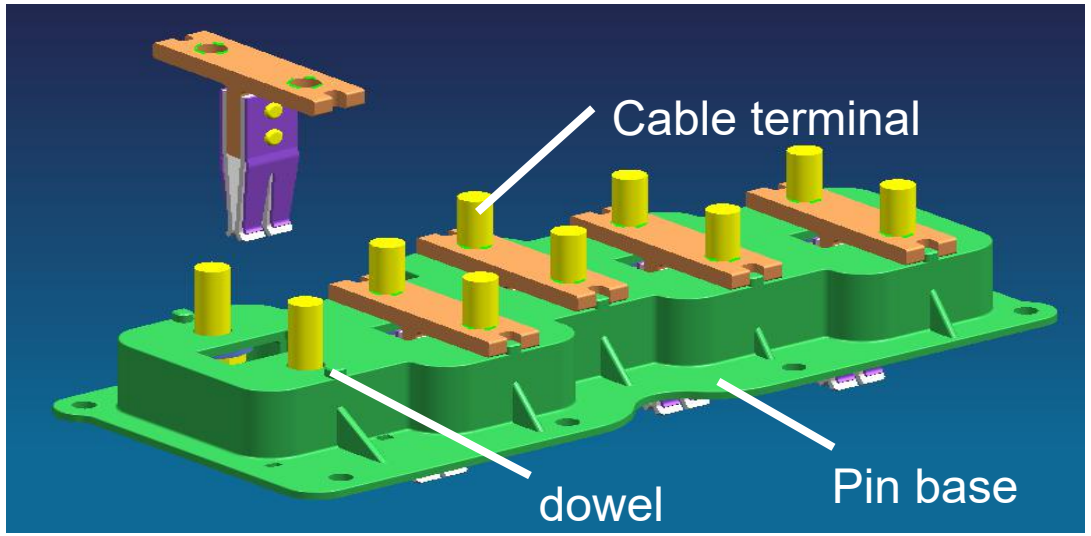
(1) The "t" type copper bar is used as the pile head and the structural form is simply supported beam. Compared with the original "7" type cantilever beam structure, the stability of "t" type is better 。

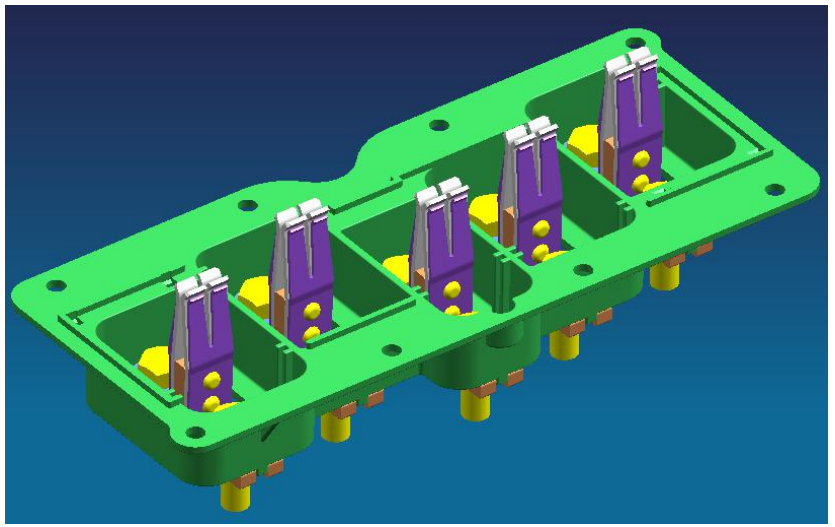
(2) "T" pin has screw seat on the left and right which making wiring more flexible and convenient .

(3) There are locating pins on the left and right to ensure the pin connection is accurate and reliable.

(4) “T "structure has higher heat dissipation quality and stronger current carrying capacity.

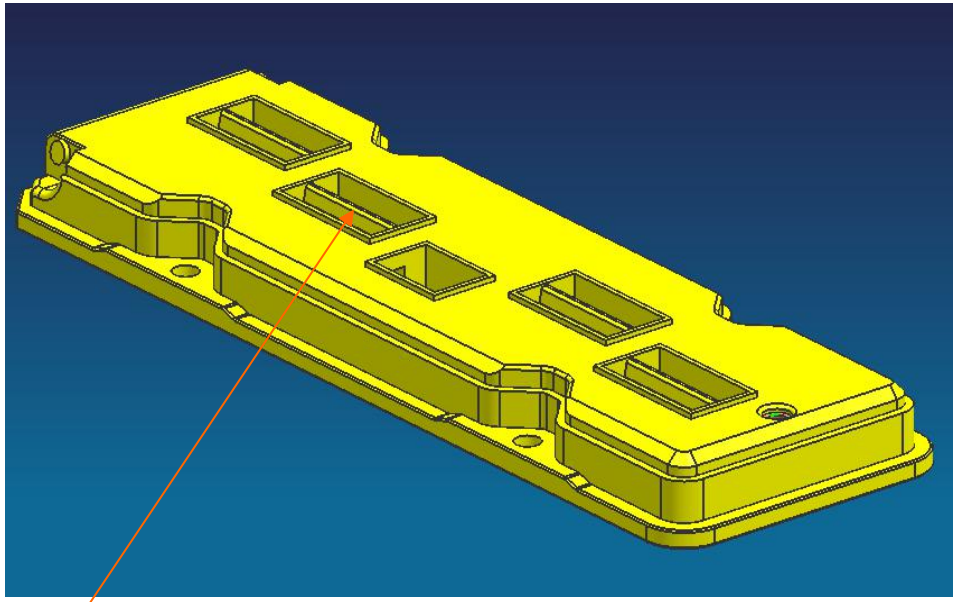
(5) The pin with different current level only needs to change the size of "T" pile head

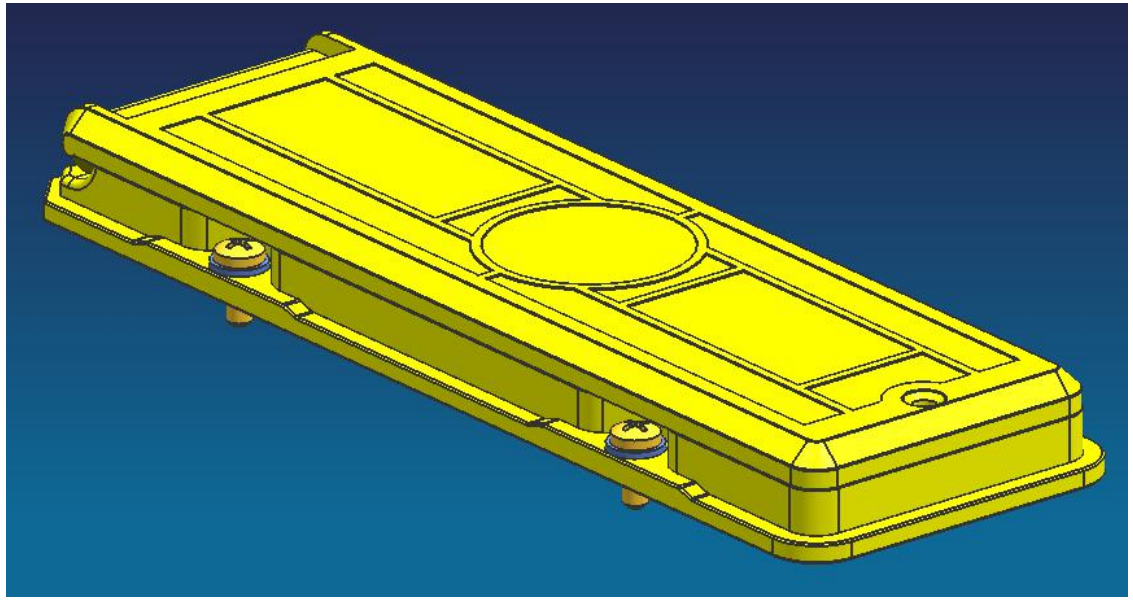




SOCKET UNIT

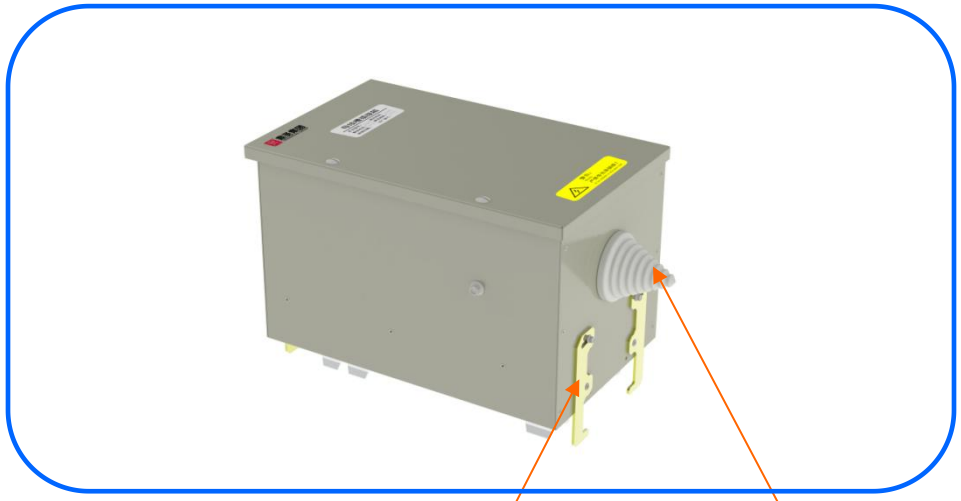
Structure of busbar socket device





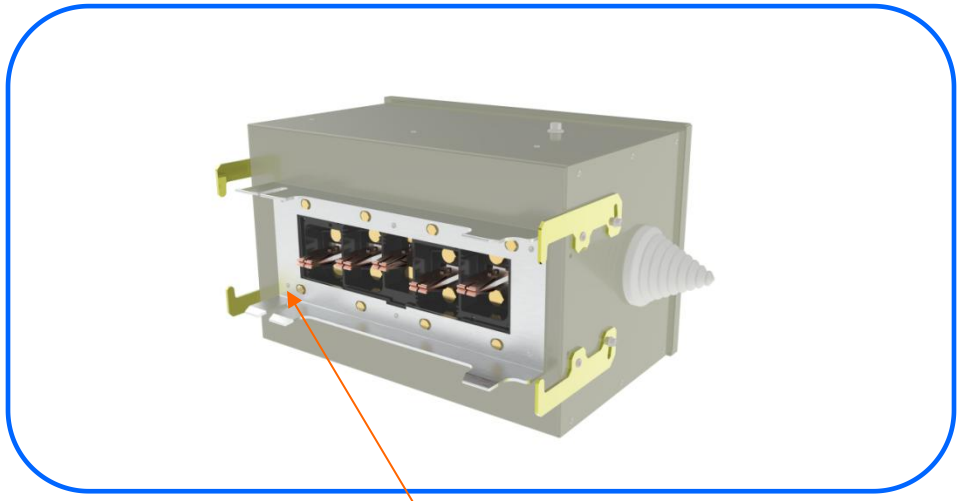
Guide rib ensures the pin is inserted accurately, easily and reliably

SOCKET UNIT



interlock

Cable Jacket



Installing guide plate

main features

- The optimized box is smaller and saves space
- Designed with support and positioning function

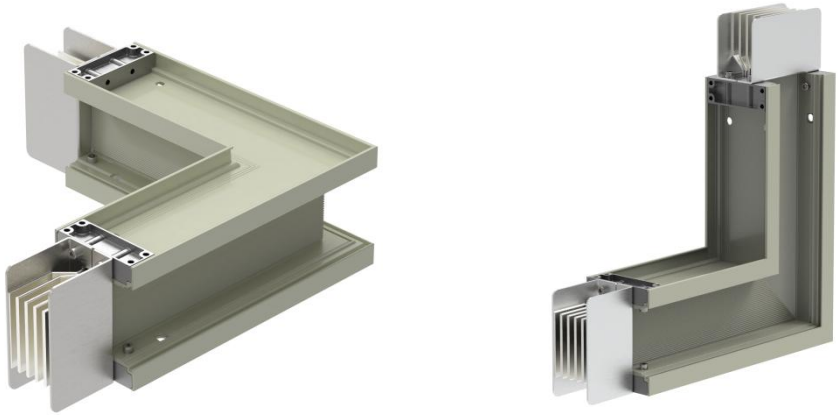
-Double interlock

- Quick installation
- Safe and reliable

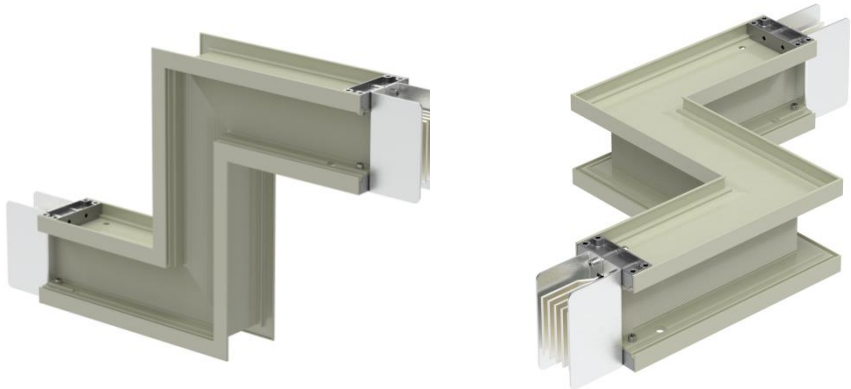
FUNCTIONAL UNIT

All kinds of CCX3 busbar bend structures are designed which can be more convenient and flexible for wiring design and construction. And it is adapt to the complex installation conditions on site.

