

How to bend a cable tray at a 45-degree angle

Article Overview

A 45-degree cable tray bend is typically achieved by mitering two tray sections with 22.5-degree cuts on each, then joining them to form the full angle.

Step-by-Step Process

1. Measure and Mark the Tray

- o Draw a perpendicular line across the width of each cable tray section where the bend will occur.
- o Using a protractor or angle finder, mark 22.5° from the perpendicular line on each tray section. The second tray piece should have the 22.5° cut in the opposite direction to allow proper joining .
- 2. Cut the Tray
 - o Use an appropriate cutting tool, such as an angle grinder with a metal cutting disc, to make the cuts along the marked lines.
 - o Ensure the cuts are precise to maintain the correct 45-degree angle when joined .
- 3. Deburr and Smooth Edges
 - o After cutting, deburr all edges using a file or grinder to remove sharp metal and prevent damage to cables or injury during installation .
- 4. Test Fit and Join
 - o Align the two cut sections to form the 45-degree bend.
 - o Use cable tray connectors or hardware to securely join the sections, ensuring a stable and smooth transition for cables .

Optional: Using Formulas for Accuracy

- o For more precise fabrication, you can calculate the lip removal or overlap using trigonometric formulas. For example, take half of the desired bend angle (22.5° for a 45° bend) and measure the corresponding distance from the centerline to mark the cut .
- o Practicing on cardboard or scrap metal first can help verify measurements before cutting the actual tray .

Safety Considerations

- o Always wear safety glasses, gloves, and ear protection when cutting metal.
- o Ensure the work area is clear and stable to prevent accidents.
- o Smooth all edges to protect cable insulation and prevent injuries during installation . By following these steps, you can create a precise and safe 45-degree bend in a cable tray, suitable for routing electrical or communication cables efficiently.

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Step-by-Step Guide: 45-Degree Cable Tray Bend Calculation #CableTrayBending #ElectricalInstallation

Let's talk Cable Tray Offsets (not basket tray) So, I've done a few cable tray offsets in my time, but I just wing it every time. I would

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The assembly guide below will help the cable tray installer make the bends and others without difficulty even he had never installed

You can buy a manufactured 90 degree bend or make one on a cable tray bending

Fiberglass cable tray 45 degree horizontal bend assembly submittal

Bend Angle: The bend angle is the degree to which the cable tray is bent. It is crucial to accurately measure and

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

I am an apprentice electrician and looking knowledge on how to create a 90° bend on a cable tray suitable for SWA. I understand we

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the cable tray is 3 metres in length, this doesn't matter but i think the width does. it is 150mm across. i know that for a

The tray can be cut and bent, allowing cable runs to be adjusted on the jobsite. The

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