

Stainless Steel Cable Tray Specification Selection

Article Overview

Stainless steel cable trays are available in 304 and 316 grades, designed for industrial and corrosive environments, with standardized widths, rung spacing, and load capacities.

Material and Grades

Stainless steel cable trays are typically manufactured from AISI 304 or 316 stainless steel. Type 304 is widely used for its high resistance to rust and general corrosion, suitable for factory, food, and kitchen installations, while Type 316 contains 2-3% molybdenum, enhancing resistance to chlorides and industrial solvents, making it ideal for outdoor, coastal, and chemical processing environments . All components, including side rails, rungs, and hardware, are often made from the same stainless steel grade to ensure uniform corrosion resistance .

Tray Types and Construction

- o Ladder trays consist of two longitudinal side rails with transverse rungs welded at standard spacing of 6, 9, or 12 inches, capable of supporting a 200 lb concentrated load per rung with a safety factor of 1.5 .
- o Solid or ventilated trays provide additional protection for sensitive instrumentation and control cables, with solid covers used where heat buildup is minimal .
- o Return flange trays are available in light, medium, and heavy-duty ranges for various industrial applications .

Dimensions

- o Widths: 50mm, 75mm, 100mm, 150mm, 225mm, 300mm, 450mm, 600mm, 750mm, 900mm .
- o Depths: Typically 3, 4, or 5 inches per NEMA VE 1 standards .
- o Lengths: Standard straight sections are supplied in 10, 12, 20, or 24-foot sections .
- o Rung spacing in radiused fittings: Industry standard 9 inches at the center of the tray width .

Load and Mechanical Specifications

- o Each rung must support a 200 lb concentrated load at the center with a safety factor of 1.5 .
- o Splice plates are high-strength steel, secured with 8 nuts and bolts per plate, with electrical resistance not exceeding 0.00033 ohm .
- o Straight sections are fabricated as I-beams for structural integrity .

Standards and Compliance

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- o Installation should follow NEMA VE 1 and VE 2 standards .
- o Stainless steel trays comply with ASTM 9108-94 (2015) or BS EN 10088-1:2014 for chemical composition and corrosion resistance .
- o CE marking and third-party certifications (UL, IMQ, LCIE) ensure compliance with European and international directives .

Applications

Stainless steel cable trays are extensively used in oil, gas, petrochemical, rail, offshore, marine, nuclear, food processing, and heavy industry applications due to their durability and corrosion resistance . They are suitable for environments with high salinity, chemical exposure, or de-icing salts.

Accessories

A full range of couplers, bends, tees, and risers is available to configure cable routing systems for complex installations . These specifications ensure that stainless steel cable trays provide reliable cable support, corrosion resistance, and compliance with industry standards for a wide range of industrial and commercial applications.

Delivering engineered solutions in cable management ABB manufacturers a comprehensive range of cable tray systems and

Not all cable trays are equivalent. The mechanical and electrical characteristics, tests, certifications, overall quality management,

Carbon steel cable trays intended for installation in corrosive or highly corrosive environments with severe alkaline and acidic

A practical guide to selecting stainless steel cable tray for humid, marine, washdown, and corrosive environments.

Tray components must be accurately formed to tolerances with rounded edges. Cable trays installed in hazardous environments

-- One-piece tray Selection guide Ventilated trough o Formed from a pre-punched sheet to produce a one-piece ventilated trough o

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Steel Ladder System Hubbell's NEXTFRAME™ Ladder Tray is the effective and widely used cable runway that supports and delivers

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

Durable Stainless Steel Construction - Made from high-quality 304 stainless steel with a chrome finish,

Cable trays and auxiliaries shall be made of stainless steel complying with BS EN 10088-2 Grade 1.4401 (ASTM Grade 316).

Description: This product category covers metal cable trays and metal cable tray systems intended for field assembly and for use in

During severe fire conditions, steel or stainless steel cable tray will remain intact and provide support longer than aluminum or

CODE Tray can be found in a variety of industrial, institutional and commercial applications. We have supplied cable tray worldwide

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

stainless steel 304 & 316 tray 8-1: 2014 without a post treatment. The European standard that lists the chemical composition of

Cable tray shall be installed according to the latest revision of NEMA VE 2. Stainless Steel: Straight section and fitting side rails and

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