

In decentralised distribution, Schneider busway hits the high note!



More than 50,000 km of Schneider busbar trunking has been sold around the world.

Schneider busway on its second world tour

More than 50 years of experience, with hundreds of thousands of installations in operation throughout the world.

Full KEMA-KEUR type test certification (IEC60439) for each and every ampere rating of busway.

A total coordination with the Schneider Electric system

Busway is a part of a comprehensive offering of Schneider Electric products designed to operate together. This concept covers all low and medium voltage electrical distribution components. The result is an optimised electrical installation with even higher performance through full electrical, mechanical and communication compatibility.

With the new range, you get a complete, tested distribution solution that complies with standards. It is perfectly suited to traditional applications (factories, warehouses, etc.) and to the distribution of electrical power from the incoming transformer on through to all types of loads in offices, commercial premises, laboratories, etc.

Introduction

Schneider Busway Factories



Canlis Factory, Dijon, France

Dijon Factory was set up in 1972, manufacturing Canalis Busbar trunking system, ISO 9001 and ISO 14001 certified.



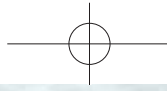
Square D facility in Oxford, Ohio U.S.A. is an ISO 9001 and ISO 14001 registered busbar trunking manufacturing facility.

I-LINE busbar trunking system was first introduced by Square D in 1961 in its production facility in Oxford, Ohio U.S.A. As one of the major brands of the Schneider Electric, Square D has acquired worldwide recognition in a variety of busway applications.



Schneider Busway (Guangzhou) Ltd. is certified having ISO 9001 quality management system, ISO 14001 environment management system and OHSAS 18001 occupational health and safety management system.

Schneider Busway Guangzhou was initially set up by Square D, USA in 1997, and now is a professional busbar trunking manufacturer, product including I-LINE II and Canalis series, mainly supplying to the Asia Pacific and Middle East market.

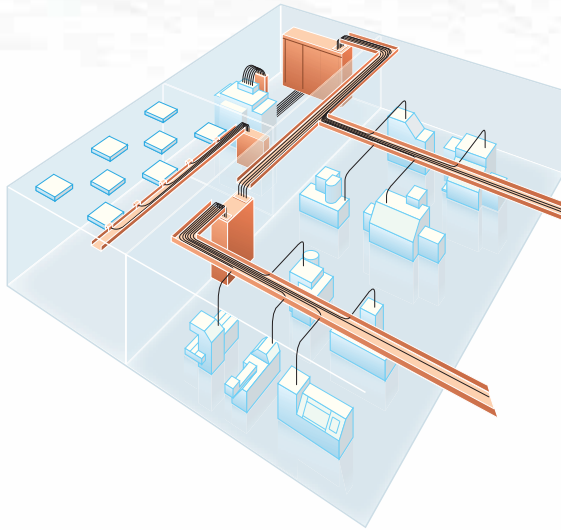


With Schneider busway, you play all the right notes!

Introduction

Distribution systems

Schneider Electric offers different distribution systems to fit your operating needs.

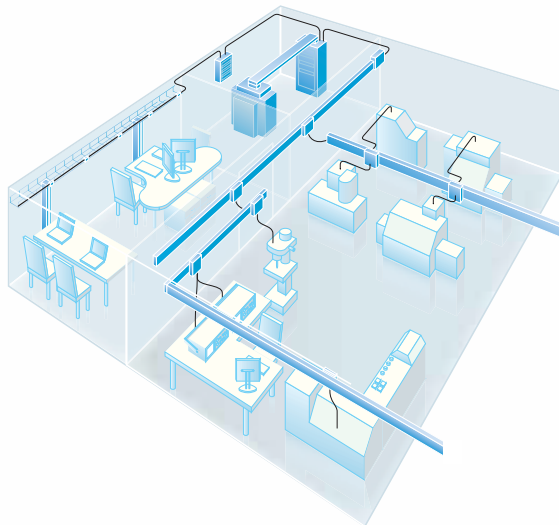


Centralised distribution

- For all continuous processes:
 - cement plants,
 - oil and gas,
 - petrochemicals,
 - steel,
 - paper, etc.
- Centralised distribution offers:
 - continuity of service,
 - combined distribution of power, control and monitoring circuits,
 - supervision, etc.