CCX3 busbar elbow has the same characteristics as the compact busbar such as small volume, full closure, convenient installation, reliable use and etc.

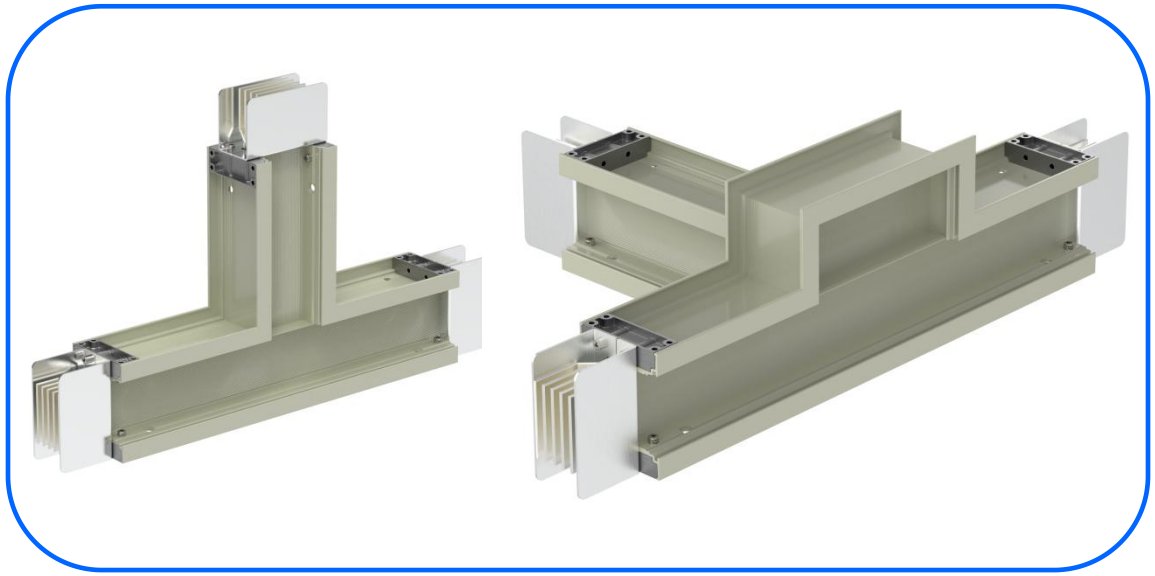


L- Bend

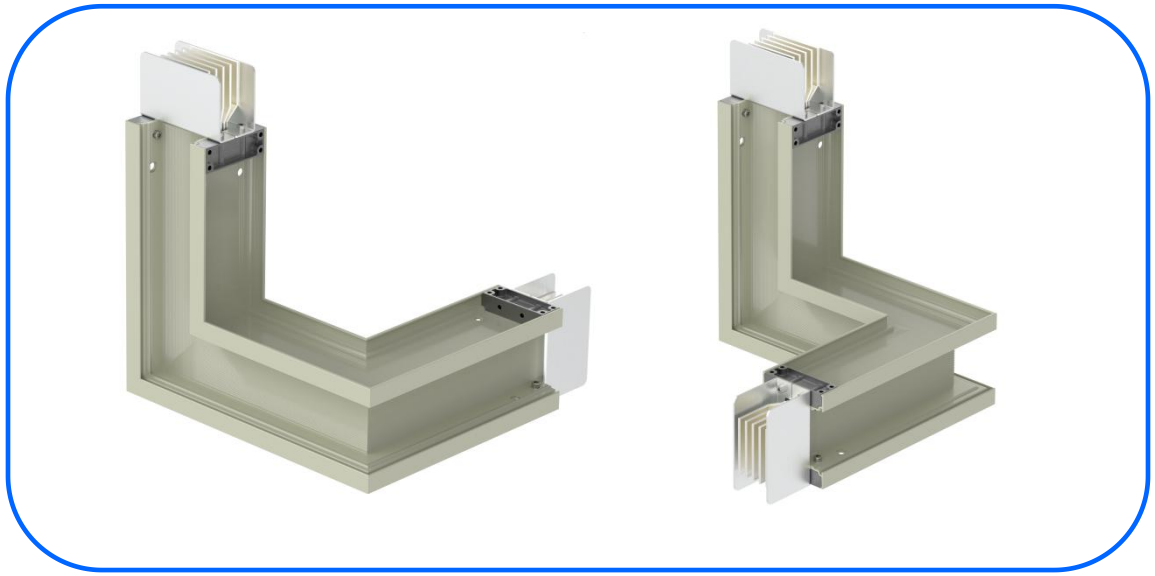


Z-Bend

FUNCTIONAL UNIT

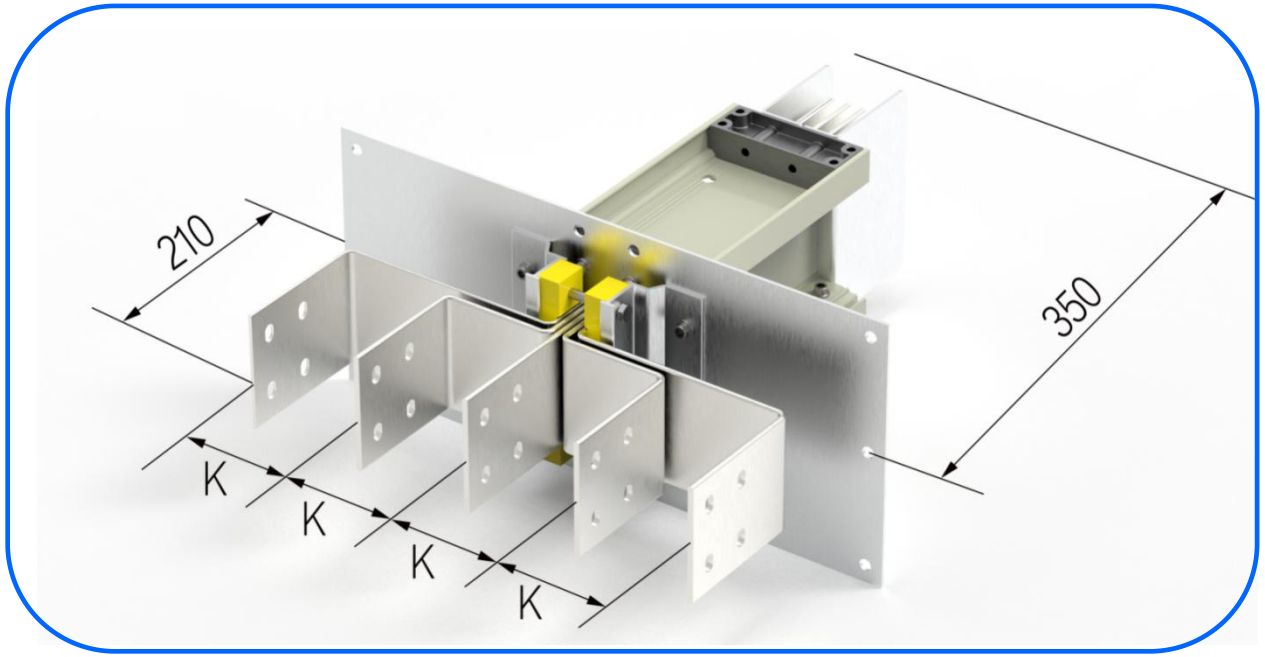


T-Bend



Special Bend

FUNCTIONAL UNIT

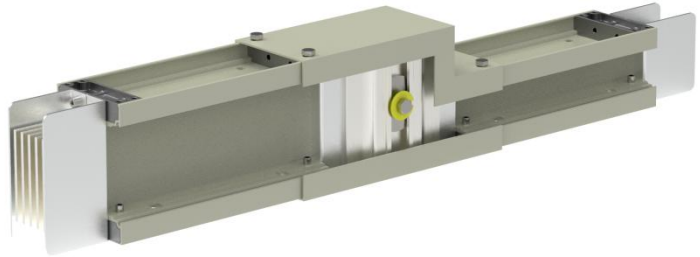


The start busbar and the start box can be matched with any type of switchgear transformer and the clients can also decide the spacing of the start busbar according to your needs.

FUNCTIONAL UNIT

Transformer section

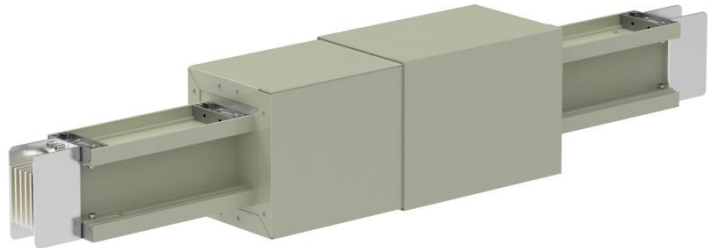
It is a transition section to realize the transformation of current from small to large. It can provide more economical transmission and distribution mode for users.



PS:The standard length is 1000mm

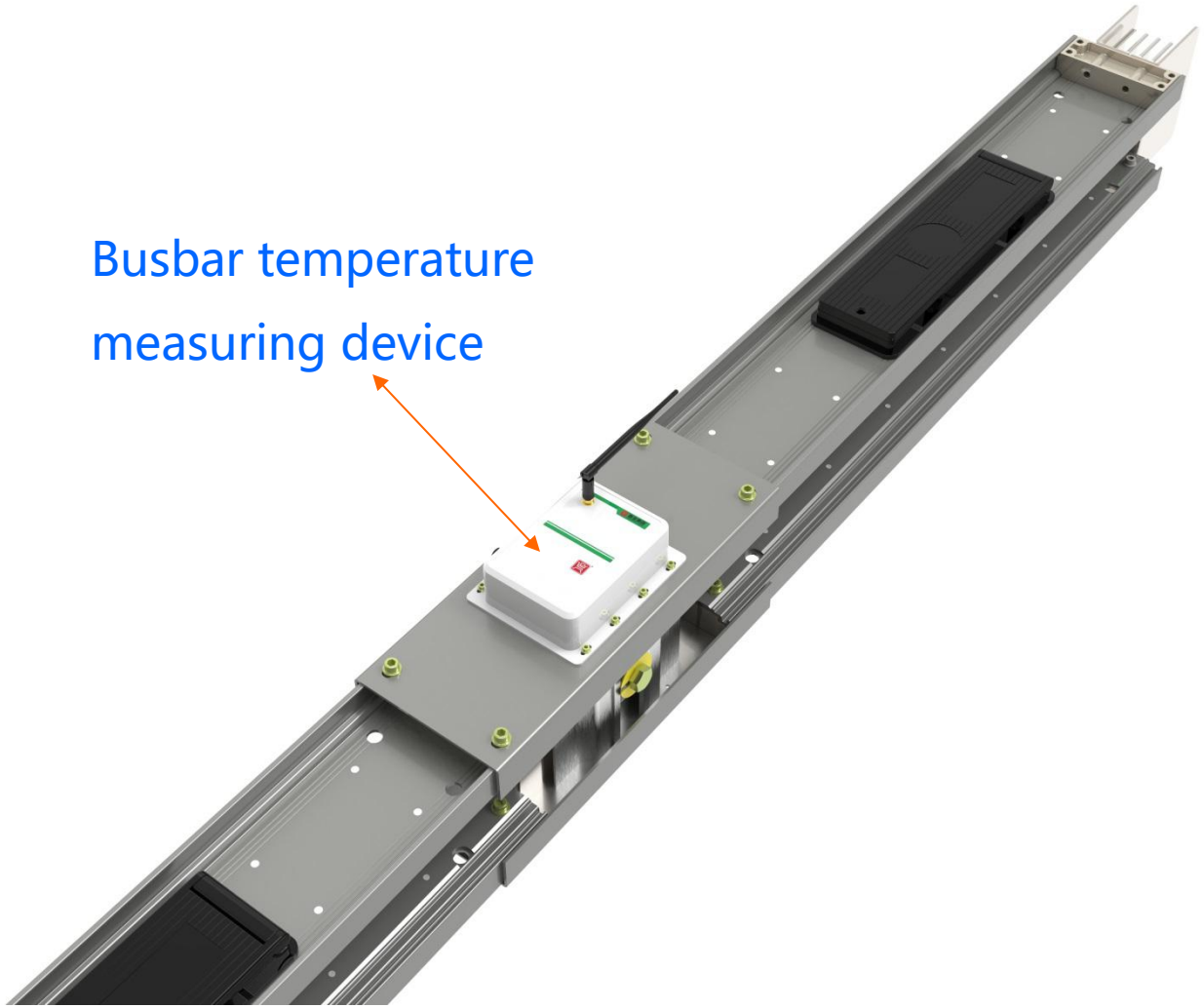
Expansion joint

It can compensate for the contraction of the straight section of the busbar due to thermal expansion or the length change caused by crossing the expansion joint of the building. The expansion range of expansion busbar unit is ± 25mm. In general, one expansion unit shall be installed every 60m in the straight section.



