

Air Valve Distribution Box



Overview

The XURI Air Distribution Box delivers dry, clean, and pressure-stable compressed air to multiple output points through a single integrated enclosure.

Key Takeaways

An air valve or air outlet distribution box is a key HVAC component that distributes supply and extract air from a ventilation unit to multiple rooms while controlling airflow and reducing noise.

Function and Purpose

Air distribution boxes, also known as plenum boxes, serve as central hubs in ventilation systems. They distribute supply and extract air from the main ventilation unit through ducts to individual air valves or diffusers in different rooms. These boxes help balance airflow, reduce fan noise, and ensure efficient air circulation throughout a building.

Construction and Features

Material: Typically made of galvanized sheet metal for durability and corrosion resistance. **Noise Reduction:** Many models include noise-dampening structures to minimize fan noise and sound transmission between rooms. **Access:** Practical access doors allow for maintenance and inspection of internal components.

Outlets: Duct outlets are usually located at the ends or on top of the box, with locking devices to secure ducts. **Accessories:** Plugs, outlet collars, and mounts are often included, with additional accessories available as needed.

Air Valves and Diffusers

Air valves are installed at the endpoints of the distribution system to control airflow and direction. They come in various types: Rectangular or circular valves for supply and extract air, suitable for offices, schools, and residential spaces. Adjustable valves like the TFF model allow 360° airflow distribution, with deflectors to shield part of the flow.

Diffusers such as swirl or linear types optimize air mixing, penetration depth, and comfort. Materials: Valves may be made from sheet steel or recyclable polypropylene, tolerating temperatures up to 100°C. Integration with Ventilation Systems Air distribution boxes and valves are often used in demand-controlled ventilation systems, where airflow is adjusted based on occupancy or environmental conditions.

They are compatible with plenum boxes and other air distribution products to ensure efficient, quiet, and balanced ventilation.

Summary

In essence, an air valve/air outlet distribution box is essential for distributing air efficiently, controlling airflow, reducing noise, and maintaining comfort in HVAC systems. Proper selection and installation of these components ensure optimal performance and energy efficiency in residential, commercial, or industrial buildings.

Article Content

Distribution boxes

Air Excellent DBOX stepped adaptor 125-150-160-180-200 Air Excellent DBOX
External Air Restrictor Valve New

Air Distribution Box

The XURI Air Distribution Box delivers dry, clean, and pressure-stable compressed air to multiple output points through a single integrated enclosure. Each outlet

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 box | Komfovent

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

Air Valves

The TFF air valve is available in different sizes and has adjustable airflow and a 360° distribution pattern, from which up to 180° can be shielded with a deflector. The TFF consists of a fixed part with springs,

Air valves

The valves are made of high-quality powder-coated sheet steel. The volume flow can be easily adjusted using the rotatable valve disc, which is locked in place

Vallox Bluesky air distribution box

The air distribution box distributes the supply and extract air of the ventilation unit through the duct to valves into different rooms or outside. Vallox BlueSky air distribution boxes are made of galvanized

Air Distribution Boxes : Regulus

The plastic boxes are designed for interconnecting separate branches of air ducts and for transition to flexible ducting of 125 mm diam., flat square ducts or outlet disk valves.

Air Distribution Manifolds

To request GA- and/or 3D- drawings (.step) please contact sales@hy-lok . Air Distribution Manifolds (pdf)

Plenum boxes for swirl diffusers and air diffusers

Our extensive range of plenum boxes is optimized for all Wildeboer swirl diffusers and linear air diffusers. Each plenum box is thoroughly measured with the appropriate ceiling air diffusers and

Air Distribution Products

Systemair's air distribution products are developed and rigorously tested in certified laboratories to assure reliable operations of each component.

Air Valves

The front plate is held by the central thread bolt and can be moved by rotating. This allows the gap between the plate and the seat to be adjusted to set the required airflow volume. The TFF supply air

DF Swirl Diffuser

DF Swirl Diffusers are suitable for constant and variable supply air volume flows and exhaust air. The radial air distribution occurs via conical diffusers on square or circular front plates with radial blades

Gas Delivery Systems

Valve Manifold Box Valve Manifold Boxes (VMB) are designed to safely split a single Hazardous or Non-Hazardous gas supply into multiple use points. This concept increases efficiency in the manufacturing

Cryogenic Distribution Valve Boxes | Air Liquide Engineering

Our cryogenic distribution valve boxes act as the crucial junctions for massive helium infrastructures. Capable of seamlessly handling helium in its most demanding states—liquid, superfluid, and

Air Distribution | McMaster-Carr

Choose from our selection of air distribution, including right-angle flow rectangular manifolds, build-your-own air hose system, and more. Same and Next Day Delivery.

How a Variable Air Volume VAV System Works

Learn how a Variable Air Volume System and VAV box's works including VAV Zoning, Static Pressure Sensor use and location for VFD control.

Air Distribution | Bauer Compressors

Each high-pressure distribution system is carefully designed to include pressure indicating devices and safety, isolation, vent and drain valves as required. All

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