Our solutions:

- Prisma Plus and Okken switchboards.

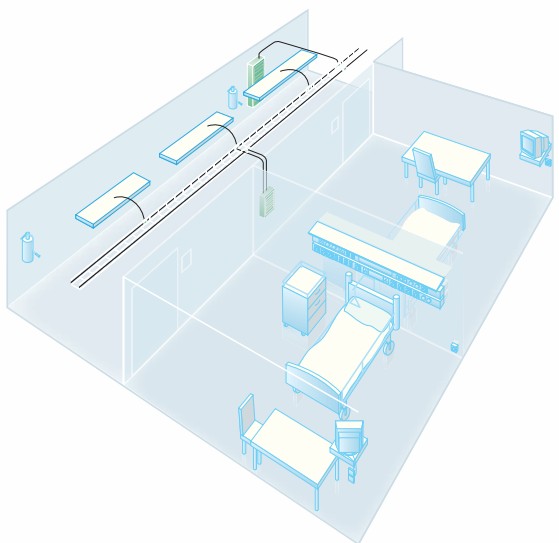


Decentralised distribution

- For manufacturing industries:
 - mechanical,
 - textiles,
 - lumber
 - injection moulding,
 - electronics,
 - pharmaceuticals,
 - livestock, etc.
- Decentralised distribution lets you:
 - design installations without layout details,
 - upgrade without shutting down production,
 - get systems up and running sooner thanks to faster installation,
 - generate savings depending on the number of loads.

Our solutions:

- Prisma Plus switchboards,
- Schneider busbar trunking.



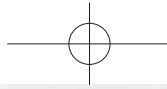
Combined distribution

Where the advantages of both centralised and decentralised distribution are required.

- Commercial and service buildings:
 - offices,
 - stores,
 - hospitals,
 - exhibition halls, etc.
- Infrastructures:
 - airports,
 - telecommunications,
 - internet data centres,
 - tunnels, etc.
- Industrial facilities:
 - pharmaceuticals,
 - food processing, etc.

Our solutions:

- Prisma Plus and Okken switchboards,
- Schneider busbar trunking.



With Schneider busway, you play all the right notes!

The Schneider busway decentralised distribution concept



Electrical power available at all points, throughout the installation.

Exclusive features of the Schneider Electric system

Total coordination of the Schneider Electric system provides maximum safety of life and property, continuity of service, upgradeability and ease of installation.

Product characteristics are checked by calculations and tests carried out in our laboratories and certified in independent international recognized laboratories.

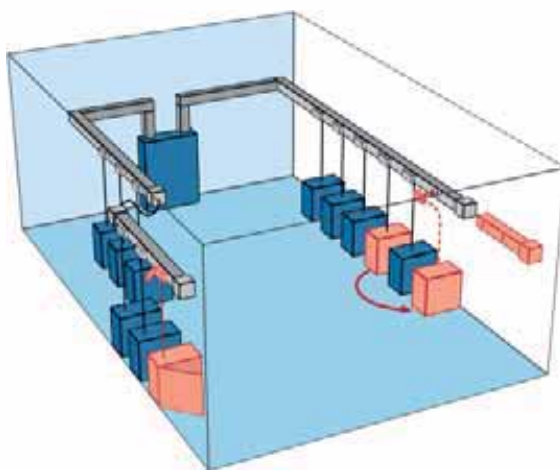
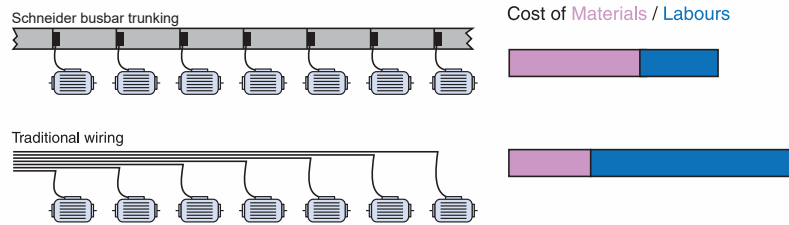
Introduction

A competitive installation.

Simplicity, upgradeability, safety and continuity of service and operation.