PS:The standard length is 1200mm

INTELLIGENT BUSBAR SYSTEM

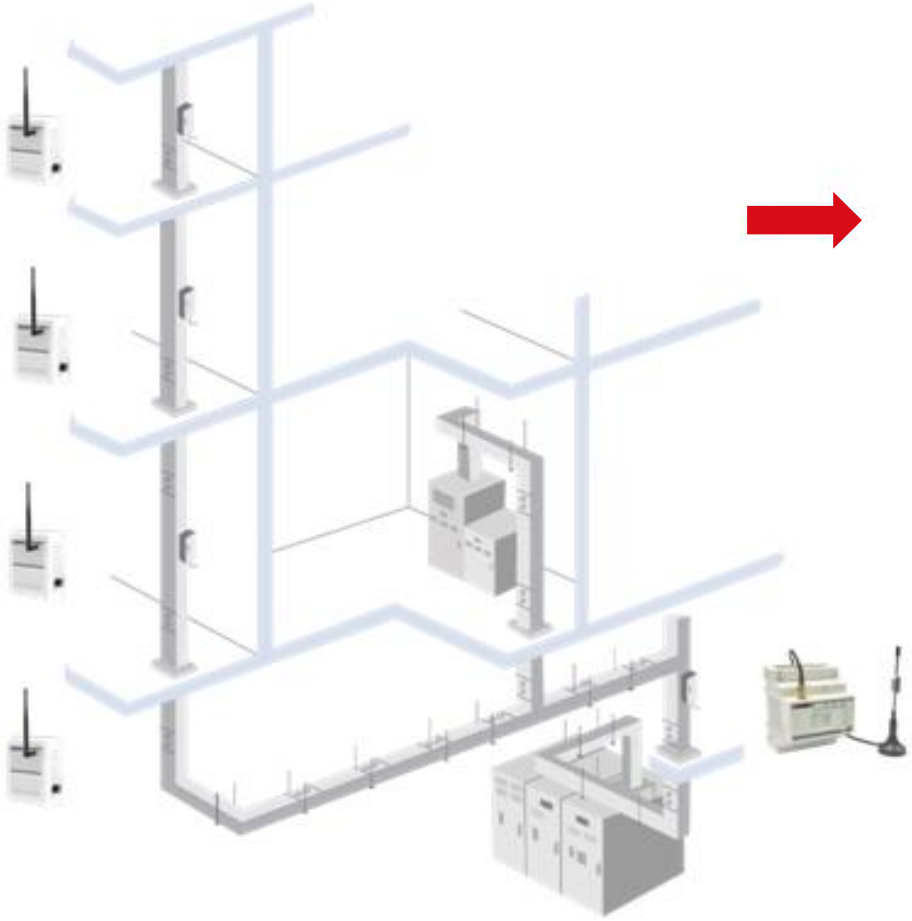


Busbar trunking intelligent monitoring system

By adding a new generation of temperature data sensor to the intelligent busbar, the data acquisition of busbar connector unit and A, B, C three-phase working state can be completed. The working state and electrical characteristic data of the plug-in box can be monitored at the same time. The system has the functions of real-time data analysis, historical data analysis, field simulation, report generation, automatic early warning and alarm, equipment remote management, etc.

INTELLIGENT BUSBAR SYSTEM

Terminal, intelligent terminal



Management and intelligent gateway

iGateWay系列

Local inspection

本地HMI

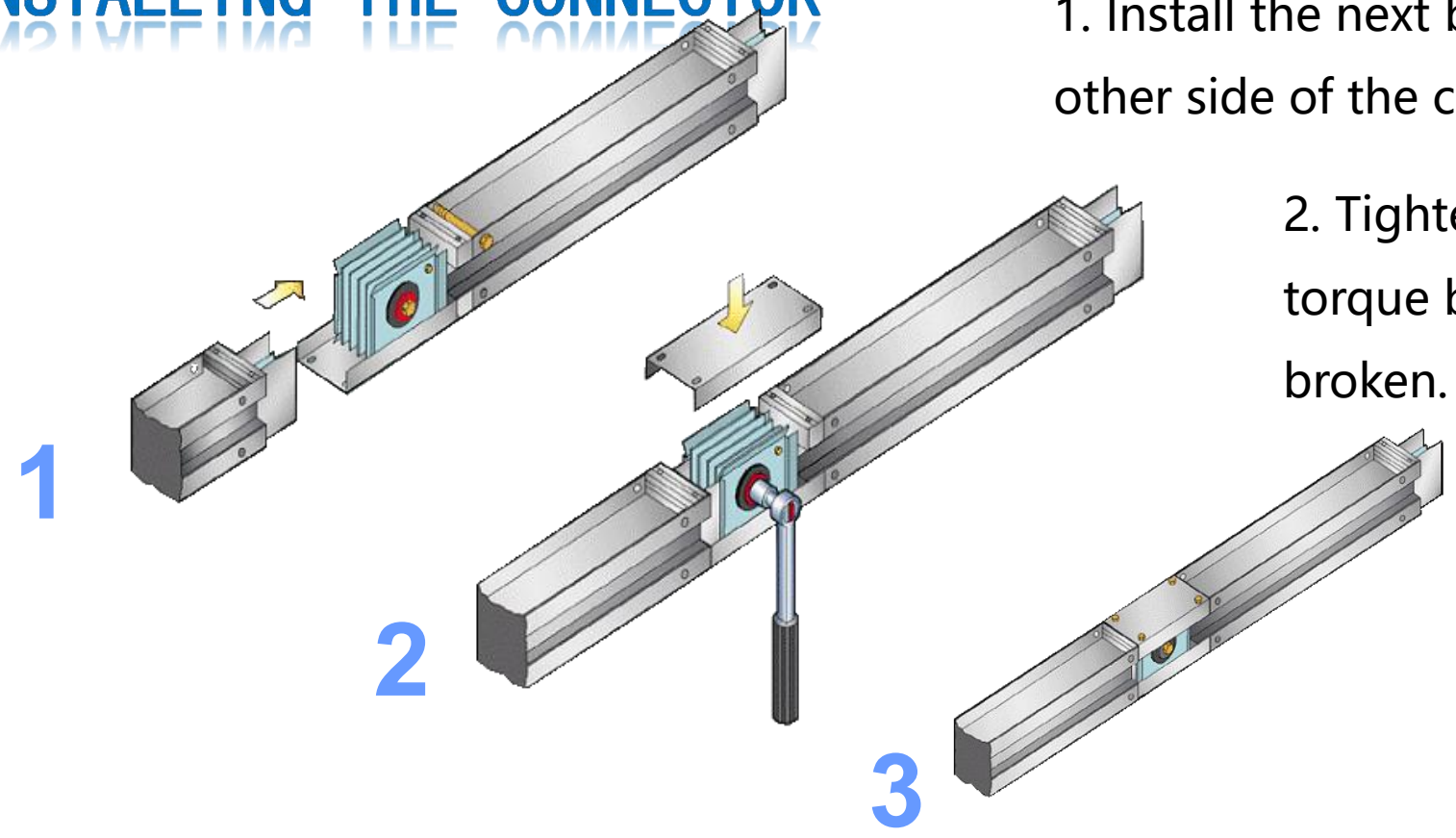
本地母线监控系统

Cloud platform

母线运维云平台

INSTALLATION OF BUSBAR

INSTALLING THE CONNECTOR



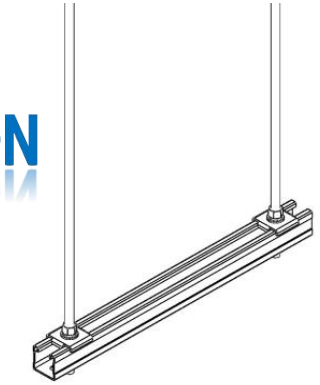
1. Install the next busbar section on the other side of the connector.

2. Tighten the first bolt head of stud torque bolt with spanner until it is broken.

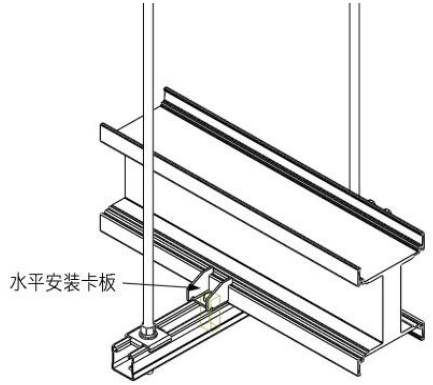
3. Install the cover plate of the connector and fasten the bolts.

INSTALLATION OF BUSBAR

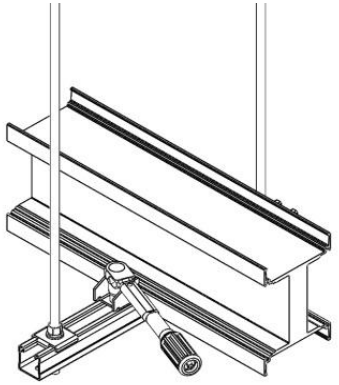
HORIZONTAL INSTALLATION



1. After the suspender is fixed on the ceiling, install C-shaped steel according to the installation height of the busbar (Figure 1).



2. Install the horizontal mounting clamp plate according to the installation method of the busbar and the horizontal mounting clamp plate shall be close to the busduct cover plate (Figure 2)



3. After adjusting the busbar straightness, tighten the mounting bolts of the clamp plate with a spanner (Figure 3)

Attention

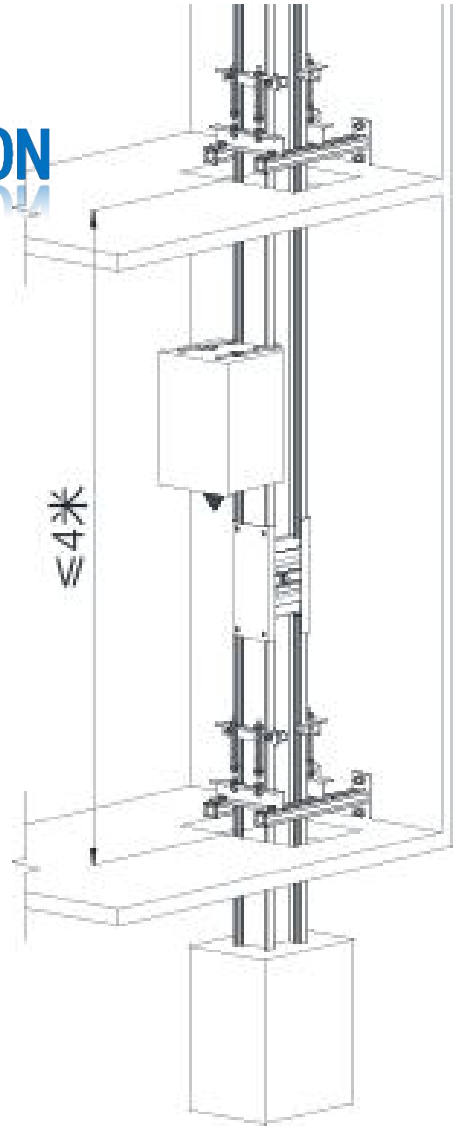
1.It is forbidden to straighten the busduct by force and the busbar levelness shall be corrected by hanger bolts.

