



INSTALLATION INSTRUCTIONS

For CV Series Explosion Vents

1) WARNING

- a) Read the complete instructions before attempting to install the explosion vent.
- b) It is the user's responsibility for the design and installation of adequate vent ducting or directional flow after rupture occurs with the explosion vent as intended. When size is specified, ZOOK assumes that adequate provisions have been made by the purchaser and/ or user for proper venting of a system to relieve the specific volume. Locate the explosion vent where people or property will not be exposed to the system discharge in the event of rupture. Vent toxic or flammable fumes to a safe location to prevent personnel injury or property damage.
- c) It is the user's responsibility to specify the Static burst pressure (P_{STAT}) rating at the coincident temperature at which the explosion vent is to be used. An explosion vent is a temperature sensitive device. The burst pressure of the explosion vent is directly affected by its exposure to the coincident temperature. Failure to utilize an explosion vent at the specified coincident temperature could cause premature failure.
- d) Particles may discharge when the explosion vent ruptures. These particles may be part of the explosion vent itself, or other environmental matter in the system. It is the user's responsibility to ensure that the particles are directed to a safe area to prevent personnel injury or property damage.
- e) Explosion vent service life is affected by corrosion, creep and fatigue, and physical damage. These conditions will derate the explosion vent to a lower pressure. The user should be prepared to handle a premature failure of the explosion vent. The media or other environmental conditions should not allow for any build-up or solidification of media on the explosion vent. This may increase the burst rating of the explosion vent.
- f) ZOOK explosion vents, when installed correctly, will provide a very good seal for liquids and most gases or vapors. However, ZOOK cannot guarantee the leakage rate of the explosion vent seal without prior knowledge of the requirement and details of the piping layout. Consult ZOOK for guidance if leakage is critical to the installation.
- g) The customer and/or its installer shall be responsible for the proper installation of explosion vent into a system.
Recommended torque values do not consider piping/ducting stress or alignment.
- h) Customer and/or its installers shall be responsible for improper installation and physical damage resulting therefrom, including, but not limited to, damage resulting from leakage, improper torquing, and/or failure to follow installation instructions.
- i) ZOOK standard Terms and Conditions of Sale apply unless otherwise stated in writing by the manufacturer.

2) FRAME INSPECTION AND PREPARATION – NEW FRAMES

- a) Carefully remove the new explosion vent frame from its packaging and disassemble by removing the studs and nuts. Discard the brown shipping paper and packaging sandwiched between the two halves of the frame.
- b) Wipe with a clean cloth and suitable solvent to remove all rust inhibitors and foreign material.
- c) Inspect the seat area for any scratches, dents, or nicks. Imperfections on these surfaces can cause leaks. DO NOT USE if any scratches, dents or nicks are detected, contact ZOOK immediately for instructions.
- d) The frame must not be machined or modified in any way without prior written approval from ZOOK.

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3) HOLDER INSPECTION AND PREPARATION – EXISTING FRAMES

- a) For existing installations remove the outlet frame from the piping/ducting by removing the studs and nuts and place on a clean flat surface.
- b) Remove the used explosion vent.
- c) Inspect the frames mating surfaces for foreign material. Remove any adhered gasket material from the previous installation and clean the gasket surfaces of the holder thoroughly. Dirt and grit on these surfaces can cause leaks.
- d) Inspect the seat area for any scratches, dents, or nicks. Imperfections on these surfaces can cause leaks. **DO NOT SCRAPE OR SCRATCH** any seating surface. If wiping these surfaces with a clean cloth and suitable solvent does not remove surface residue, fine emery cloth or steel wool may be utilized. Care should be exercised not to exert sufficient pressure on the emery cloth or steel wool to cut or groove these sealing surfaces. **DO NOT USE** if any scratches, dents or nicks cannot be removed, contact ZOOK immediately for instructions.
- e) The frame must not be machined or modified in any way without prior written approval from ZOOK.