Savings start with installation

With plug-in points, Schneider busbar trunking reduces installation costs. Given the low cost of adding new circuits, savings increase as the number of loads increases, a natural consequence of the growth of your business.



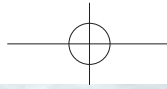
Upgradeable during operation

In decentralised distribution, evolving operating requirements and costs are integrated right from the start.

- The addition, relocation or replacement of load equipment can be carried out quickly, without de-energising the supply trunking or shutting down operation,
- The cost of making such changes is greatly reduced:
 - loads are located close to supply points,
 - plug-in points are always available,
 - plug-in units can be reused or new ones added quickly for load relocation or replacement needs.

Reusable in the event of major changes

When making major modifications to your installation, the existing trunking can be easily dismantled and reused.



Schneider busway, in total harmony with the environment!

Introduction

Safety of life and property



Example:

Consequences of a fire in a 100 m² office with electrical distribution by cables.
 200 kg of cables (i.e. 20 kg of PVC) produces:

- 4400 m³ of smoke,
- 7.5 m³ of hydrochloric acid,
- 3.7 kg of corroded steel.

With Schneider Busway, no toxic emission in case of fire

The busbar trunking has a low combustible load. Its construction uses very little consumable material and is **halogen free**.
 In the event of a fire, the busbar trunking does not emit any gas or toxic smoke.

The busbar trunking helps prevent the propagation of a fire through partition walls and floors.

Halogen-sensitive applications

- Public buildings (infrastructures, hospitals, schools, etc.),
- Buildings with evacuation difficulties (high-rises, ships, etc.) and service-activity buildings,
- Sensitive processes (production of electronic components, etc.).

Schneider Busway contains no PVCs

When PVCs burn, they produce large amounts of smoke that can be a serious safety hazard.

- Reduced visibility:
 - risk of panic,
 - complicates rescue work,
- Smoke toxicity:
 - hydrogen chloride gas (highly toxic),
 - carbon monoxide (danger of asphyxiation).

Health

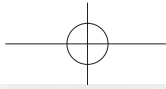


Schneider Busway reduces the risk of exposure to electromagnetic fields

According to the WHO (World Health Organisation), exposure to electromagnetic fields can be a health hazard starting at levels as low as 0.2 micro-Teslas and could represent a long-term risk of cancer. Some countries have created standards that stipulate limits

All electrical conductors generate magnetic fields proportional to the distance between them. The design of Schneider busbar trunking with tightly spaced conductors in a metal enclosure helps to considerably reduce radiated electromagnetic fields.

The electromagnetic field characteristics of Schneider busbar trunking are well-defined and measurements show that they are far below potentially dangerous levels.



Schneider busway, in total harmony with the environment!

Environment



Example:
1 kg of PVC generates 1 kg of waste.

Schneider Busway is fully recyclable

- Schneider Busway busbar trunking can be reused. Schneider Busway busbar trunking is designed for a long service life and can easily be dismantled, cleaned and reused.
- All packaging materials can be recycled (cardboard or recyclable polyethylene film).
- All Schneider Busway products are designed for safe end-of-life recycling. PVC, on the other hand, requires neutralisation of the hydrochloric acid produced using lime and generates dioxins that are extremely toxic.

Schneider Busway helps conserve natural resources

The depletion of raw materials (copper, plastics, etc.) is one of our ongoing concerns. For this reason, we have optimised the used of all materials used to make our busbar trunking:

- Reduction of dangerous or polluting materials.
- Reduction in the weight of insulating materials,
- Reduction in the use of plastics for improved fire performance: less energy released during combustion, thereby limiting propagation and facilitating extinction (lower calorific value).

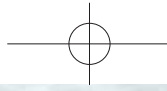
Conservation of natural resources

Schneider Busway reduces your line losses by 20 % Schneider Busway divides your consumption of plastic by a factor of four

The cost of an electrical installation includes the initial investment for the equipment and its installation, the cost of maintenance and the cost of energy losses during operation. The concept of decentralised distribution is a way to merge all the circuits in one and thus to reduce to the maximum the low cross-section lengths and the weight of insulating materials.

Example:
34m of 250A Schneider busbar trunking equipped with 7 sets of 25A load.