2. Supports and hangers must be set at elbows, combined elbows, start boxes and etc.

3. Brackets shall be setted at both ends of the joint with a maximum spacing not more than 1 m. Do not load at joints.

INSTALLATION OF BUSBAR

VERTICAL INSTALLATION

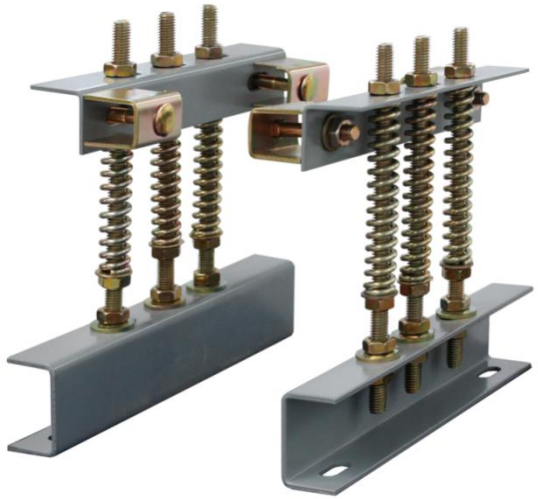


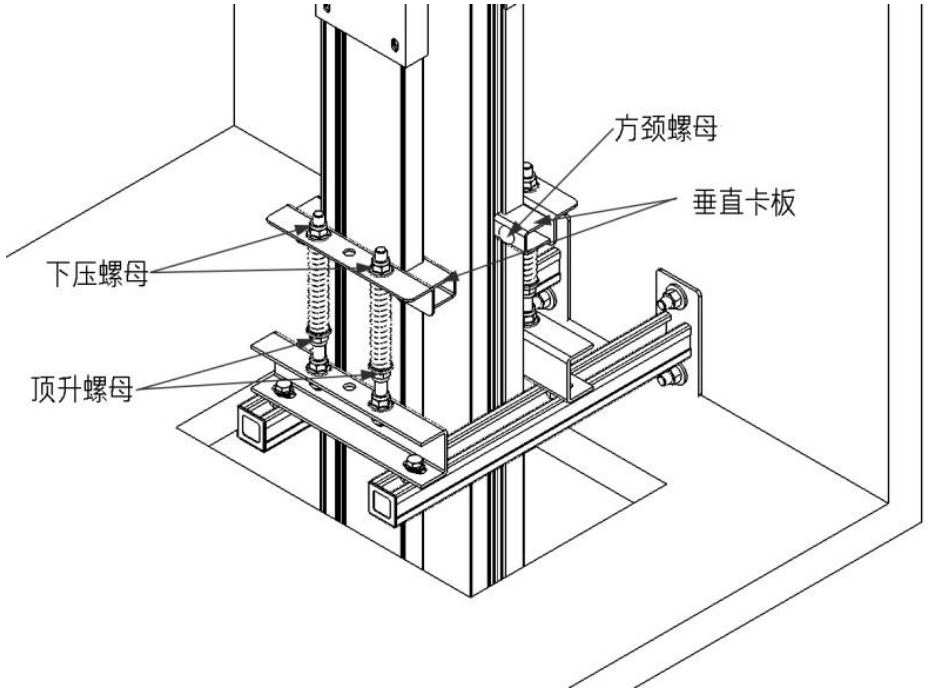
Precautions for installation in shaft

1. After installation, the bending degree of busbar shall not be larger than 1 degree.
2. The installation space of spring bracket shall not be more than 4m. If there is a separate busbar between floors, it is necessary to install fixed support between floors.
3. It is forbidden to install the spring bracket at the connector of busbar or the socket of plug box.

INSTALLATION OF BUSBAR

VERTICAL INSTALLATION



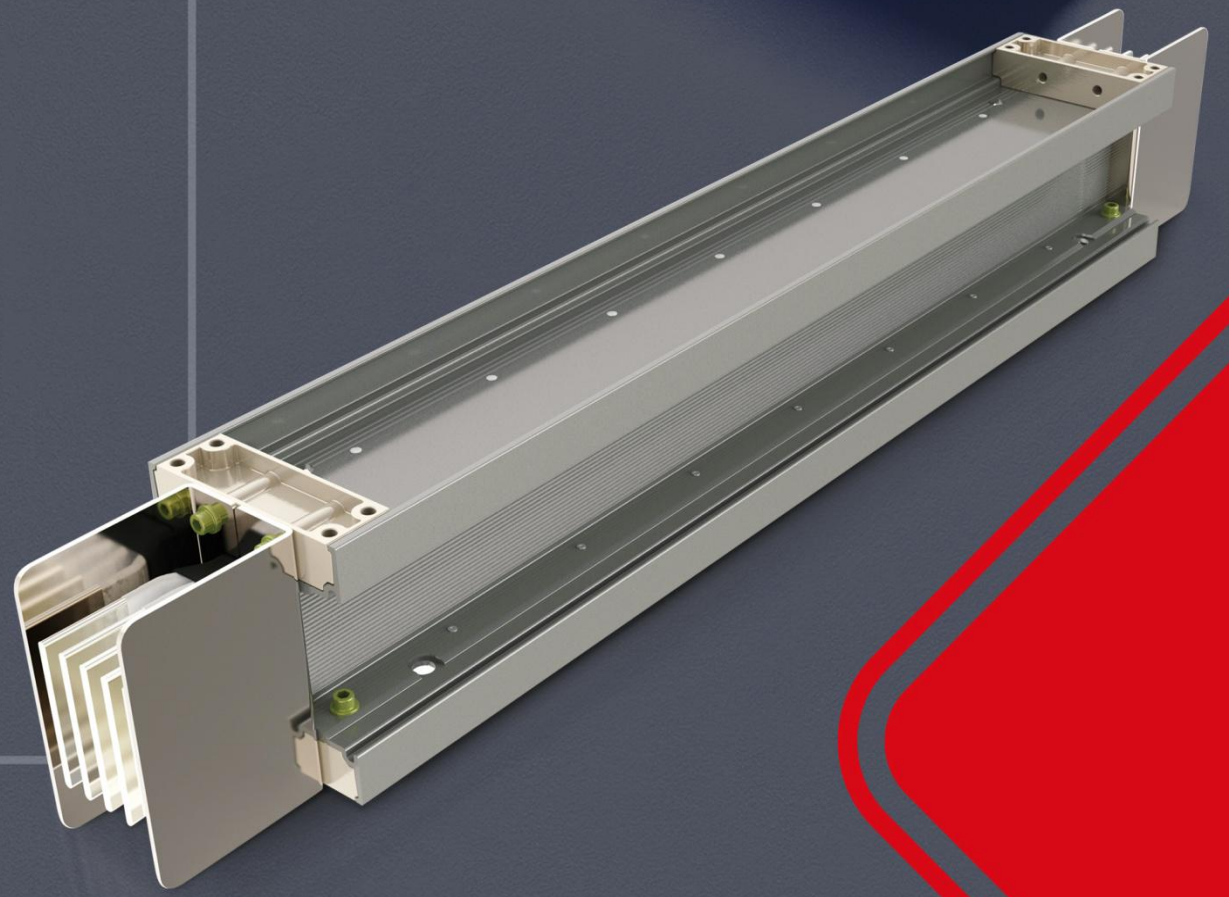


Spring bracket

It is used to support and fix the busbar in the vertical section of the electrical shaft and absorb the displacement caused by the busbar due to self weight, thermal expansion and cold contraction.

鼎圣集团
DINGSHENG GROUP

02 Busway production



R & D CAPABILITY

DingSheng Circuit parameters and line loss calculation system

It is a special software independently designed and developed by Ding sheng group. It mainly carries out section optimization calculation, busbar parameter improvement calculation and performance comparison of different specifications of busbar, which can effectively guide the design and selection of busbar.

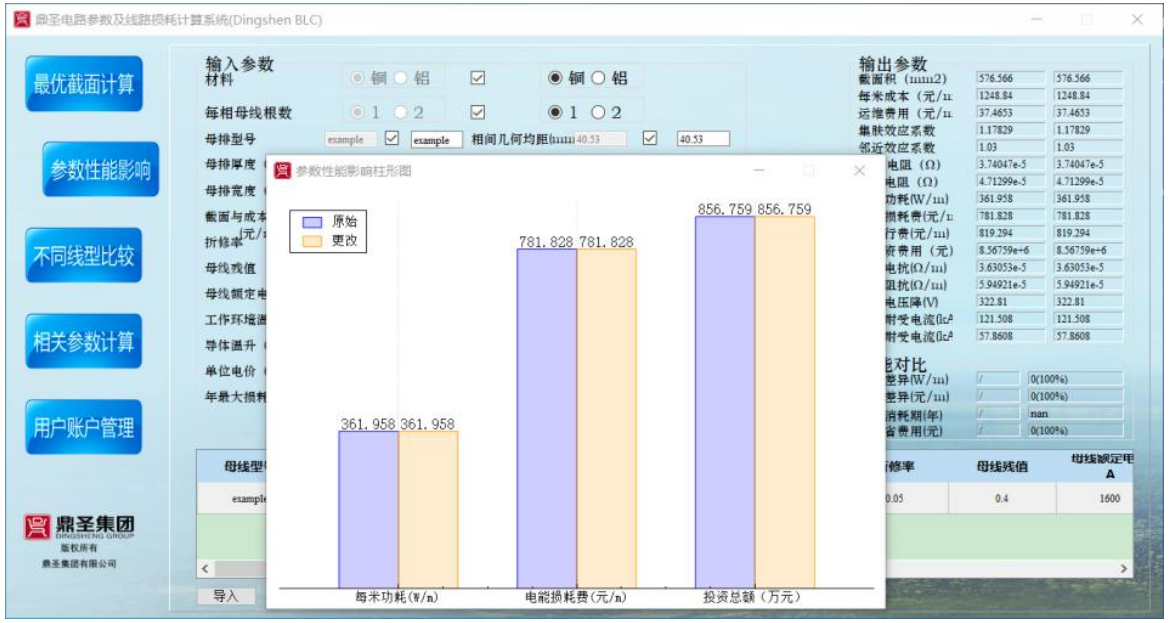
Software presentation

According to the application environment and material parameters of the busbar, the optimal busbar section and its detailed parameters can be calculated theoretically. It provides datas for busbar design and selection.

Line loss calculation software

R & D CAPABILITY

Line loss simulation software



Compare and analyze the busbar with different parameters, calculate the difference of power consumption per meter, power consumption and total investment in detail. And then provide support for busbar selection.

Based on the existing mature busbar parameters, modify the parameters, calculate the detailed performance, parameter index and other differences.Before and after the modification, provide datas for busbar design.

SHEET METAL

AMS.HS-30510CNC punching and shearing machine

PBH-220/3100-6C-FMC Robot automatic bending machine

SHEET METAL

钣金

Trubend 1100 CNC bending machine

Trupunch 2000 CNC punch machine

WELDING

welding robot: It can reach 90 pieces / hour, more than traditional manual welding 60 pieces / hour , and the efficiency is increased by 50%; it can continuous working and the process is more reliable and stable than traditional manual welding.

