Fabrication of U-shaped steel cable trays



Overview

WESCOSAWescosa designs and manufactures cable tray systems, including perforated tray, cable ladder, channel tray and strut (metal framing), directly from.

Key Takeaways

U-shaped steel cable trays are fabricated through a sequence of cutting, punching, roll forming, bending, welding, and finishing processes to ensure structural integrity and precise dimensions.

Material Preparation

The process begins with selecting cold-rolled steel, galvanized steel, or stainless steel coils. The metal is uncoiled and straightened using a precision feeder and straightener to ensure smooth, flat sheets suitable for forming.

Cutting and Punching

Sheets are cut to the required length using shearing machines or integrated cutting units.

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C punching systems create holes or slots along the tray for cable access, ventilation, and heat dissipation. The hole layout, diameter, and spacing are carefully designed to balance mechanical strength and functionality.



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Roll Forming and Bending

The core shaping process uses a roll forming machine with multiple precision rollers. The flat metal strip is progressively bent into a U-shaped cross-section, including reinforcement ribs if required. Servo-driven systems and PLC controls ensure high dimensional accuracy (±0.

2mm) and consistent mechanical strength. For smaller or custom batches, manual or semi-automatic bending may be used.

Welding and Assembly

If the tray requires joints or reinforcements, spot welding or seam welding is applied to strengthen connections. This step ensures the tray can support cable loads and maintain structural stability.

Finishing

Edges are smoothed to remove burrs and sharp corners for safety. Surface treatments such as galvanization, powder coating, or painting may be applied to enhance corrosion resistance and durability.

Quality Control

Finished trays undergo inspection for dimensional accuracy, hole alignment, surface finish, and load-bearing capacity. Automated production lines often include sensors and PLC monitoring to detect deviations and maintain consistent quality.

Summary

The fabrication of U-shaped steel cable trays integrates precision cutting, punching, roll forming, bending, welding, and finishing. Modern production lines allow for customized dimensions, high efficiency, and minimal material waste, producing durable trays suitable for electrical installations in industrial, commercial, and residential applications.

Article Content

perforated cable tray manufacturers, cable tray accessories

We offer a wide range of perforated cable trays which are facricated using quality raw materials such as Mild Steel, Pre-Galvanised Steel. These perforated cable trays are offered in different types,

Cable trays

Our cable trays are produced in fit for purpose materials like stainless steel, galvanized, aluminium and fibreglass (FRP/GRP) composites to suit any project

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Characteristics of U steel cable tray

The main material is high-quality steel plate, which is surface-coated with plastic or hot-dip galvanized (for outdoor use), featuring large load-bearing capacity, elegant appearance and corrosion

U Steel Cable Ladder

As its name implies, the U-shaped steel cable tray uses U-shaped steel for its side beams and crosspieces. It is assembled by screw fastening and has various

Cable Trays and Accesories

SFSP manufactures a wide range of products capable of providing the characteristics which respond to the proposed application, along with quality of

GUIDE CABLE TRAYS TECHNICAL

Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules of Canadian Electrical Code, Part I and the National Electrical Code®

Steel Cable Tray

Steel Cable Tray Steel Cable Tray systems are Certified CSA Cable Tray, UL listed, and NEMA certified and are available in the following material types 316 Stainless Steel Cable Tray, 304 Stainless Steel

CABLE TRAY

SFSP has manufacturing facilities in KSA, UAE, Egypt, and Lebanon. SFSP adapts quickly and easily to market demands and requirements. The factory is operating a top of the line production machinery,

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Analyzing the Steel Cable Tray Systems Market: Revenue ...

The "Steel Cable Tray Systems market" decisions are mostly driven by resource optimization and cost-effectiveness. Demand and supply dynamics are revealed by market research,

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Cable tray

Common cable trays are made of galvanized steel, stainless steel, aluminum, or glass-fiber reinforced plastic. The material for a given application is chosen based on where it will be used. Galvanized

What are the main components of a cable tray?

Wire Mesh Tray / Basket Tray Components Wire mesh trays are made of welded steel wires forming a grid. Key parts: wire grid structure &

CABLE MANAGEMENT SYSTEMS CABLE TRAYS & ACCESSORIES

Cable Trays & Accessories Cable Trays are designed to meet most requirements of cable and electrical wire installations and comply to local and international standards of fabrications and finishes.

11 Types of Cable Tray Covers and How to Choose It New

Cable tray is a structure for supporting and organizing cables. Usually, it has another section that encloses the cables within the tray called a “cover” or “lidding” section. That is, it covers

Cable Trays and Accesories

Cable Trays and Accessories are designed to meet most requeriments of cable and electrical wire installations and comply to local international standards of fabrications and finishes

Characteristics of U steel cable tray

The perforated U steel cable tray is a specialized product developed for the computer rooms and stations of telecommunications operators such as China Telecom, China Mobile, China Unicom,

U-shaped steel cable tray features

U-shaped steel cable tray is the most widely used steel cable tray in China, which is common indoors and outdoors, and has excellent load bearing capacity, which is suitable for large

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