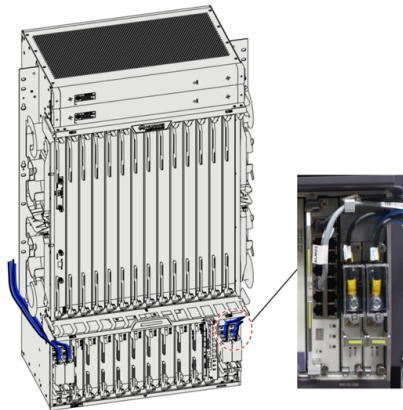


How to reserve openings for cable trays



Overview

Learn everything about cable tray installation with our complete guide. Discover types, steps, and safety tips for efficient electrical cable management.

Key Takeaways

Cable tray openings can be reserved using pre-planned fittings, removable covers, and modular accessories to maintain proper cable routing and NEC compliance.

Planning and Layout

Before installation, identify the locations where future cables, conduits, or equipment connections will pass through the tray. Use shop drawings and approved layouts to mark these openings, ensuring they do not interfere with existing cable fill limits or violate NEC spacing requirements (NEC 392) for power and control cables. Proper planning prevents overcrowding and allows for safe maintenance access.

Using Fittings and Accessories
T-Pieces and Crossovers: These tray components allow horizontal or vertical changes in routing and can serve as reserved spaces for future cable runs.
Channel or Solid Bottom Sections: For areas requiring protection or minimal heat buildup, solid-bottom trays can be installed with removable sections to reserve openings.
Barrier Strips and Cable Protection Rings: These accessories can define reserved areas within a tray, preventing accidental cable placement in those zones.

Physical Reservation Techniques

Removable Covers or Plates: Install temporary covers over reserved openings to maintain structural integrity and prevent debris accumulation. **Marked Sections:** Clearly label reserved areas on the tray to guide installers and prevent overfilling. **Spacing Rungs:** In ladder-type trays, adjust rung spacing to accommodate future cable bends and maintain minimum bend radius.

Compliance and Safety Considerations

Ensure reserved openings do not exceed the tray's fill capacity (40% for power cables, 50% for control cables) to avoid overheating. Maintain vertical clearance above trays for installation and maintenance access. Metallic trays used for reserved openings must continue to meet grounding and bonding requirements.

Summary

Reserving cable tray openings involves a combination of pre-planning, using modular tray fittings, and employing protective accessories. By marking, covering, or structurally modifying sections of the tray, electricians can ensure future cable installations are safe, organized, and compliant with NEC standards.

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