CUTTING

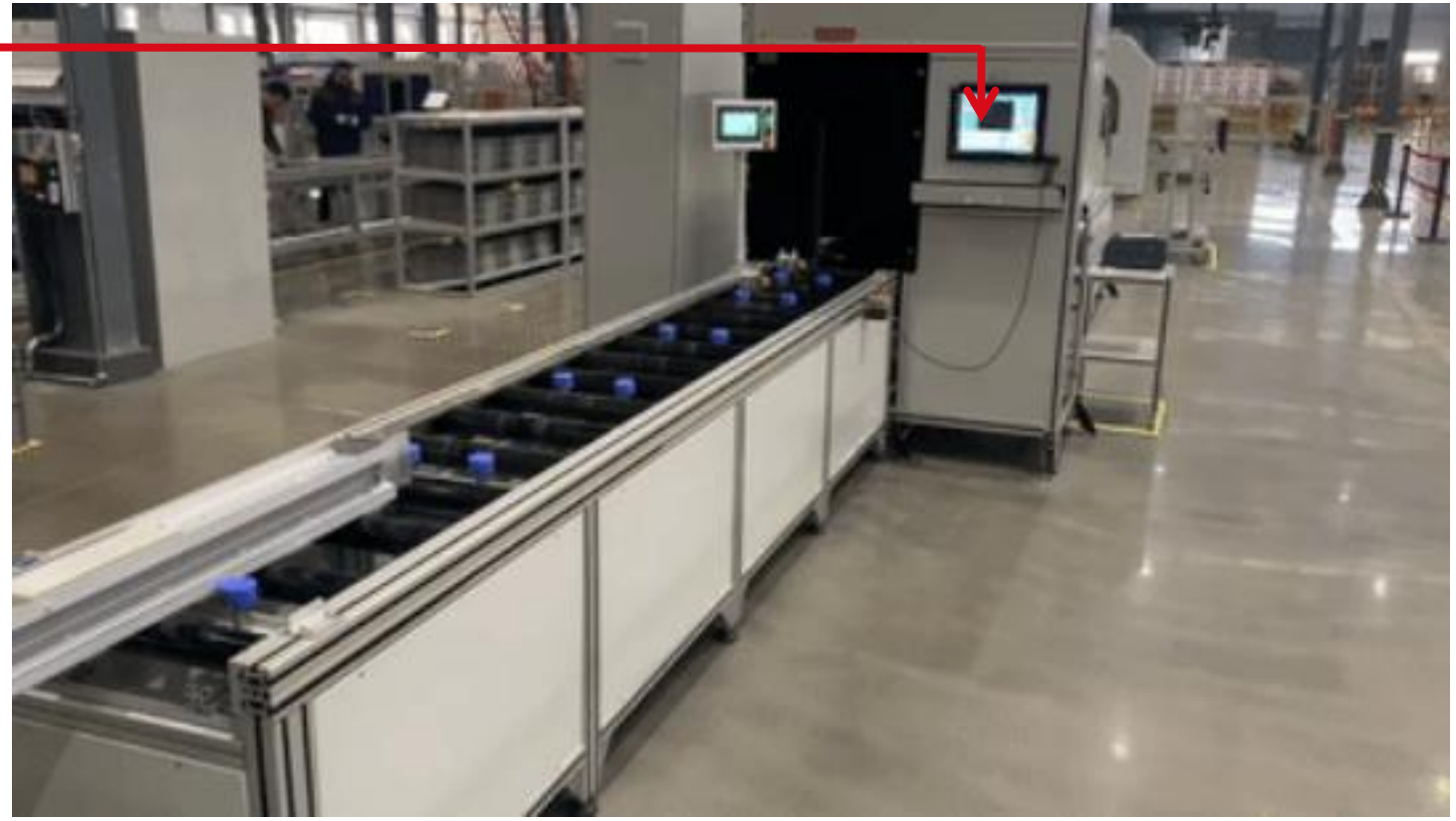
TruLaser 3030 laser cutting machine

ASSEMBLING

Two automatic riveting lines of German Bollholff which can finish riveting 1 busbar in every 200 seconds.

TESTING

intelligent inspection systems



Complete the pressure, insulation resistance and circuit continuity test in 95 seconds

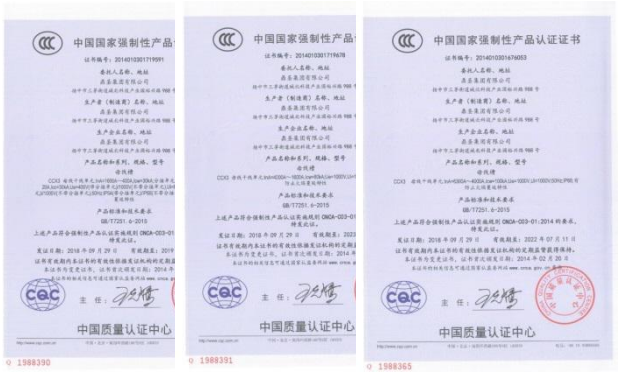
EXPERIMENT

Temperature rise test system. The measurement range is 100A ~ 6300A. Test the temperature rise K value of all parts when the busbar is fully loaded.

CERTIFICATION

KEMA cover all current

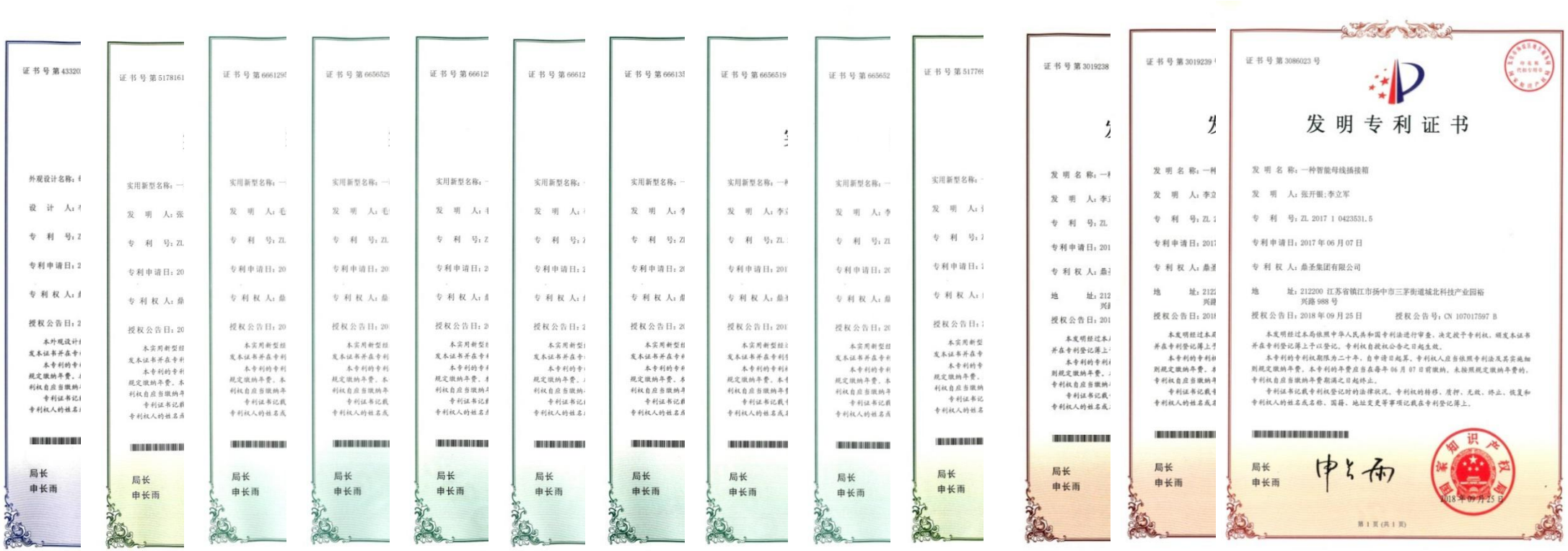
Three system management certification



CCC CERTIFICATION

SGS ROHS &CE

PATENT



发明专利证书

发明名称：一种智能母线插接箱

发明人：张开银;李立军

专利号：ZL 2017 1 0423531.5

专利申请日：2017年06月07日

专利权人：鼎圣集团有限公司

地址：212200 江苏省镇江市扬中市三茅街道城北科技产业园裕兴路988号

授权公告日：2018年09月25日　　授权公告号：CN 107017597 B

局长
申长雨

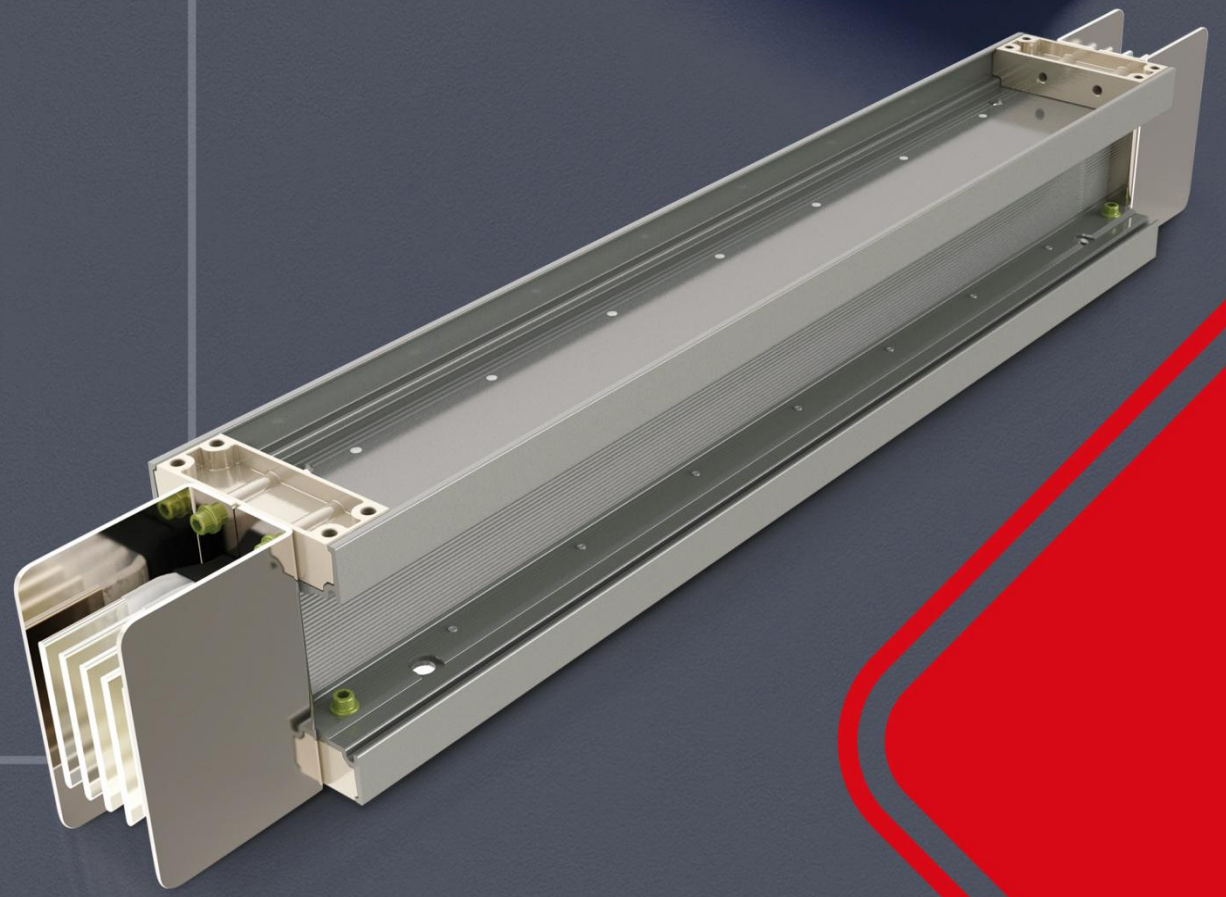
2018年09月25日

第1页(共1页)

