

Occupational Health & Safety Centrifugal Ventilation Blowers for 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. U.S. 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 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 to be Hazardous or Potentially Hazardous, the ventilation 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. Centrifugal 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.**



5FXZ6 (SVB-E8)
Electric Blower

Reference 1910.146 OSHA Confined Space Entry Regulation 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 90° 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.

Occupational Health & Safety Centrifugal Ventilation Blowers for Non-Hazardous Locations



Product Features
Single Speed Electric Blower
5FXZ6 (SVB-E8)

- 3/4 HP electric motor, 115 VAC, 11.2 amp, 60 Hz
- GFI power cord
- Aluminum non-sparking blower wheel
- Polyethylene fan housing
- Powder coat tubular steel frame with dual handles
- 8" intake and exhaust flange with molded safety guards
- Weight: 53 lbs.
- Dimensions: 23"L x 12" W x 19"H
- 1570cfm, free air delivery
- 1047cfm, 25ft. duct, 1 - 90° bend



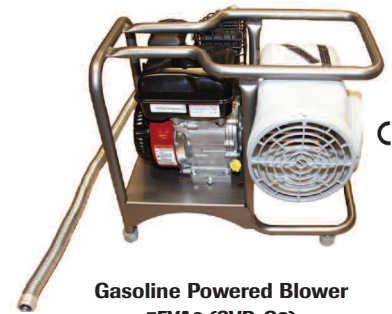
Economy Electric Blower
5FYA1 (SVB-E8EC)

- 1/2 HP electric motor, 7.9 amps, 60 Hz, 115 VAC
- GFI power cord
- Steel blower wheel
- Polyethylene fan housing
- Powder coat steel frame
- 8" intake and exhaust flange with molded safety guards
- Weight: 37 lbs.
- Dimensions: 17"L x 17" W x 18"H
- 1390 cfm, free air delivery
- 973 cfm, 25ft. duct, 1 - 90° bend



2-Speed Electric Blower
5FXZ7 (SVB-E8-2)

- 3/4 HP, 2-speed electric motor, 115 VAC, 11.5 amp, 60 Hz
- Aluminum non-sparking blower wheel
- Polyethylene fan housing
- Powder coat tubular steel frame with dual handles
- 8" intake and exhaust flange with molded safety guards
- Weight: 58 lbs.
- Dimensions: 23"L x 12" W x 19"H
- 750 cfm low/1570 cfm high, free air delivery
- 490 cfm low/1047 cfm high, 25ft. duct, 1 - 90° bend



Gasoline Powered Blower
5FYA0 (SVB-G8)

- 3.5 HP Briggs & Stratton motor - meets CAL/OSHA emission standards
- 5ft. remote flexible steel exhaust hose with custom gas-tight muffler to reduce intake of CO exhaust
- Polyethylene fan housing
- Powder coat tubular steel frame with dual handles
- 8" intake and exhaust flange with molded safety guards
- Weight: 53 lbs.
- Dimensions: 23"L x 12" W x 19"H
- 1500 cfm min - 3000 cfm max free air delivery
- 1040 cfm min - 1725 cfm max, 25ft. duct, 1 - 90° bend

Centrifugal Ventilation Blower Kits for Non-Hazardous Locations

Description	ASI Part #	Grainger #
Single Speed Electric Blower Kit, includes 8" SVB-E8 blower and SV-CUP Saddle Vent® Ventilation Kit	SVB-E8SCUP	5FYA4
2-Speed Electric Blower Kit, includes 8" SVB-E8-2 blower and SV-CUP Industrial Saddle Vent® Ventilation Kit	SVB-E82CUP	5FYA5
Economy Electric Blower Kit, includes 8" SVB-E8EC blower and SV-CUP Industrial Saddle Vent® Ventilation Kit	SVB-E8CUP	5FYA3
Gasoline Blower Kit, includes 8" SVB-G8 blower and SV-CUP Industrial Saddle Vent® Ventilation Kit	SVB-G8CUP	5FYA6
Industrial Saddle Vent® Ventilation Kit includes Industrial Saddle Vent®, 90° elbow, 6 and 15 ft duct, Duct Canister, and Universal Mount	SV-CUP	3PAN9

