



# Confined Space Ventilation Safety Compliance

## The Saddle Vent® and Conductive Saddle Vent®

**Issue:** OSHA CFR29-1910.146 states "Many workplaces contain areas that are considered "Confined Spaces" because while they are not necessarily designed for people, they are large enough for workers to enter and perform certain jobs. A confined space also has limited or restricted means for entry or exit and is not designed for continuous occupancy. Confined spaces include, but are not limited to, tanks, vessels, silos, storage bins, hoppers, vaults, pits, manholes, tunnels, equipment housings, ductwork, pipelines, etc." **CFR29-1910.146 Section 5.2 states** "Mechanical ventilation shall be used to control the confined space environment until the confined space atmosphere is deemed stable and continued until the last entrant egresses the confined space."

**Solution:** Air System's industrial, specialty, and custom confined space ventilation products offer a solution-based product for every application.

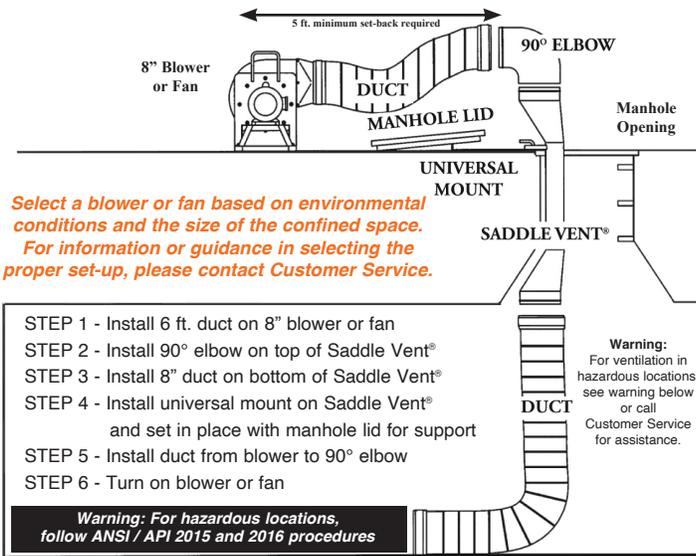
**Compliance:** OSHA CFR 29-1910.305 states "electrical equipment shall comply with NRTL, Nationally Recognized Testing Laboratories Standards and shall display the necessary Certified Markings. Certifications and approvals shall be appropriate for the products intended for the work environment."

Air Systems fans and blowers are certified to USA and Canadian standards for non-hazardous and hazardous locations. Optional ATEX versions available.



### The Saddle Vent® Ventilation System

Typical Saddle Vent® Setup Procedure



**WARNING: HAZARDOUS LOCATION OPERATIONS**

Use a certified explosion-proof blower or fan, conductive ducting and the conductive Saddle Vent® system. Attach all grounding wires and assure a complete circuit to the blower in order to remove static charges.



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*The Industry Leader in Breathing Air Filtration & Confined Space Ventilation*



# Centrifugal Blower vs Axial Fan

## Choose the Best Fan or Blower for the Job

### Confined Space Ventilation Safety Compliance



Standard Electric



Explosion Proof

## Centrifugal Blowers

### Centrifugal Blowers:

A centrifugal blower uses a “squirrel cage” designed with numerous forward curving blades on a circular wheel, creating significant air volume (CFM) and very high air pressure (WG).

### When to use:

Centrifugal blowers are typically heavier and cost more than axial fans due to the motor required to run the blades. Centrifugal blowers are used to move air a long distance using multiple lengths of duct.



## Axial Fans

### Axial Fans:

Axial fans are designed with several large paddle blades creating a large volume of air flow (CFM), but the blade configuration leads to lower air pressure (WG). When used with ducting, the duct creates resistance and the axial fan becomes inefficient at longer distances.

### When to use:

Axial fans are lightweight, low cost, and best when working at short distances with short ducting runs, preferably 15 to 25 feet of ducting.

International  
Blowers Available



## In-Line Axial Fans

### In-line Axial Fans:

An in-line axial fan can be used by itself or used with a fan or blower as a velocity accelerator for long duct distances.

### When to use:

When ventilating at long distances, simply add an in-line fan to the ducting to increase or maintain air flow for long distances. In-line fans can be used with either axial or centrifugal blowers to extend longer ventilation distance.

## Venturi Blowers

### Venturi Air Blower:

Venturi air blowers operate with a compressed air source and uses no moving parts or blades. Tremendous CFM is created by using a hollow hub to spin air similar to a jet engine.

### When to use:

With no mechanical blade, the venturi is not designed to push air through ducting. The venturi is primarily used as a suction or push air device on a tank and can be used in conjunction with an axial or centrifugal fan to rapidly remove gases or fumes from a tank. Venturi bases are designed to fit American Petroleum Institute (API) standard tanks.



For a more comprehensive overview of confined space ventilation or custom solutions, including International options, please contact **Customer Service**.