

Air Inlet Distribution Box



AI Overview

Air inlets in a distribution box should be positioned to ensure unobstructed airflow, away from contamination sources, and connected directly to the air handler or ventilation system. Proper Placement Guidelines Air inlets are typically located on the return side of the air handler or within the distribution box to draw in fresh or recirculated air efficiently. The inlet should have a direct, short path to the air handler, HRV, or ERV, minimizing bends, sagging, or kinks in the ductwork to reduce airflow resistance and maintain system efficiency. Distance from Contamination Sources Maintain at least 10 feet from known contamination sources such as exhaust vents, dryer vents, kitchen hoods, plumbing vents, or vehicle exhaust. For wall-mounted inlets, ensure a minimum of 3 feet away from dryer exhausts or roof vent terminations. Inlets should not draw air from garages, crawlspaces, attics, or adjacent dwelling units to prevent contamination. Height and Orientation Install inlets at least 2 feet above grade or above the roof deck to avoid debris and water entry. In some cases, placing the inlet at the gable end of the house is easier than lifting it off the roof 2–4 feet. Use a louvered damper for ventilation inlets to control airflow while preventing debris entry; mesh screens can be used for general protection but are not recommended for dryer vents. Connection to Distribution Box The inlet duct should be sealed to the air handler or distribution box using mechanical fasteners and metal tape or mastic to prevent leaks. Ensure the duct is supported adequately to prevent sagging, which can reduce airflow efficiency. By following these guidelines, the air inlet will provide clean, unobstructed airflow to the distribution system, maintain indoor air quality, and optimize HVAC performance.

Article Content

Mastering Plenum Boxes Design: Key Factors for Performance

Uniform Air Distribution: Plenum boxes evenly distribute airflow to all supply outlets, preventing uneven airflow in certain areas. This is particularly important in multi-branch air supply

Air Distribution Basics and Duct Design

Right-sizing of a heating, ventilation, and air-conditioning (HVAC) system is the selection of equipment and the design of the air distribution system to meet the accurate predicted heating and cooling loads

Optimizing air inlet designs for enhanced natural ventilation in indoor ...

The objectives are to evaluate the influences of air inlet design parameters including location and size, and transformer load, on the airflow distribution, temperature field, and cooling

Basics Of Air Distribution

A parallel box has all the same parts, but its fan is located at the induced air inlet, or parallel to the primary airflow. It's usually mounted on a fan deck and has a backdraft damper.

75mm Distribution and Manifold Boxes - BPC

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Air Distribution Boxes

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Direct distribution box, 8 outlets / inlets

Direct distribution box, 8 outlets, inlets, RT2R-8x90/160-OC. Material: galvanised steel. Interior box insulation with antibacterial and antifungal additive.

Performance Considerations for Fan Inlet Boxes | AirPro Blog

A properly engineered inlet box ensures smooth, even airflow into the fan wheel, minimizing turbulence that can degrade performance and lead to premature wear. One of the most

What is a plenum box and how does it work?

In this article, we will explore what a plenum box is, how it functions within an HVAC system, key considerations in its design, and why proper selection is essential for optimal ventilation outcomes.

Plenum Boxes: Purpose, Sizing, and Installation Guide

What Is a Plenum Box? A plenum is an enclosed box that connects directly to the HVAC equipment and serves as a central air distribution or collection chamber. It acts as a pressure

Air Distribution Box w/ 11 Outlets 5500 psi, 1 H/P CGA-347 Inlet

MACK™ Systems provide effective air distribution for breathing, filling, and rescue applications. The MACK™ units have been designed as a series of portable air distribution boxes to meet the most

Distribution boxes

Ubbink's Air Excellent distribution boxes, DB200 and DB800, are designed for flexible installation and optimal airflow management. The DB200 is ideal for smaller areas and can be extended horizontally

Air Distribution Manifold

Air Distribution Manifolds For Main Air Panel Applications Basic Size 12 - Inlet Port 3/4" Basic Size 20 - Inlet Port 1 1/4" Air Distribution manifolds provide individual control on machinery with multiple

Air Conditioning Distribution Box: Essential Guide to Function, Types ...

The Air Conditioning Distribution Box is a critical electrical component that centralizes power distribution for cooling systems while providing protection and ease of maintenance. This

Air Excellent distribution box DB824 125-200 24

The Air Excellent distribution box DB824 is a versatile and efficient solution, complete with a stepped adaptor, 24 internal air restrictor rings, and 20 covers

Air Distribution Box w/ 11 Outlets 5500 psi, 1 H/P CGA-347 Inlet

More advanced models offer multiple air pressure regulators for confined space rescue operations, mid-range pressure regulators for rescue tool devices, and high pressure emergency air cylinder filling

Amazon : HVAC Ducting Box

Streamline your HVAC ductwork with high-quality ducting boxes. Explore galvanized steel options for long-lasting, corrosion-resistant solutions.

Air distribution box | Komfovent

Air distribution box LOK-H Inside covered with synthetic rubber Assembled with plastic PAT-75 duct connections Galvanized steel

Linear Slot Diffuser Plenum Boxes | Fiberglass

Browse our full range of linear plenum boxes for 1-slot, 2-slot, 3-slot, and 4-slot diffusers. Available in fiberglass R-6 insulated plenums, knock-down

Understanding the Role of a Plenum Box in HVAC Air Distribution

In modern HVAC (Heating, Ventilation, and Air Conditioning) systems, efficiency and comfort depend heavily on the proper distribution of air. One crucial yet often overlooked component

Air Excellent distribution box DB206H160 6 connections

Detailed information The Air Excellent distribution box DB206H160 is a versatile and efficient solution, complete with a horizontal adaptor, 6 internal air restrictor rings, and 3 covers for unused

Distributor boxes and manifolds

The Indomo range includes versatile, low-profile plenum boxes designed for optimal air distribution in both residential and commercial environments. Available in five types – MLU, MRU, MHU, MCU, and

Adjustable Top Entry Distribution box

Enhance your electrical management with our adjustable top Entry Distribution Box. It's reliable, flexible, and constructed to last.

Contact Us

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