3 invention patents, 3 appearance design patents and 17 utility model patents

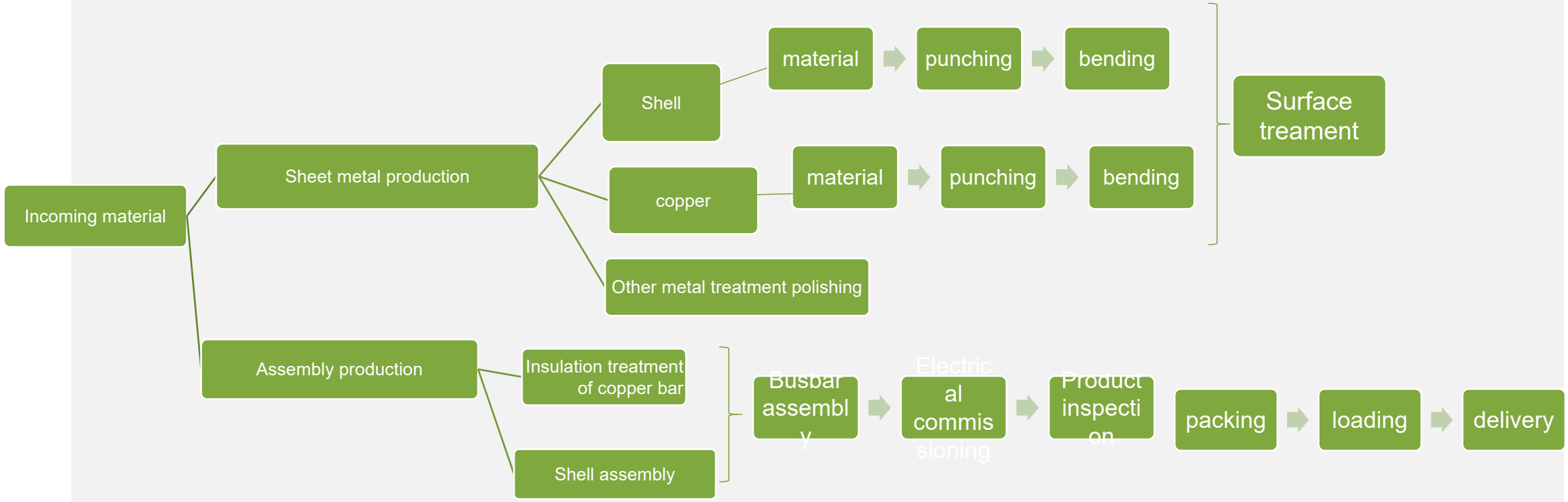
鼎圣集团
DINGSHENG GROUP

03 Quality control



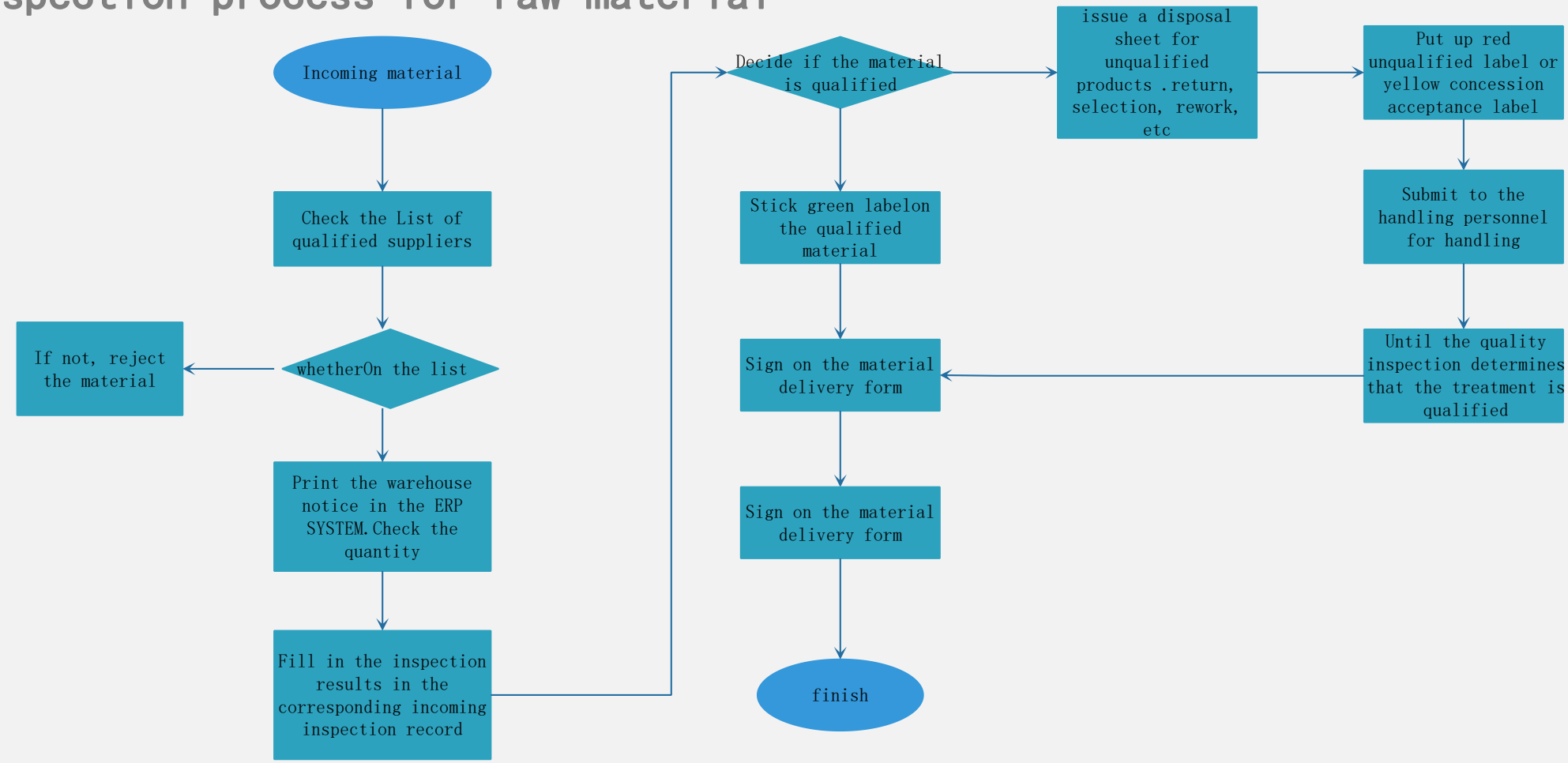
DEVICE
工艺路线

Technological process



QUALITY ASSURANCE

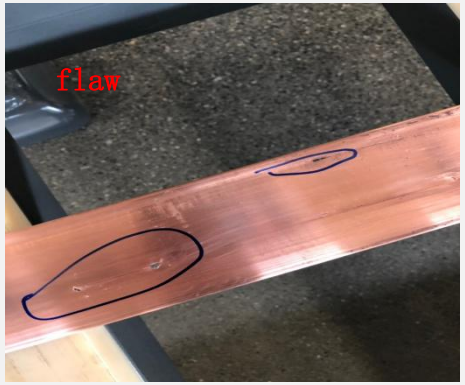
Inspection process for raw material

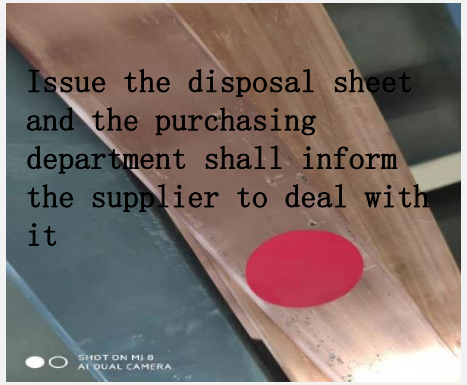


QUALITY ASSURANCE

The inspection for incoming raw material

Issue delivery inspection sheet and put qualified products into storage





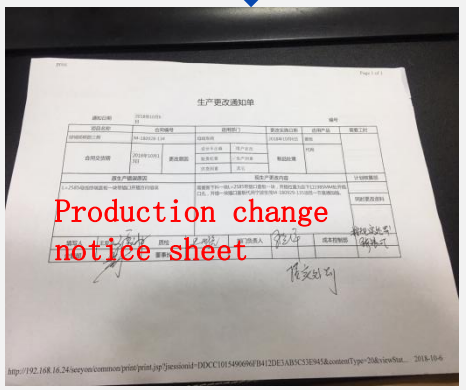
Issue the disposal sheet and the purchasing department shall inform the supplier to deal with it

QUALITY ASSURANCE

Inspection during production

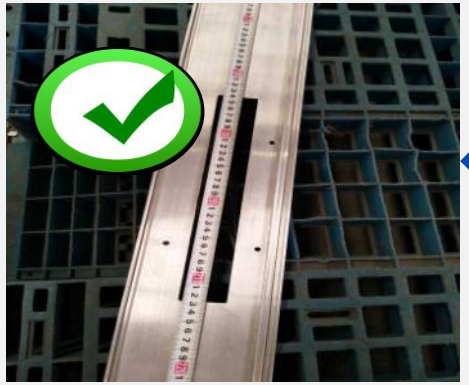
Not match the drawings

unqualified sheet of products



Production change notice sheet

Redraw production

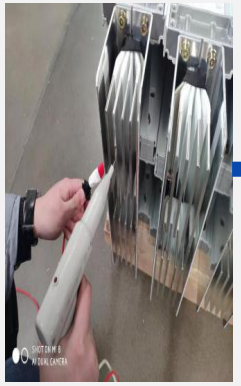


QUALITY ASSURANCE

Final inspection process

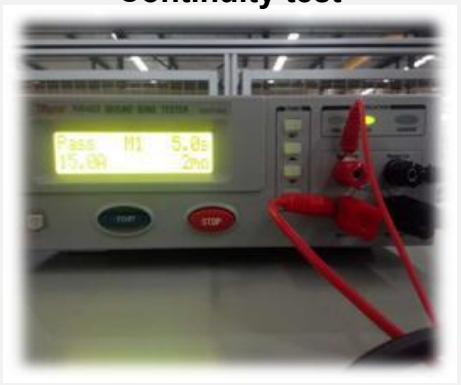
electrical clearance and creepage distance Inspection

ectric strength inspection



Insulation resistance test

protection circuit Continuity test



Shell protection inspection

Mechanical operation inspection

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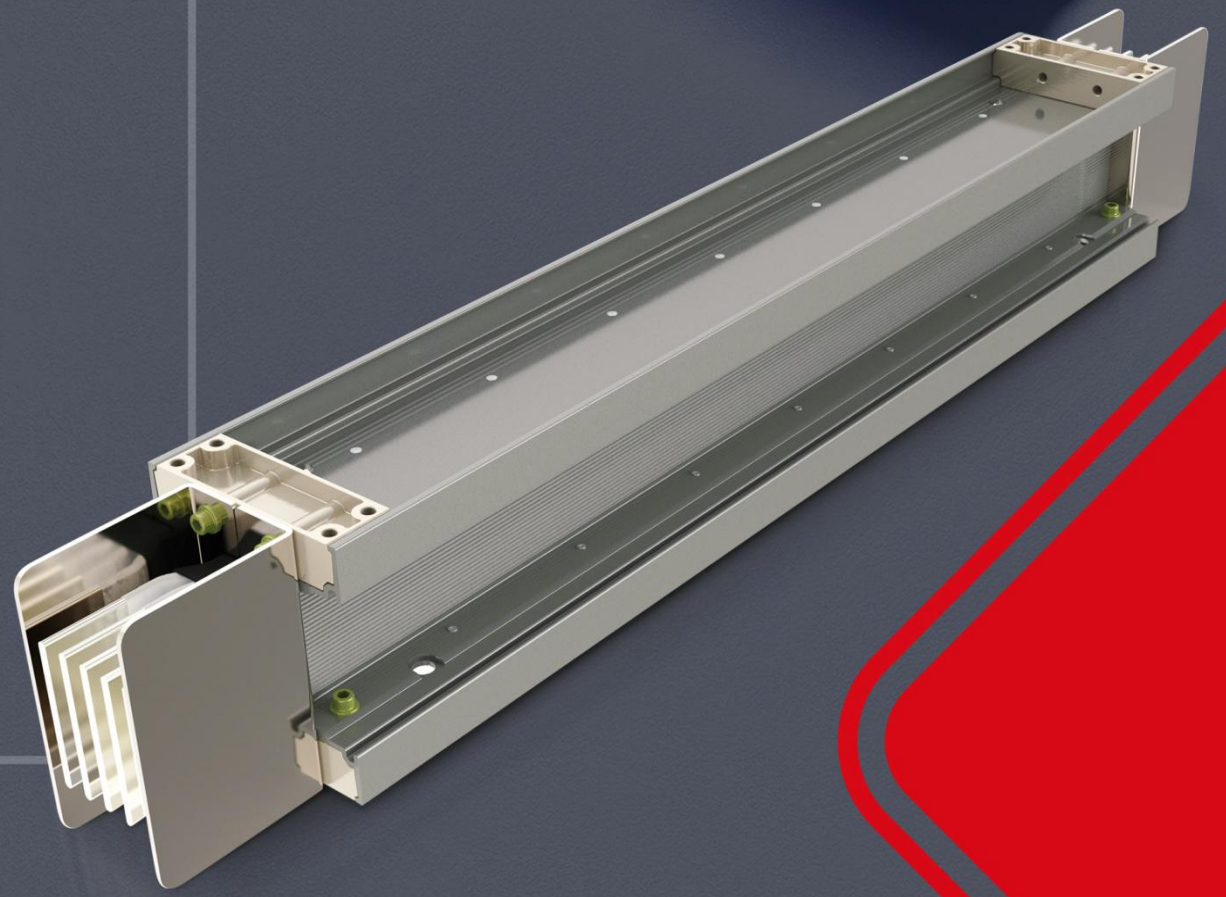
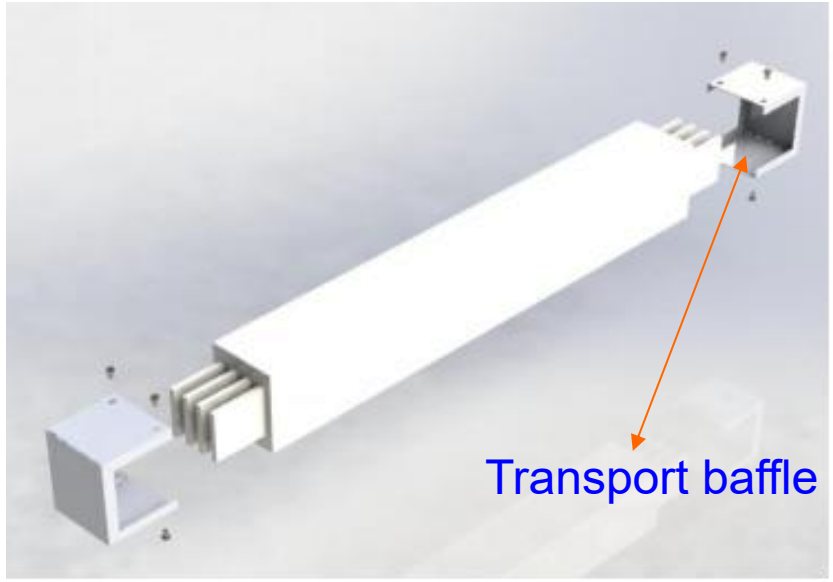
04 PACKING