4) INSTALLATION OF THE EXPLOSION VENT INTO THE SYSTEM

- a) **CAUTION:** All ZOOK explosion vents are recommended for installation into frames manufactured by ZOOK ONLY.
- b) **CAUTION:** Explosion vents are precision instruments and must be handled with extreme care. Explosion vents should be installed only by qualified personnel familiar with explosion vents and proper installation practice.
- c) Carefully remove the new explosion vent from its package.
- d) Examine the new explosion vent carefully before installation. **Do not use if there is any indication of damage.** Handle with extreme care.
- e) Carefully install the new explosion vent between the inlet and outlet mounting frames using new gaskets as shown in figure 1. ZOOK recommends compressed fiber gasket no greater than 1/16" (1.6mm) thick. The user is cautioned to select a gasket material that is suitable for the intended service and will resist "cold flow". In the event of cold flowing of the gaskets, the installation torque will relax, which can result in erratic bursting of the Explosion vent and/or leakage.
- f) Do not apply any compounds to the gasket or seating surfaces.
- g) Install installation studs and nuts, making sure they are free of any foreign matter, and well lubricated.
- h) **WARNING:** If the explosion vent is installed upside down, the burst pressure may exceed the marked burst pressure. **PAY CLOSE ATTENTION TO THE DIRECTIONAL ARROWS ON THE EXPLOSION VENT.**
- i) **WARNING:** The explosion vent tag is designed to provide critical information about the explosion vent and should NOT be removed.
- j) Run-up all studs finger tight while maintaining parallelism between the inlet and outlet frames.
- k) Using a torque wrench, tighten all studs and nuts to 25 foot pounds (34 newton meters) using a crisscross pattern. After following this sequence, a final tightening should be performed bolt-to-bolt to ensure that all bolts have been evenly torqued. The use of hardened washers will enhance the installation by reducing the friction due to possible galling of the nut bearing surfaces.
- l) Verify parallelism between the inlet and outlet frames.
- m) Stud torque values should be verified periodically at the system temperature.

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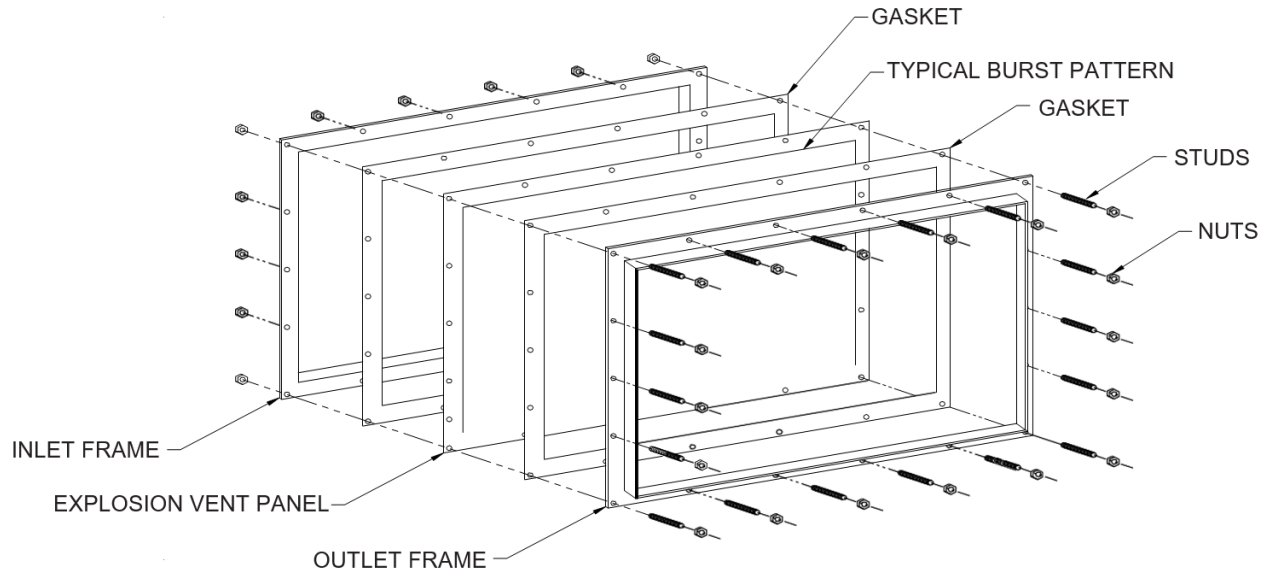


FIGURE 1|