Confined Space Ventilation Safety

8” Axial Fans
Non-Hazardous Locations

Issue: Confined spaces are some of the most dangerous and potentially life-threatening work environments in industry, making ventilation, respiratory and PPE equipment an integral component of a total safety program. US OSHA states “electrical equipment must be approved by a Nationally Recognized Testing Laboratory (NRTL) **“ . . . and stated in 29 CFR 1910.303(a). In addition, NRTL’s must approve this equipment using US recognized test standards, 29 CFR 1910.7.”** Proper selection and training with approved confined space safety equipment can reduce the cause of potential accidents and even loss of life. In order to select the proper equipment, the worker must first determine whether the location is considered a **Hazardous** or **Non-Hazardous** location.

Application: In order to stabilize the atmosphere in the confined space, continuous ventilation should be used before and during occupancy of the confined space. These blowers can be used to provide fresh air to underground vaults, tanks, open pits, and many other similar areas.

Recommendation: Once the confined space is determined to be non-hazardous through the use of a gas detection meter, the correct blower can be chosen to meet the working conditions and available power. Always inspect the blower for loose parts or debris that may cause harm to a worker. Make sure all electric blowers are properly grounded. Make sure all confined space workers are trained on the use and proper application of the ventilation system and all other confined space tools. **If there is potential the atmosphere in the confined space could become hazardous, select an explosion-proof or intrinsically safe blower.**

CVF-8AC
8” AC Axial Fan

VIDEO ONLINE

Blower and Fan Selection Guide Available at www.AirSystems.com

www.AirSystems.com

Reference 1910.146 OSHA Confined Space Entry Regulation

What is a Hazardous Location?

All confined spaces should be considered as a “Hazardous Location” until proven otherwise. Federal OSHA refers to the National Electrical Code (NEC) as the “Bible” for reference information concerning hazardous locations. The NEC defines a hazardous location as those areas “where fire or explosion hazards may exist due to flammable gases or vapors, flammable liquids, combustible dust, or ignitable fibers or flyings.”

Confined Space Ventilation Tips

1) Proper ventilation procedures should be followed in accordance with all Federal, State, and local laws. For work in hazardous locations, follow ANSI/API 2015 and 2016 procedures.
2) Always test the confined space for hazardous gases and sufficient oxygen with a calibrated multi-gas monitor prior to ventilating the space. After ventilating for a sufficient amount of time, re-test the confined space before entering the space. Ventilation must remain in operation during occupancy.
3) Use a purge time chart, provided on Air Systems’ blowers, to calculate purge times prior to entering a confined space. Each 90º bend in a section of 8” duct will reduce flow approximately 10-15%. Each additional 25 ft section of duct will reduce flow by approximately 15%.
4) If toxic or combustible gases or low oxygen levels are encountered, increase ventilation purge times by 50% and retest the air quality prior to entry.
5) When ventilating a manhole or tank, always set the blower back from the opening a minimum of five (5) feet. This should prevent any hazardous gases purged from the confined space from being drawn back into the intake of the blower and forced back into the confined space.
6) Never block or restrict entry and egress to or from a confined space opening. Always use Air Systems’ Conductive Saddle Vent® System placed in the opening of the manhole or tank to allow continuous ventilation without restricting entry and egress to the opening.
7) With gases heavier than air, the ventilation duct should be placed at the bottom of the confined space allowing the blower’s air to push the gases out the top of the confined space.
8) Always use non-sparking tools in and around a hazardous work site
9) Always have proper respiratory equipment for the ventilated work space and for emergency rescue.
10) The build-up of static electricity is more prevalent during cool dry conditions, typically below 50% relative humidity. Depending on the work environment, anti-static clothing and special static removal devices may be necessary to prevent ignition from static electrical discharge.

Model	Model No.	Free Air	15’ 1-90° Bend	15’ 2-90° Bends
8” AC Fan (60 Hz)	CVF-8AC	974 CFM	786 CFM	661 CFM
8” AC Fan (50 Hz)	CVF-8AC50	830 CFM	705 CFM	629 CFM
8” DC Fan (12 VDC)	CVF-8DC	974 CFM	786 CFM	661 CFM

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CVF-8AC
8” AC Axial Fan

CVF-15ACAN
8” Canister Fan
with 15 ft Duct

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Fans meet OSHA 29 CFR 1910.303(a) and 1910.7 electric certification requirement.

Saddle Vent® is a Registered Trademark of Air Systems International, Inc.

8" Axial Fans

Item No.	Description
CVF-8AC	8” AC Axial Fan - 1/3 HP, 115 VAC, 60 Hz. CSA C/US Certified. CE Registered. 17 lbs.
CVF-8AC50	8” AC Axial Fan - 1/3 HP, 230 VAC, 50 Hz. CE Registered. 18 lbs.
CVF-8DC	8” DC Axial Fan - 1/4 HP, 12 VDC, 19 amps, with battery clips. CE Registered. 18 lbs.

8"Axial Canister Fans

Item No.	Description
CVF-15ACAN	8” CVF-8AC Axial Fan, 15 foot duct canister
CVF-25ACAN	8” CVF-8AC Axial Fan, 25 foot duct canister
CVF-15DCAN	8” CVF-8DC Axial Fan, 15 foot duct canister, & battery clips
CVF-25DCAN	8” CVF-8DC Axial Fan, 25 foot duct canister, & battery clips
	Duct Canister Only - Fits 8” CVF Fans
CVF-CAN15	8” Duct canister with 15 foot duct
CVF-CAN25	8” Duct canister with 25 foot duct

8" Saddle Vent® Ventilation Kits

Item No.	Description
CVF8A15KIT	8” CVF-8AC axial fan, 6 and 15 foot duct with canister, Saddle Vent®, 90° elbow, and universal mount
CVF8A25KIT	8” CVF-8AC axial fan, 6 and 25 foot duct with canister, Saddle Vent®, 90° elbow, and universal mount
CVF8D15KIT	8” CVF-8DC axial fan, 6 and 15 foot duct with canister, Saddle Vent®, 90° elbow, and universal mount
CVF8D25KIT	8” CVF-8DC axial fan, 6 and 25 foot duct with canister, Saddle Vent®, 90° elbow, and universal mount

CVF8A15KIT
8” Axial Fan Saddle Vent®
Ventilation Kit

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