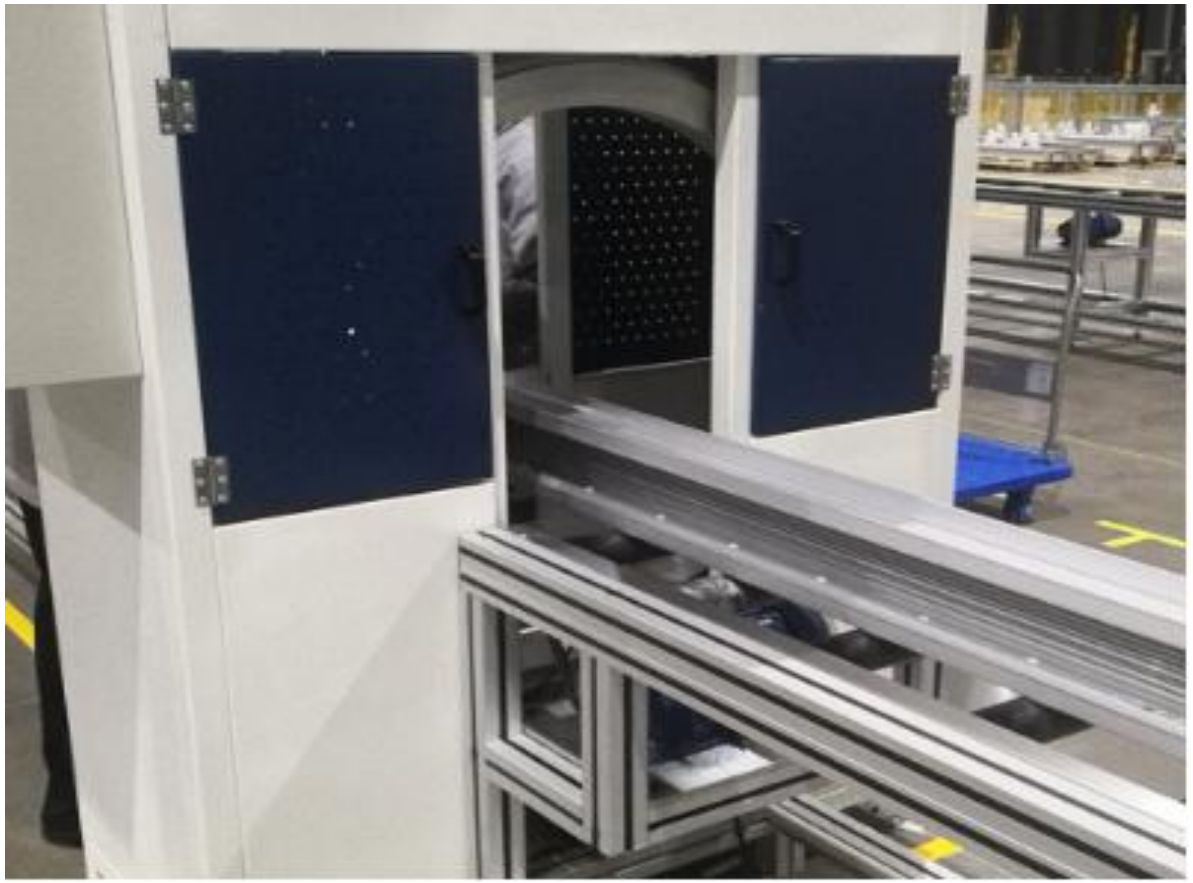
BUSBAR PACKAGING



1.Using transport baffle to prevent the connection between busbar from friction and collision.

2.Both ends of the busbar shall be installed with customized transportation baffles.

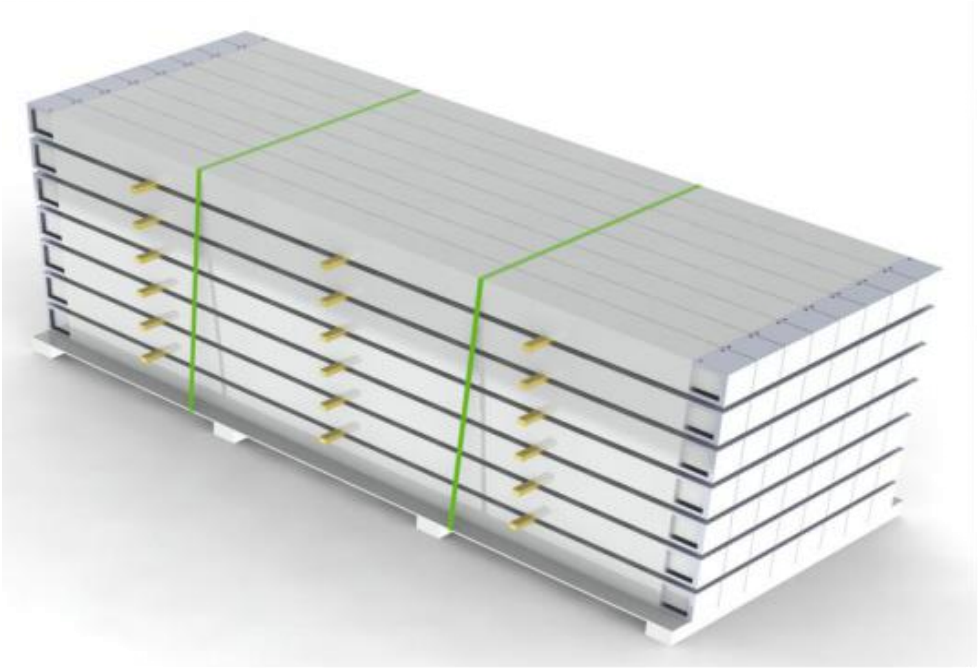
BUSBAR PACKAGING

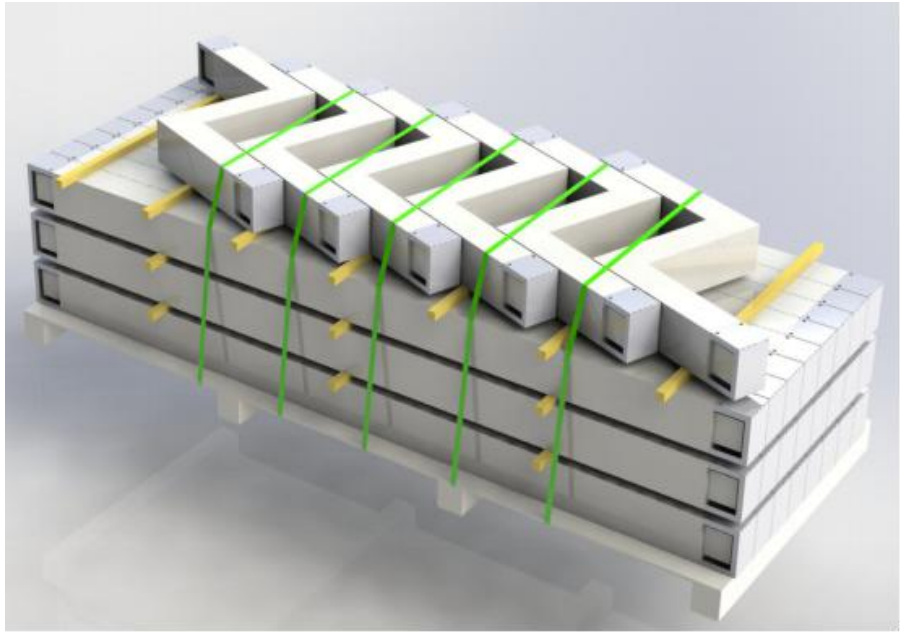


The straight section of the busbar adopts the automatic packing machine which can make the winding film evenly wrap the busbar when packing.

It is easy to operate, fast, efficient, beautiful and safe.
Cancel manual packing to reduce uncontrollability.

BUSBAR PACKAGING



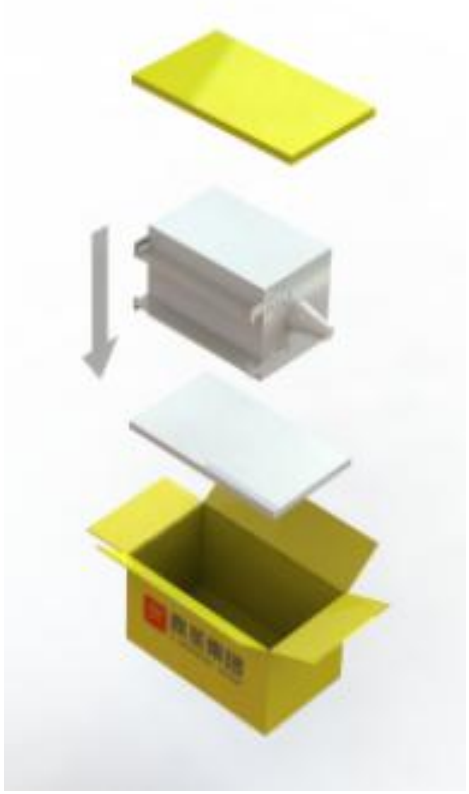


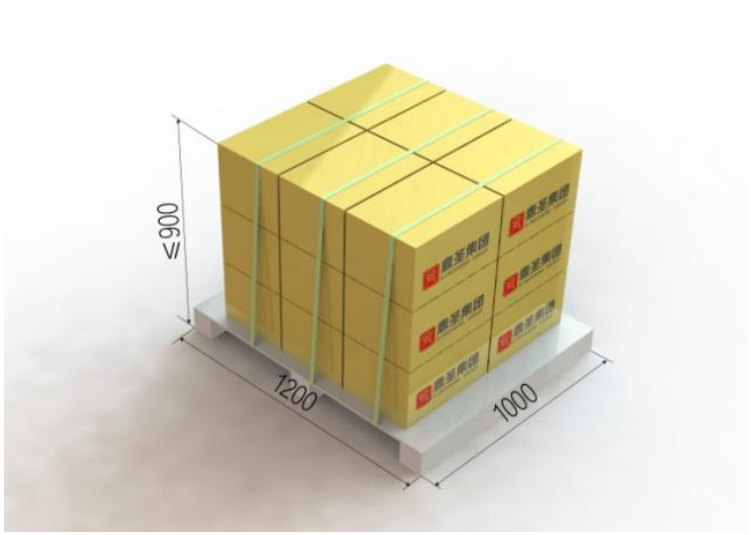
Each layer shall be separated from the lower layer by using small batten and fixed with fiber packing belt to reduce the friction with the busbar. It is safe and convenient for loading and unloading.

BUSBAR PACKAGING

instruction for packing of plug-in box and start end box

Place a layer of EPE pearl cotton protective layer with thickness of 5mm at the bottom of the box (better protect the copper claw part between the plug-in box and the busbar), and then use 5 layers of corrugated board with thickness of 5mm. Place AB corrugated board to protect the surface layer before seal the carton.

