GRAINGER®
FOR THE ONES WHO GET IT DONE

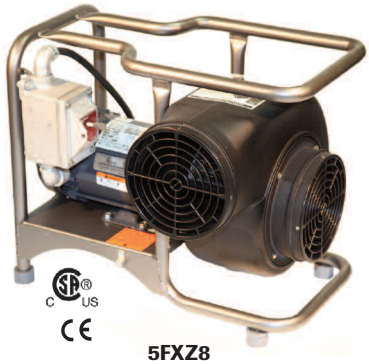
Occupational Health & Safety
Centrifugal Ventilation Blowers for Hazardous Locations

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. U.S. OSHA states "electical 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 U.S. recognized test standards, 29 CFR 1910.7."** Proper selection and training with approved hazardous location 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. **If the location is deemed Hazardous or Potentially Hazardous, the blower must be approved for use in the hazard location and an Explosion-Proof Electric or Pneumatic blower should be chosen.**

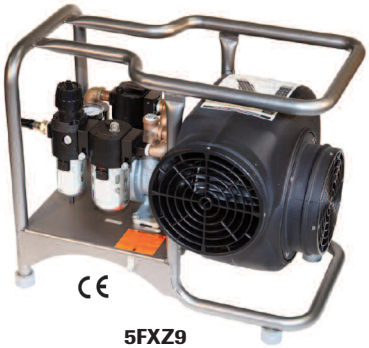
Application: In order to stabilize the atmosphere in the confined space, continuous ventilation should be used before and during occupancy of the confined space. These blowers can be used to provide fresh air to underground vaults, tanks, open pits, and many other hazardous areas.

Recommendation: Once the confined space is determined to be a hazardous location through the use of a gas detection meter, the correct hazardous location 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. Always select an explosion-proof or intrinsically safe blower when entering a hazardous location. Make sure all explosion-proof electric and pneumatic blowers are properly grounded. Always use conductive duct and assure the ground wire found in each segment of duct is connected to the ground lug found on the blower. Make sure all confined space workers are trained on the use and proper application of the ventilation system and all other confined space tools.

AIR SYSTEMS INTERNATIONAL



5FXZ8
(SVB-E8EXP)
Explosion-Proof Electric Blower



5FXZ9
(SVB-A8)
Pneumatic Blower

Reference 1910.146 OSHA; Permit-Required Confined Spaces and 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. 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."

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) When using a Venturi style pneumatic air horn (also called an eductor) on a steel tank, make sure the aluminum base is not dragged along the surface of the steel tank; this may cause a spark where rust is forming. Always make certain the Venturi blower has been properly grounded (bonded) to the tank prior to ventilating and assure the tank is properly grounded.
10) Always have proper respiratory equipment for the ventilated work space and for emergency rescue.
11) 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.

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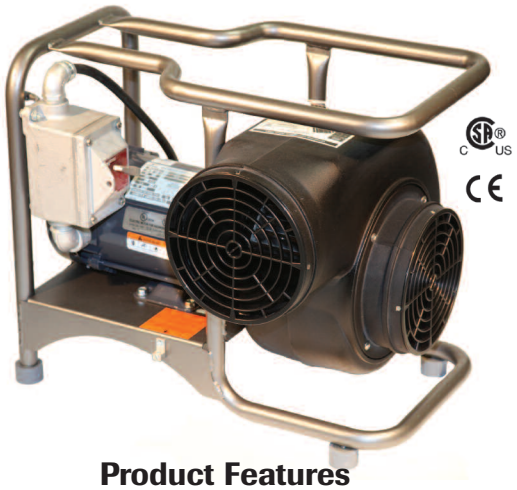

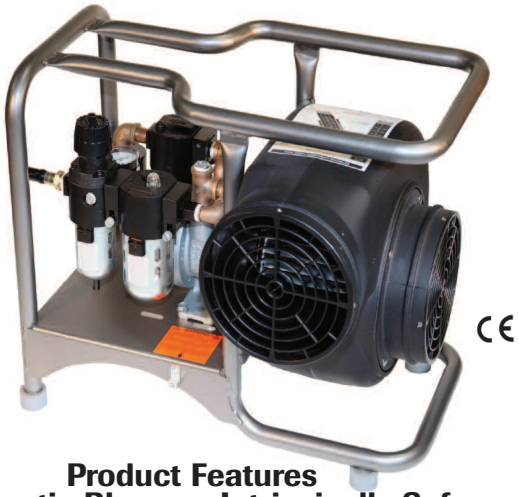

Product Features
Explosion-Proof Electric Blower
5FXZ8 (SVB-E8EXP)

- Explosion-proof switch installed and wired with 25ft cord, no plug, user wired per NEC requirements
- 3/4 HP electric motor, 115 VAC, 12.6 amp
- Approved for Class I, Div. 1, Groups C and D Class II, Div. 1, Groups E, F, G
- CSA/CUS approved and CE registered
- Conductive Polyethylene fan housing
- Aluminum non-sparking blower wheel
- Static grounding lug installed
- Powder coat tubular steel frame with dual handles
- 8" intake and exhaust flange with molded safety guards
- Weight: 68 lbs.
- 1570 cfm, free air delivery
- 1047 cfm, 25 ft duct, 1 - 90° bend

Product Features
Pneumatic Blower - Intrinsically Safe
5FXZ9 (SVB-A8)

- 4HP air motor, operates from 10 - 100psi
- Ultra-quiet operation – under 80 dbA
- CE registered
- Conductive Polyethylene fan housing
- Aluminum non-sparking blower wheel
- Static grounding lug installed
- Powder coat tubular steel frame with dual handles
- Adjustable flow output regulator
- In-line moisture separator/lubricator provided as standard
- Air Systems' unique muffler and oil coalescing filter installed at air motor discharge
- 8" intake and exhaust flange with molded safety guards
- Weight: 48 lbs.
- 1500 cfm free air delivery, at min psi and cfm
- 1040 cfm free air delivery, at min psi and cfm, 25 ft duct 1 - 90° bend
- 3000 cfm free air delivery, at max psi and cfm
- 1725 cfm free air delivery, at max psi and cfm, 25 ft duct, 1 - 90° bend

Conductive Saddle Vent® Ventilation Kits for Hazardous Locations

5FYA2 (SVB-E8XCUP)
Explosion-Proof Electric Kit

Centrifugal Ventilation Blower Kits for Hazardous Locations

Description	ASI Part #	Grainger Item #
Explosion-Proof Electric Blower Kit, includes SVB-E8EXP, 8" blower and SV-CUPCND Conductive Saddle Vent® Ventilation Kit	SVB-E8XCUP	5FYA2
Pneumatic Blower Kit, includes SVB-A8, 8" blower and SV-CUPCND Conductive Saddle Vent® Ventilation Kit	SVB-A8CUP	5FYA7
Conductive Saddle Vent® Kit, includes Conductive Saddle Vent® 90° elbow, 6 and 15ft. Conductive duct, Duct canister, and universal mount	SV-CUPCND	3WE68

For more information contact your Grainger Representative.
8S / January 2012