

Confined Space Ventilation Safety 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 while the confined space is occupied.
- 3) Use a purge time chart, provided on Air Systems' blowers, and below, 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%.
- 4) If toxic or combustible gases or low oxygen levels are encountered, increase ventilation purge times by 50% and retest the air quality.
- 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 that may be 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, 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 scraped along the surface of the steel tank; this may cause a spark where rust is forming. Always make certain that the Venturi blower has been properly 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 electric discharge.



The Conductive Saddle Vent® Ventilation System

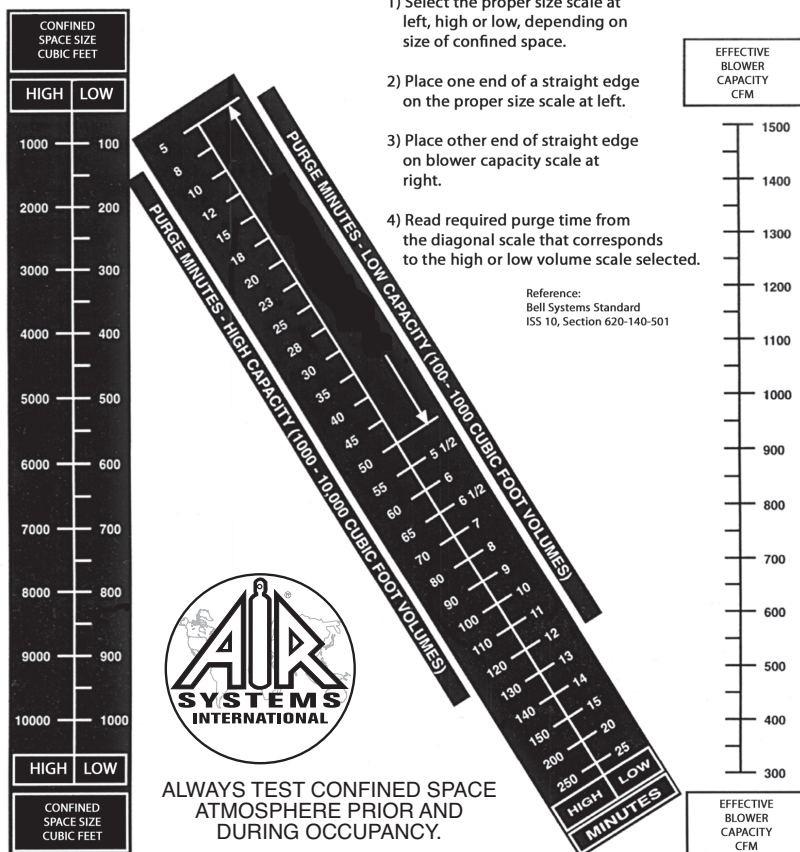
Confined Space Entry - Do it Right the First Time!

ESTIMATING APPROXIMATE PURGE TIMES

HOW TO USE CHART

- 1) Select the proper size scale at left, high or low, depending on size of confined space.
- 2) Place one end of a straight edge on the proper size scale at left.
- 3) Place other end of straight edge on blower capacity scale at right.
- 4) Read required purge time from the diagonal scale that corresponds to the high or low volume scale selected.

Reference:
Bell Systems Standard
ISS 10, Section 620-140-501



- 1) Proper ventilation procedures should be followed in accordance with all Federal, State and Local Laws.
- 2) Air quality of the confined space should be tested prior to ventilation.
- 3) Ventilate confined space for the minimum times recommended above and retest air quality prior to entry.
- 4) If toxic and/or combustible gases or low oxygen is encountered, increase purge times by 50%
- 5) If 2 blowers are used, add the two capacities and proceed with the "HOW TO USE CHART" directions above.
- 6) Effective blower capacity is measured with one or two 90° bends in 8" diameter, 25 foot blower hose.
- 7) Maintain continuous ventilation while confined space is occupied.