Type of distribution	Insulation	Consumption
Decentralised k_s : diversity coefficient = 0.6	 23 KG	 1600 Joules
Centralised k_s : diversity coefficient = 0.6	 90 Kg	 2000 Joules



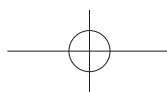
Schneider busway, fortissimo throughout the range!

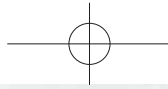
Introduction



Application

1. Transformer/ Switchboard connection
2. Horizontal distribution, from the substation to the loads in workshop
3. Vertical distribution, from the substation to the loads of each high rise floor
4. Lighting application, in Park place, supermarket, exhibition center, metro ect.

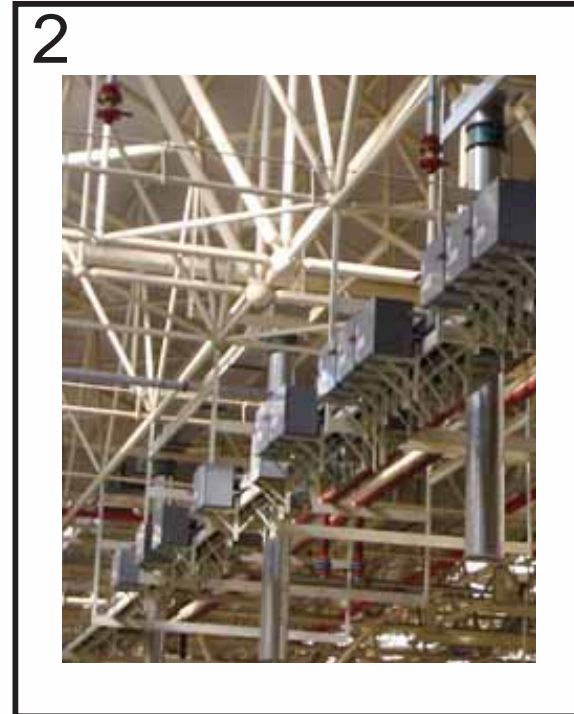




Schneider busway, fortissimo throughout the range!



Transformer/ Switchboard connection



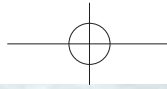
Horizontal distribution



Vertical distribution



Lighting application



Schneider busway, a display of advantages!

Introduction

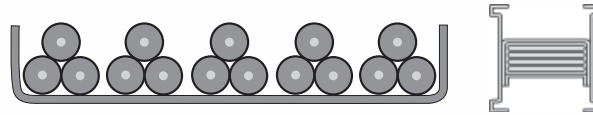
A compact solution

■ The compact size of Schneider busway means it takes up very little space in the building:

- used as a rising main, it takes up only a minimum of space,
- used for horizontal distribution, it fits easily into the building's structure (false floors, false ceilings, service shafts, etc).

■ Changes in direction have been designed to optimise the space taken up, contrary to an equivalent installation using cables which requires large bending radii.

■ Tap-off units, complete with protective devices, are fitted along the entire length of the busbar trunking thus reducing the floor area taken up by the electrical distribution switchboards.



A simple and economical system

■ The design study is easy to perform as it does not require a detailed layout of each load. Equipment choice is pre-determined and optimised.

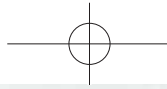
■ Installing the busbar trunking requires 2 or 3 people only, for a time equivalent to that for installing cableways. The time normally needed for laying cables is therefore saved.

■ Connection to the MV/LV substation is made using a quick fitting joint block. The plug-in units can be prepared in the workshop thus reducing on-site time. Their connection to the busbar trunking is done in a single plugging-in operation. For those ratings more than 500A, it is done by bolt-on operation.

■ Installing busbar trunking lengths can be done as and when building work progresses, thus optimising on-site work and allowing possible unexpected events to be anticipated in advance.

■ It is also important to note that busbar trunking is a factory tested solution, meaning the time needed for inspecting connections is reduced (visual inspection of tightening torque).





Schneider busway, a display of advantages!

Complete safety



■ Busbar trunking temperature rise and short-circuit withstand are known and independent of the installation. Coordination of the Schneider Electric system results in complete control of the electrical network.