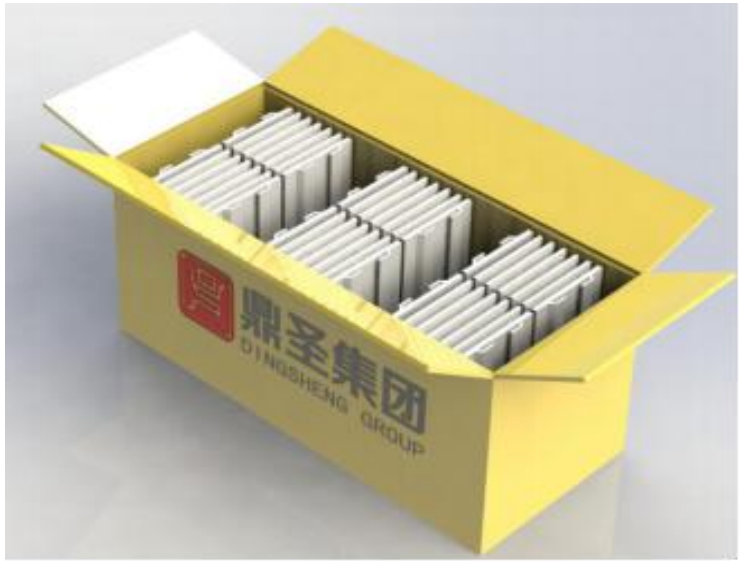




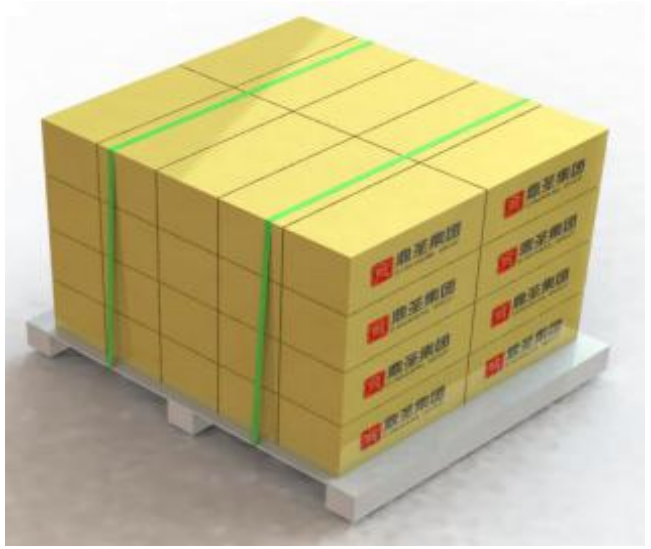
After automatic packing,print facing up, anti-collision, rain proof, etc. marks on the carton.

BUSBAR PACKAGING

Busbar connector packaging operation guide



Using corrugated carton for packaging. The thickness of the carton is required to be 5mm and 5 layers is required for the carton. The EPF foam film is requested to put on the bottom of the carton before loading.the Covered a layer of EPF foam film before sealing the carton.



Covering all the tarpaulins on the connector, pack them as a whole, nail the box board and pack them. Mark Face up, anti-collision, rainproof and other signs on the carton.

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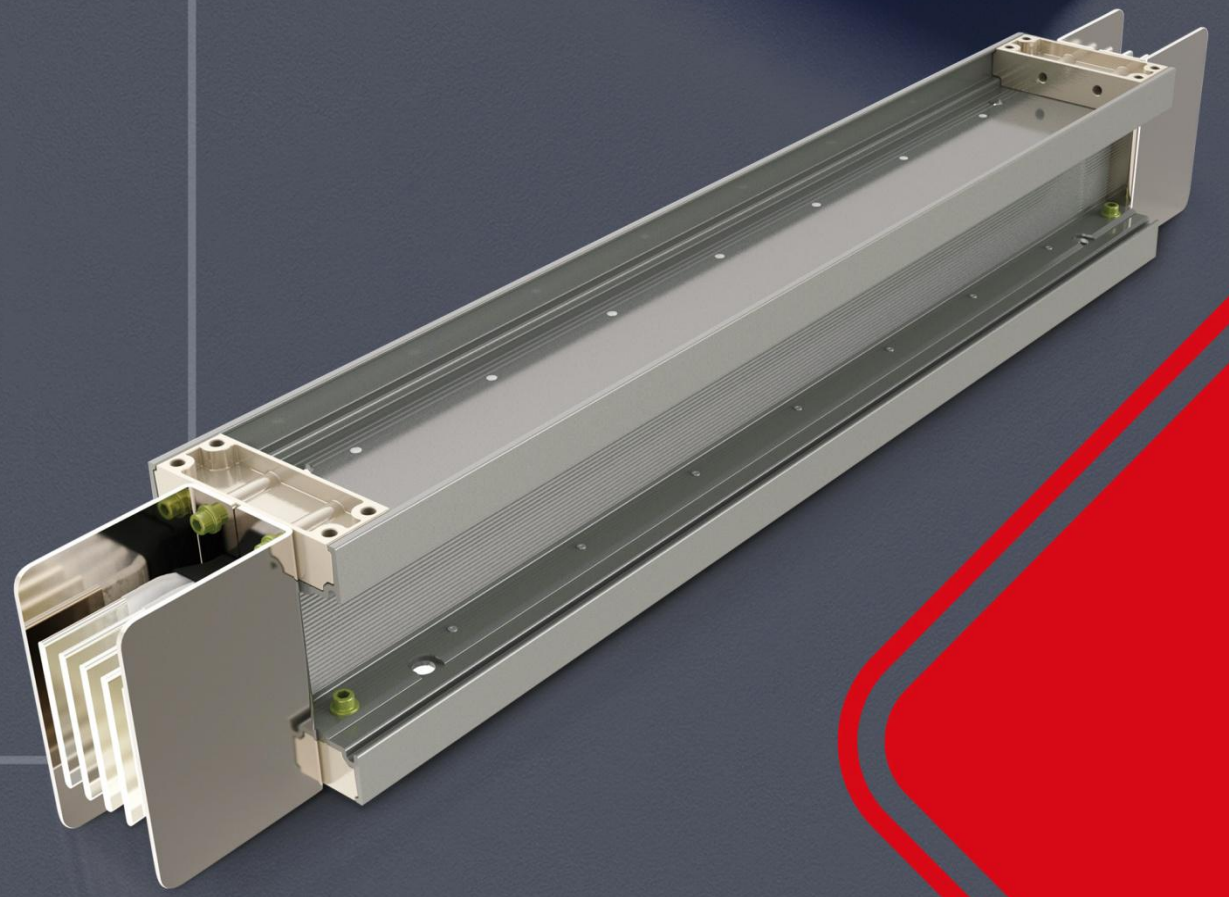
05 BUSWAY PROJECT



PROJECT

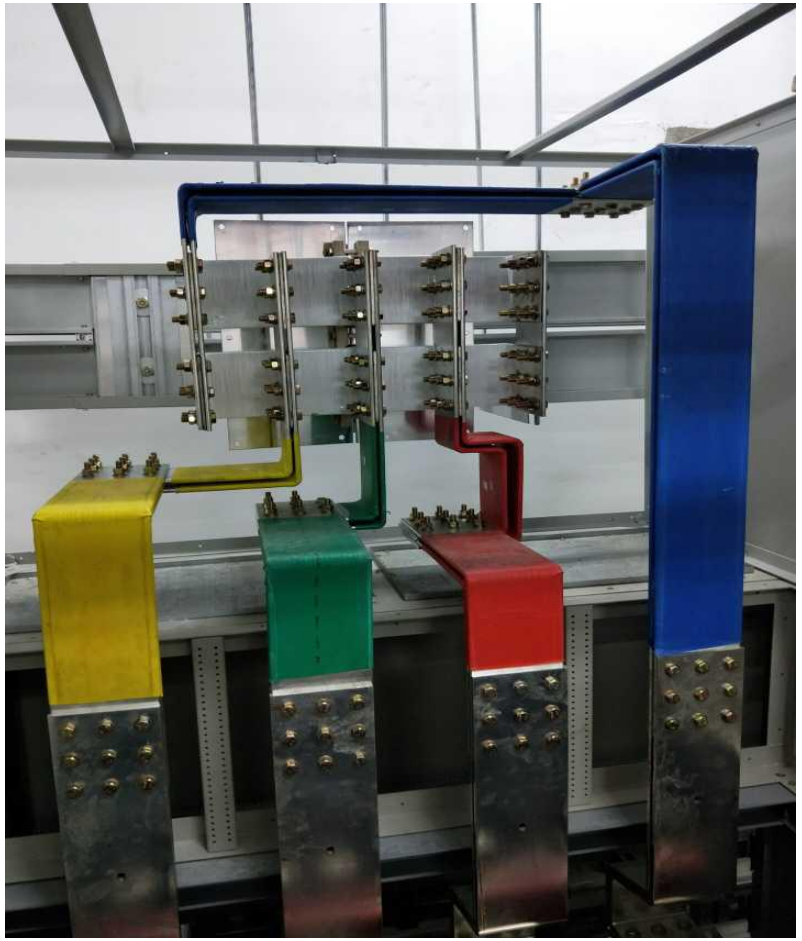
China Mobile project

PROJECT

China Mobile project

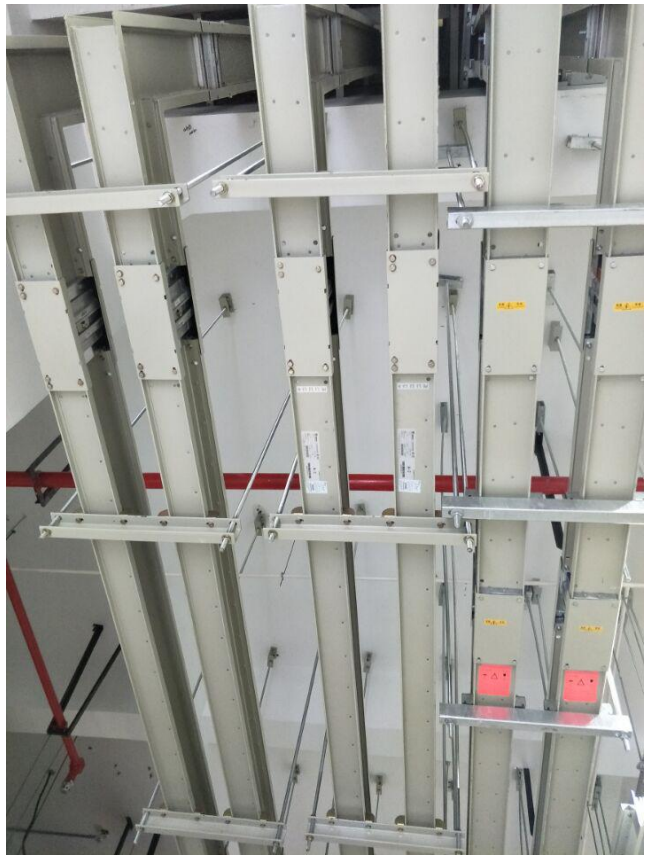
PROJECT

China Mobile project



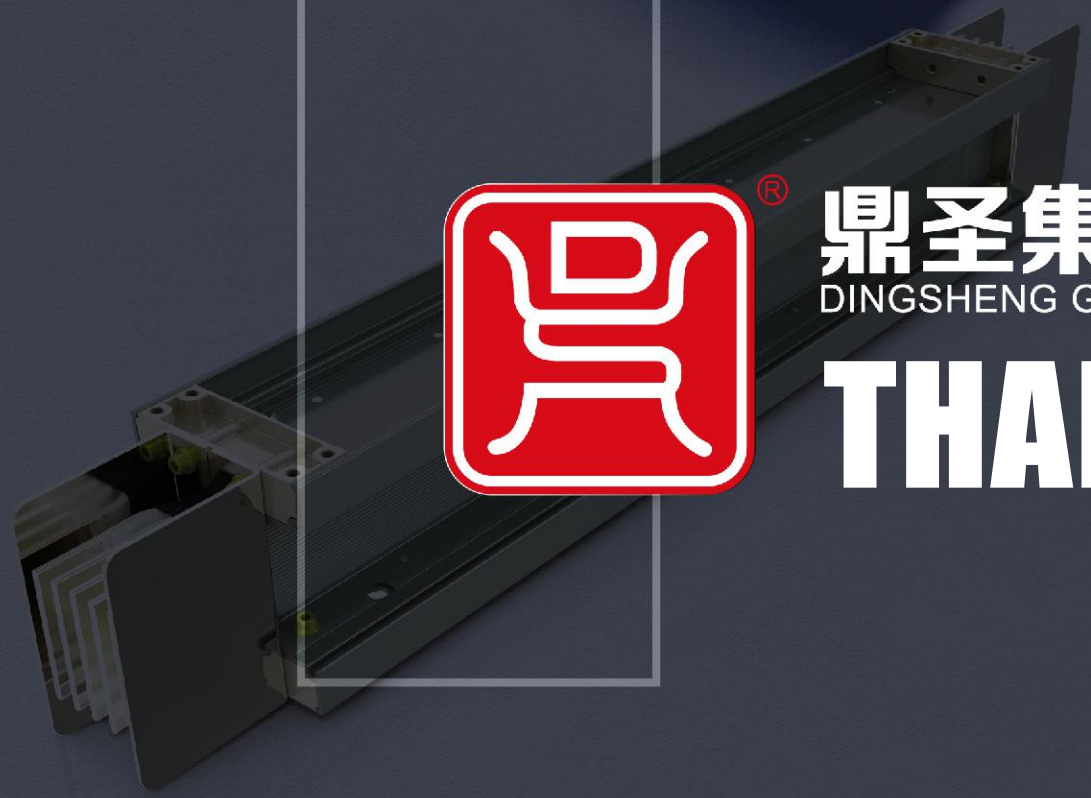
PROJECT

China Mobile project



PROJECT

China Mobile project



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THANK YOU