Distribution Box Production Line



Overview

This production line is equipment for production of distribution boxes. The strip coil to be processed is manually placed on the uncoiler, and then corrected and tensioned.

Key Takeaways

A distribution box production line is a highly automated system that transforms raw metal sheets into finished electrical enclosures with precision, efficiency, and customization capabilities.

Overview of Production Line

Modern distribution box production lines are designed to handle galvanized steel, stainless steel, or cold-rolled coils, converting them into electrical enclosures through a series of automated and semi-automated processes. These lines typically include: Uncoiler and Straightening: Raw metal coils are placed on an uncoiler, straightened, and tensioned to ensure smooth feeding into the forming machines. Servo Feeding and Hydraulic Devices: The metal is fed precisely into punching and forming stations using servo-controlled feeders and hydraulic systems.

Roll Forming and Bending: Roll forming machines shape the metal into box profiles, followed by bending devices that create the sides, back, and top of the enclosure. Punching and Drilling: CNC or hydraulic punching machines create holes for circuit breakers, switches, cable entries, and mounting hardware. Surface Treatment: Boxes may undergo powder coating, anti-rust treatment, or painting to enhance durability and corrosion resistance.

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Key Features and Technical Specifications

Production Speed: Typically 2–3 enclosures per minute, depending on box size and complexity. Adjustable Dimensions: Height 300–1200mm, depth 160–400mm, customizable to client specifications. Automation: PLC control systems allow for continuous operation, precise control, and reduced manual labor.

Material Standards: Supports domestic and international steel standards with tensile strength up to 780 MPa. Continuous Operation: Designed for 12-hour continuous production with stable performance.

Manufacturing Workflow

Design & Engineering: CAD and 3D modeling ensure accurate dimensions, IP/NEMA ratings, and component layout for industrial, commercial, or renewable energy applications. Material Preparation: Selection of steel or stainless steel sheets, quality checks for thickness, hardness, and corrosion resistance. Cutting & Forming: CNC laser cutting, punching, stamping, and bending to achieve precise shapes and openings.

Assembly: Installation of busbars, terminals, neutral and ground bars, and other internal components. Inspection & Quality Control: Each enclosure undergoes rigorous testing for durability, electrical safety, and compliance with international standards such as IEC, ANSI, cUL, CSA, and ISO 9001. Packaging: Finished boxes are manually or automatically packed for shipment.

Advantages of Modern Production Lines

High Efficiency: Automated lines reduce production time and labor costs while maintaining consistent quality. Customization: Manufacturers can produce tailored solutions for specific applications, including solar power, industrial automation, and commercial buildings. Integrated Supply Chain: Some manufacturers handle in-house production of components like sockets, wires, and casings, improving cost efficiency and reducing delays.

Durability and Safety: Use of high-quality materials and precise assembly ensures long service life and compliance with safety standards. In summary, a distribution box production line combines advanced machinery, automation, and quality control to efficiently produce high-performance electrical enclosures, meeting both standard and customized requirements for global markets.

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Article Content

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This production line is equipment for production of distribution boxes. The strip coil to be processed is manually placed on the uncoiler, and then corrected and tensioned.

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Electrical Distribution Board Enclosure Roll Forming

Electrical distribution board roll forming machine production line process Uncoiler→ Straightening→Servo feeder→Hydraulic device→ Guide device → Roll forming

Sheet metal production line for electrical enclosures | WEMO

We make punching and bending lines which can produce casings and doors for electrical enclosures and distribution cabinets.

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Distribution Box Production and Processing Equipment: Complete

Distribution box production equipment is the core foundation of modern electrical enclosure manufacturing, widely used in the production of low-voltage distribution boxes, power

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What is electrical distribution box production line

This steel box production line is equipment for production of distribution boxes. The strip coil to be processed is manually placed on the

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Electrical box Production Line process Uncoiler→ Straightening→Servo feeder→Hydraulic device→ Guide device → Roll forming machine →Bending device Distribution box production line technology

Understanding Distribution Boxes: A Comprehensive

A distribution box, also known as a power distribution box or electrical distribution box, is used to distribute electrical power safely to multiple

Automatic Metal Junction Box Making Machine

8.Adopted closed electric loop circuit, have compatible with any automatic equipments. Keywords: Junction box production line,Junction box making

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