■ Installation standards IEC 60 364 chapter 5.523.6 stipulate that **above 4 parallel cables, it is preferable to use busbar trunking**. Paralleling many cables leads to uneven distribution of currents and the risk of abnormal temperature rise.

■ The busbar trunking and plug-in units are designed to guarantee the safety of personnel and equipment:

- Fully silver-plated cooper contact solution.
- bolted connections with tightening torque guaranteed by torque nuts.
- foolproof system to avoid the risk of assembly errors.

Its metal enclosure and high protection degree protect the busbar trunking from all external aggressions (corrosion, rodents, etc).

Seismic Compliance



The complete standard offer of I-Line and Canalis busway is certified for Zone 4 seismic conditions as witness and approved by mechanical and dynamic tests, at EERTC (Earthquake Engineering Research & Test Centre) in China, as well as electrical verification test performed by CEST under IECCEB scheme.

For projects under seismic conditions, consult your local Schneider office to provide you with more information in particular on hangers and supports.

Operating continuity

When working on the electrical installation, the busbar trunking provides immediate readability of the electrical circuit thus allowing the appropriate zone to be quickly identified.

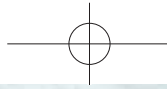
Plug-in units (<40A) can be plugged-in and out without the need for a shutdown; service continuity is thus irreplaceable.

The quality of the electrical contacts guarantees **maintenance free** operating continuity.

A large range of plug-in units



All I-LINE plug-in units are compatible with I-LINE II busbar trunking system, regardless whether they bear MCCB or fusible switch.



Schneider busway, everyone to their music!

Introduction

Office and Hotel buildings



Key points

- Fire barrier.
- Halogen free.
- Small size.
- Operating continuity.



Key projects

- Pentronas Towers (Malaysia)
- Hong Kong International Financial Center (Hong Kong)
- Shanghai Jin Mao Building (China)
- Emirates Palace (UAE)
- Grand Indonesia Building (Indonesia)
- Dubai International Finance Center (UAE)
- Al Shira'a Tower (Kuwait)
- Beverly Hill Tower (Qatar)
- Al Safwa Tower (Saudi Arabia)
- Robinson Cybergate Center Tower (Philippines)
- Mita Koyamacho High-rise Apartment (Japan)
- International Commerce Centre (Hongkong)
- Congress Conference Building (Egypt)

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Shopping centres and Exhibition centres



Key points

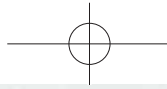
- Halogen free.
- Distribution and metering.
- Able to be evolved.
- Sprinklers.



Key projects

- Carrefour supermarket(World wide)
- Guangzhou International Exhibition Centre(China)
- Convention & Exhibition Centre(Hong Kong)
- Asia World Expo(Hong Kong)
- Central World Mall(Thailand)
- Siam paragon (Thailand)
- Abu Dhabi National Exhibition Center(UAE)
- Mall of Arabia (Saudi Arabia)
- Melbourne Convention Centre (Australia)
- Mall of the Emirates (UAE)
- National Convention Centre (Vietnam)
- Queensgate shopping Mall (New Zealand)
- National Olympic Stadium (Guangzhou, China)
- Panda Distribution Facility (Saudi Arabia)
- Las Vegas Sands (Macau)

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Schneider busway, everyone to their music!

Industry buildings



Key points

- Operating continuity.
- Able to be evolved.
- Low voltage drops.
- Network readability.

