

Article Overview

A light trough cable tray is a partially enclosed, lightweight support system designed to route and protect electrical cables while providing moderate ventilation and easy maintenance.

Overview

A trough cable tray is a U-shaped or shallow channel system with a continuous bottom and side walls, sometimes featuring small ventilation holes to allow airflow. Unlike ladder trays, it does not have transverse rungs, offering continuous support for cables while maintaining moderate structural strength. Light trough trays are specifically designed to be lighter in weight, making them easier to handle and install, especially in indoor or less demanding industrial environments.

Materials and Construction

Light trough trays are commonly made from:

- o Galvanized steel - corrosion-resistant and durable for general industrial use.
- o Aluminum - lightweight, naturally corrosion-resistant, and easy to install.
- o Stainless steel (SS304L or SS316L) - suitable for corrosive or high-temperature environments. Surface treatments such as electro-galvanization, hot-dip galvanization, or powder coating enhance durability and resistance to environmental factors.

Applications

Light trough cable trays are ideal for:

- o Control and instrumentation cables
- o Communication and computer cables
- o Thermocouple and sensitive signal systems They are commonly used in industrial control systems, manufacturing plants, utility buildings, and data centers where moderate protection and ventilation are required. They provide a balance between cable protection and heat dissipation, making them suitable for small to medium cable loads.

Advantages

- o Lightweight and easy to install - reduces labor and structural support requirements.
- o Continuous cable support - prevents sagging and mechanical stress on small-diameter cables.
- o Moderate ventilation - helps manage heat without fully exposing cables.



Cable tray with light trough

- o Maintenance-friendly - cables can be easily inspected, added, or removed .
- o EMI shielding potential - when equipped with a cover, it can reduce electromagnetic interference for sensitive cables .

Comparison with Other Cable Trays

Feature	Light Trough Tray	Solid Bottom Tray	Ladder Tray	Bottom Continuous, may have ventilation holes	Fully solid
Open		with		rungs	Ventilation
Protection	Good	Best	Moderate	Weight	Light
Weight	Light	Heavier	Moderate	Maintenance	Easy
Easy	Easy	Easy	Easy	Applications	Control,
communication, moderate power	Sensitive instrumentation, fiber optics	Heavy power cables, long spans			

Installation Considerations

- o Ensure proper support spacing according to cable weight and tray length.
- o Use covers if additional protection or EMI shielding is required.
- o Avoid overloading to maintain structural integrity and prevent cable damage.
- o For outdoor or humid environments, consider corrosion-resistant materials and coatings . Light trough cable trays provide a versatile, lightweight solution for routing and protecting cables in environments where full solid-bottom trays are unnecessary, but ladder trays may be too open or heavy. They are particularly effective for sensitive control and communication systems requiring moderate protection and easy access.

Compare Light, Medium, and Heavy Duty Cable Trays simply. Learn the differences in

Our guide explains ceiling cable tray types, from ladder to mesh. Learn which tray suits your

Explore the ultimate guide on selecting and installing light duty cable trays for your project. Discover key

Fast installation with dependable support. Everything you need to build a cable management system, including Cablofil wire mesh

Durable and reliable cable tray systems providing premium performance in commercial and industrial applications, available in a

Cablofil steel trough trays provide the strength and security required when then need to limit cable access is of primary importance.

Cable trays and baskets are designed to help support and route cable bundles in an organized manner along ceilings or walls. Shop

Cable ladder is a more reliable, less expensive solution for supporting cable, which is easier to maintain,

Cable tray with light trough

proves more adaptable to

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Often unheralded, cable trays play a vital role in tray cable installations throughout industrial, commercial, and residential projects.

V-Trough cable tray keeps cabling cool, protected and easy to manage. Its high-strength steel construction matches many European

Where cable tray wiring systems with current carrying conductors are installed in a dust environment, ladder type cable trays should

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