

Light troughs and cable trays



Overview

Cord Troughs | McMaster-Carr Choose from our selection of cord troughs, including cable and hose trays, steel formable cable and hose trays, and more. Same.

Key Takeaways

Trough cable trays provide a secure, organized, and ventilated solution for routing cables in light trough installations, available in solid, perforated, or wire mesh designs. Overview

Trough cable trays are designed to support and protect electrical, data, or communication cables in applications such as light troughs, commercial lighting, and industrial installations. Their “trough” design, often with a solid or partially enclosed bottom, prevents physical damage, dust accumulation, and moisture ingress while allowing for heat dissipation and organized cable routing (Shielden Strut, Eaton) .

Types of Trough Cable Trays

- Solid Bottom Troughs: Provide maximum protection for sensitive cables, ideal for environments where dust or debris is a concern. They are often made from aluminum, galvanized steel, stainless steel, or PVC-coated materials (MP Husky) .
- Perforated or Ventilated Troughs: Allow moderate airflow to prevent heat buildup, suitable for light troughs with moderate heat-generating cables (Wire Mesh Cable Tray) .

- **Wire Mesh Troughs:** Lightweight and flexible, these trays are easy to cut and install, offering excellent cable visibility and accessibility for maintenance or future expansion (Legrand, RSP Supply) .

Materials and Finishes

- **Aluminum:** Lightweight, corrosion-resistant, and easy to handle.
- **Steel (Galvanized or Pre-Galvanized):** Strong and durable, suitable for heavier cable loads.
- **Stainless Steel:** Highly corrosion-resistant, ideal for humid or outdoor environments.
- **PVC-Coated Steel or Aluminum:** Provides additional protection against moisture and chemical exposure .

Dimensions and Load Capacity

- **Widths:** Commonly 6", 12", 18", 24", 30", and 36".
- **Depths:** Typically 3", 4", 5", and 6".
- **Lengths:** Standard sections range from 10 to 24 feet.
- **Load Capacity:** Varies by material and support spacing; aluminum and steel trays can support up to 280 lbs per foot when properly mounted (McMaster-Carr) .

Installation Considerations

- **Support Spacing:** Trays should be supported at intervals recommended by the manufacturer, typically 5-12 feet for light-duty applications.
- **Mounting Methods:** Options include wall brackets, ceiling hangers, trapeze supports, or floor mounts.
- **Accessories:** Covers, dividers, splice kits, elbows, tees, and dropouts help maintain cable organization, reduce stress on cables, and allow smooth transitions around bends or junctions (Graybar, RSP Supply) .
- **Ventilation:** Perforated or mesh designs improve airflow, reducing heat buildup in light troughs with multiple or high-current cables.

Advantages for Light Trough Applications

- **Organized Cable Management:** Keeps power and data cables neatly routed within the trough.
 - **Protection:** Shields cables from physical damage, dust, and moisture.
 - **Flexibility:** Easy to modify or expand as lighting layouts change.
 - **Safety:** Reduces trip hazards and prevents cable sagging or overstressing .
- In summary, choosing the right trough cable tray for light troughs involves selecting the appropriate material, size, and ventilation type based on cable load, environmental conditions, and installation requirements. Accessories and proper support ensure long-term reliability and ease of maintenance.

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