How to position cable trays at a 45-degree angle

Article Overview

To make a cable tray bend at a 45-degree angle, you need to calculate the cut dimensions, mark the tray, cut the flanges, and fold the tray so the edges overlap correctly.

Step-by-Step Process

1. Determine the Cut Size For a flat 45-degree bend, measure the width of your cable tray. Divide the angle in half (22.5? for a 45? bend) and calculate the distance to mark on each side of the centerline. For example, in a 100 mm wide tray, each side would be approximately 41.42 mm from the centerline . This ensures the bend will form the correct angle. 2. Mark and Cut the Tray Draw lines along the calculated distances on both sides of the centerline. File or cut the lip that will be removed between these lines. Then, cut down the centerline to allow the tray to fold properly . 3. Fold the Tray Bend the tray so that the cut edges overlap slightly. This overlapping ensures the tray maintains structural integrity and forms a smooth 45-degree angle . It is recommended to practice on cardboard or scrap material first to verify the measurements and bending technique. 4. Using Segments for Larger Bends For longer or more complex bends, you can use multiple segments. For instance, a 90-degree bend can be made using two 45-degree segments . This approach helps maintain a smooth curve and reduces stress on the tray. 5. Consider Offsets and Sloped Sections If the tray needs to bypass obstacles or change elevation, calculate the required offset using trigonometry or a cable tray offset calculator. For a 45-degree slope, the horizontal and vertical distances can be determined using standard multipliers or formulas to ensure proper alignment . Measure along the straight tray to mark bending points accurately. 6. Installation Tips

o Ensure the bend radius complies with cable specifications to avoid damaging cables.
o Use clamps or temporary supports to hold the tray in place while bending.
o Check alignment with adjacent tray sections before final installation. By following these steps and using the formulas for cut size and overlap, you can create precise 45-degree bends in cable trays for both horizontal and vertical routing .

use the 90 brackets shown on page C25. To form the horizontal tee, position one length of tray perpendicular to the other and attach

Cable Trunking 45 Degree Bridge | How To Make 45 Degree Bridge | 45 Degree Up

Each tray section should be bonded to an adjoining section using listed bonding jumpers or a continuous ground wire and clamps

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

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90° Bend (45° x 2) Formula How to make 90°degree (45°x2) Cable trays/Trunking

I worked with cable tray about 40 years ago and remember I created a couple of simple formulae to work out how

Compute precise cable tray offset geometry, run lengths, and diagonal travel dimensions for tray routing elevation changes. Supports

Fiberglass cable tray 45 degree horizontal bend assembly submittal

This publication is intended as a practical guide for the proper and safe* installation of cable ladder systems, cable tray systems,

In designing supports for a cable tray system, consideration should be given to the loads associated with future cable additions and

This document provides information about cable trays and accessories, including straight cable trays, perforated trays, returned edge

To cut a cable tray for a 45-degree bend, you need to make two 22.5? cuts on two separate pieces of cable tray. Each cut should be

Calculate horizontal, vertical, or compound cable tray offsets based on bend angle, offset distance, and available installation space.

This guide covers the critical steps, from selecting the right electrical cable tray and performing accurate

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

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