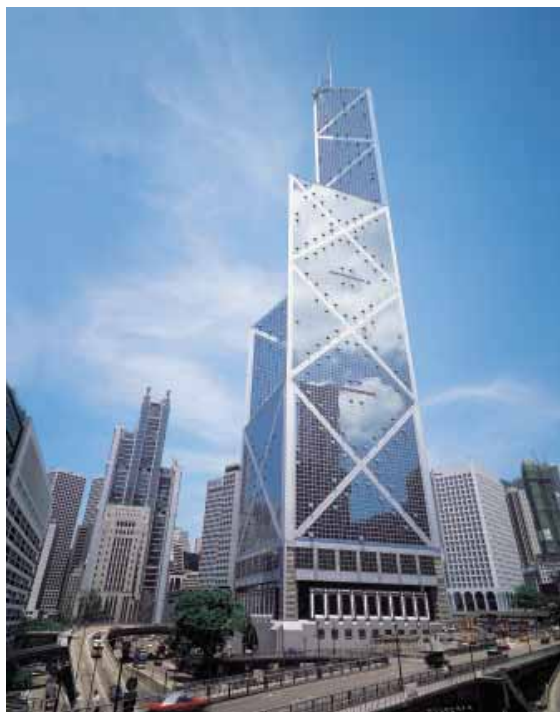


Key projects

- General Motors (World wide)
- Hitachi Semiconductor manufacturing (China)
- Chartered Semiconductor manufacturing (Singapore)
- Maruti Suzuki (India)
- Jabil Plant (India)
- Nikon Factory (Thailand)
- Intel Plant (Malaysia)
- Infineon Plant (Malaysia)
- Bosch (Korea)
- Seagate Factory (Singapore)
- ST Microelectronics (Singapore)
- Ansell Lanka (PVT) Limited (Sri Lanka)
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Introduction

Data centers and Banks



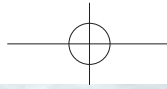
Key points

- Operating continuity.
- High tap-off density.
- Able to be evolved.
- Network compactness and readability.



Key projects

- Bank of China Tower (Hongkong)
- China Construction Bank (China)
- Citibank Hongkong (Hong Kong)
- Maybank (Malaysia)
- Commercial Bank (Qatar)
- Saudi Telecom Company (Saudi Arabia)
- Bharti data Centre (India)
- HSBC Bank HQ (Bahrain)
-



Schneider Busway, everyone to their music!

Introduction

Energy



Key points

- Operating continuity.
- Able to be evolved.
- Low voltage drops.
- Network readability.

Key projects

- Three Gorges Power Station(China)
- Wind Farm(China)
- ExxonMobil Chemical plant(Malaysia)
- Hysco Steel(India)
- Shell Chemical plant (Malaysia)
- Petro Rabigh(Saudi Arabia)
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Airport

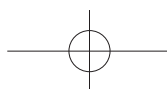


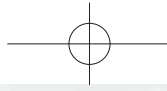
Key points

- Halogen free.
- Distribution and metering.
- Able to be evolved.
- Sprinklers.

Key projects

- Beijing Capital New International Airport(China)
- Suvarnabhumi Airport (Thailand)
- Tan Son Nhat Airport(Vietnam)
- India Ahmedabad Airport(Inida)
- Cairo Airport(Egypt)
- Dubai Airport(UAE)
- Jebel Ail Airport(UAE)
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Schneider Busway, everyone to their music!

Hospital



Key points

- Fire barrier.
- Halogen free.
- Small size.
- Operating continuity.

Key projects

The first affiliated Hospital, Guangzhou(China)
 Angkor International Hospital(Thailand)
 Al-Maidan Hospital(Kuwait)
 Beijing 301 Hospital(China)
 Mina Hospital (Saudi Arabia)
 Dammam Hospital (Saudi Arabia)

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Introduction

Metro



Key points

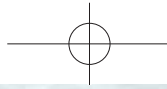
- Halogen free.
- Distribution and metering.
- Able to be evolved.
- Sprinklers.

Key projects

Guangzhou Metro(China)
 Singapore Metro
 Madrid Metro (Spain)
 London Metro (UK)

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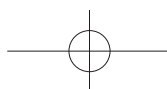
Schneider busway, hits the right notes!

Introduction

Quality - Accreditations



- IEC Certification – ASTA / ASEFA / KEMA / IECCE / CNAL
- UL Certification
- CCC approved
- ISO 9001, ISO14001
- OHS18001
- Six Sigma Program



With the Schneider busway tools and services, let us compose your project!

Work-out your solution together



Our teams are available to provide customers with technical assistance throughout the installation of their projects.

- Design of electrical distribution architectures:
 - design of decentralised transport and distribution systems,
 - technical and financial optimisation of busbar trunking design projects,
 - transformer/switchboard link,
 - installation coordination and discrimination.
- Full installation drawings:
 - 3D drawings with corresponding parts lists,
 - 2D drawing with dimensions,
 - detailed connection drawings.
- Site supervision and commissioning assistance.
- Training for designers and contractors.

Introduction

