

Is welding allowed at cable tray bends

Article Overview

Welding is generally not allowed at cable tray bends because it can compromise structural integrity and damage installed cables.

Structural and Safety Considerations

Cable trays, including bends, are designed to support cables while maintaining proper spacing and bend radius. Welding on bends can weaken the tray material, distort the bend geometry, and create sharp edges that may damage cable insulation or shielding, potentially leading to electrical faults or corona discharge issues . Cable trays are intended to be installed as manufactured, with bends and fittings designed to meet mechanical and electrical safety standards .

Standards and Best Practices

- Cable trays should comply with BS EN 61537 or equivalent standards, which specify that trays are for cable support and not for modification through welding .
- Bends must maintain the minimum bend radius to prevent cable damage, and welding could alter this radius, causing insulation stress or conductor deformation .
- Installation guides recommend using pre-fabricated bends, elbows, or fittings rather than modifying trays on-site .

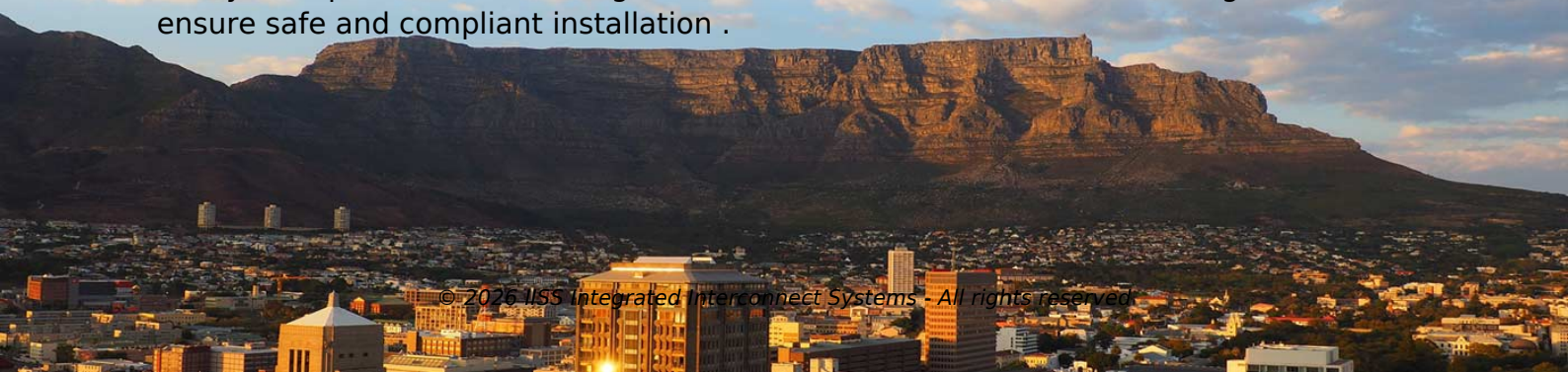
Recommended Alternatives

Instead of welding, consider:

- Using factory-made bends or elbows that match the tray type and material.
- Employing mechanical fasteners or clamps to join tray sections securely.
- Ensuring proper support spacing to maintain structural integrity without altering the tray material .

Conclusion

Welding at cable tray bends is not recommended and is typically prohibited by electrical installation standards. Modifying bends through welding can compromise both the mechanical strength of the tray and the safety of the cables it supports. Always use pre-fabricated fittings and follow manufacturer and standard guidelines to ensure safe and compliant installation .



Article Content

Oct 28, 2025

Full cable tray systems specification document

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

Sep 20, 2025

B-Line series Cable Tray Design Considerations

As an industry leader in cable tray, Eaton offers one of the widest ranges of cable management solutions available in the market

Apr 14, 2026

INSTALLATION GUIDE

When drawing/pulling cables into ladder tray, the tray run between outlets or draw-in points should not have more than the equivalent

Jan 06, 2026

Best Practice Guide to Cable Ladder and Cable Tray Systems

This guide covers cable ladder systems, cable tray systems, channel support systems and associated supports intended for the

Mar 10, 2026

Trunking Cutting Techniques Guide | PDF | Metalworking | Tools

The document provides instructions for forming various bends and joints in electrical trunking and cable trays. It describes: 1) How to

Aug 31, 2025

B-Line series Cable Tray Design Considerations

Is your cable tray system optimized for safety, dependability, space and cost savings? Cable tray (or cable ladder) systems are a

