Width of Aluminum Alloy Cable Tray

Article Overview

Standard aluminum alloy cable trays are available in nominal widths of 6, 9, 12, 18, 24, 30, and 36 inches, with the inside usable width determining cable capacity.

Standard Widths and Usable Area

Aluminum cable trays are designed with nominal inside widths that dictate how many cables can be safely accommodated. Common standard widths include 6, 9, 12, 18, 24, 30, and 36 inches. The usable width is slightly less than the outside edge-to-edge dimension due to side rail thickness, which is important when coordinating wall or floor penetrations and ensuring proper cable fill . The usable area of a tray is calculated as: Usable Area = Inside Width x Usable Depth, and the tray fill should not exceed the recommended percentage (commonly 40% of the tray area) to prevent overcrowding and heat buildup .

Material and Construction Considerations

Aluminum alloy trays are typically made from 6063 alloy for straight sections and 5052 alloy for fabricated parts, providing a balance of strength, corrosion resistance, and lightweight properties . Ladder-type trays consist of two longitudinal side rails with transverse rungs welded at standard spacings of 6, 9, or 12 inches, depending on load requirements and cable type .

Practical Design Guidelines

o Increase width before depth: Wider trays improve airflow, ease cable pulling, and allow cleaner layouts compared to simply increasing depth .
o Load capacity: Each rung must support a 200 lb concentrated load above the cable load with a 1.5 safety factor .
o Rung spacing: Standard spacing is 6-12 inches, with radiused fittings typically using 9-inch spacing .
o Design margin: It is recommended to select the next standard width up rather than sizing exactly to 40% fill to accommodate future cable additions .

Compliance and Standards

Aluminum cable trays must comply with NEMA VE-1 and VE-2, NEC, and IEC standards for installation, load, and spacing. Width selection should consider both current cable requirements and potential future expansion to maintain code compliance and operational safety . By following these width requirements and design principles, aluminum alloy cable trays can provide reliable, code-compliant support for power, control, and data cabling in commercial and industrial installations.

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Cable tray systems are defined to include, but are not limited to straight sections of of [ladder type] [vented bottom type] [solid bottom

Rung spacing in radiused fittings shall be industry standard 9" and measured at the center of the tray"s width. Each rung must be

Aluminum cable trays of NewReach are crafted from high-performance materials from durable aluminum alloys including 6063,

Cable Tray Materials: Most cable tray systems are fabricated from a corrosion-resistant metal (low-carbon steel, stainless steel or an

Made from aluminum alloy, these rugged components bolt together to form a solid and reliable cable pathway. To secure and protect

Aluminum Cable Tray systems are lighter than steel cable tray and Certified CSA Cable Tray, UL listed, NEMA and certified.

luminum Cable Trays & Ladders deliver lightweight, durable solutions. Aluminum Cable Tray manages cables, while Aluminum Cable

Explore standard sizes by tray type, understand width and depth limits, and see how to calculate and choose compliant

Aluminum Cable Tray Specifications. The document provides detailed specifications for aluminum cable trays, including features,

Our I-Beam - the most efficient structural shape Using "Copper-free" 6063-T6 Aluminum Alloy o Rungs-provide system integrity The

T&B® Cable Tray - T&B Cable Tray Systems Long-span straight sections require support only between sections, every 40 ft. (12.2

Discover aluminum alloy cable trays that are lightweight, corrosion-resistant, and optimize heat dissipation for safe,

Most cable tray systems are fabricated from a corrosion-resistant metal (low-carbon steel, stainless steel or

NEMA VE 1-2017 Specifies requirements for metal cable trays and associated fittings designed for use in

accordance with the rules

A practical guide to product selection and installation This guide for engineers and installers has been developed by ABB as a

3.1 Aluminum Trough type cable tray longitudinal members shall be 4-1/2, 6, 7,8, or 10 deep extruded aluminum channels or I

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