Jun 23, 2026

Cable tray manual

Where a cable tray wiring system containing Type TC cables will be exposed to any significant amount of hot metal splatter from

Feb 28, 2026

Cable Tray Installation Guidelines | PDF

The document provides installation guidelines for cable trays. It states that cable trays should be individually connected using bolted

Nov 11, 2025

Cable Tray Installation Guidelines | PDF

When installing cable trays, sharp bends should be avoided and the trays should be fixed in the vertical orientation where materials

Aug 31, 2025

Bend, Don't Break: Understanding Wire Bending Radius

It might seem simple, but safely installing cable means not bending it too much or often. That also means

Apr 23, 2026

Cable Tray Ladder Trunking Wire Basket Installation Guidelines

Size bends to allow for the minimum permissible radius of the largest cable on the tray where cables shall retain their relative

Oct 08, 2025

(Uk) Not really allowed to do self made 90 degree bends in tray ...

(Uk) Not really allowed to do self made 90 degree bends in tray nowadays, but if you've no choice, make it look as good as a pre

Jun 20, 2026

RECOMMENDED SPECIFICATIONS OF JUNCTION BOX AND CABLE TRAY

Basic requirements for some aspects of the E& I components (e.g., cable tray and junction box) can be found in the ABS Rules for

Oct 15, 2025

Cable Tray Technical Guide A practical guide to product selection and ...

Cable tray installed in a hazardous location must contain only those cables that are appropriate for this type of environment as

Nov 13, 2025

Best Practice Guide to Cable Ladder and Cable Tray Systems

A single length of cable ladder, cable tray or channel mounted on, but not restrained by two supports, represents a simply supported

Mar 11, 2026

Cable Tray Installation and Cable Handling Method Statement

3. Cable Tray Support Locations Cable tray supports should be strategically positioned so that connectors between horizontal

Aug 21, 2025

Document DICOS

To install the cable tray supports, first find the required elevation from the floor to the bottom of the cable tray and establish a level

Dec 24, 2025

CABLE TRAY

Do not allow the cables to drop in the cable tray as this may damage the cable and/or the cable tray. If cable connections will not be

Jan 11, 2026

Connecting Cable Trays: Your Guide to Secure and

Learn common methods for connecting cable trays safely and efficiently. Our guide covers

May 07, 2026

Cable Tray Design and Standards Guide

The document outlines codes and standards that must be followed for design and construction of cable trays and their components.

Jul 13, 2026

Earthing or Bonding a Metallic Cable Tray: What the Regs Really Say ...

If you must earth a tray for functional reasons (static discharge, RFI), do it at one end only. Bonding both ends can form

Jun 18, 2026

BEAMA Best Practice Guide to Cable Ladder & Cable Tray Systems

This document provides guidance on best practices for installing cable ladder and cable tray systems, including channel support

Jun 23, 2026

B-Line series Cable Tray Design Considerations

The most serious hazard to cable in cable trays is when the cables are exposed to significant amounts of hot metal spatter during

Dec 27, 2025

Cable Tray Technical Guide A practical guide to product selection and ...

Cable Tray Technical Guide A practical guide to product selection and installation This guide for engineers and installers has been

Jan 05, 2026

CABLETECH TRAINING AND MINIMUM BENDING RADIUS

Larger bend radii shall be considered for conduit bends, sheaves, or other curved surfaces around which the cable may be pulled

May 20, 2026

How To Bend Cable Tray

Discover the best techniques and tools to bend cable tray easily and efficiently. Learn step-by-step instructions and

Oct 05, 2025

CABLE TRAYS GENERAL INFORMATION AND INSTALLATION

Cable tray systems are to be installed so they are accessible. If possible 300mm minimum should be left above or between installed

Nov 01, 2025

welding circuits and a designated ladder cable tray requirements

Hi, NEC 2011, article 630.41 and 392.10 (B)(1)(b) requires for welding cable to be run on a dedicated cable tray. My

Nov 01, 2025

CABLE TRAY SYSTEMS GUIDE

Some applications may require the cable tray to support the weight of a single, dead object in addition to the cable loads.

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.iiss.co.za>

Email: sales@iiss.co.za

Phone: +27 63 174 2895

Address: Unit 8, Innovation Park, 15 Rivonia Road, Sandton, Johannesburg,
2196, South Africa

This document is for informational purposes only. Specifications subject to
change without notice.

