

High Speed Isolation Valves

Explosion Protection System Components

Advantages:

- Provides mechanical barrier within milliseconds after detection of an explosion.
- Full-bore construction minimizes pressure drop and prevents product build-up.
- ANSI B16.5 150# or DIN 2501 PN10 mounting flange options.
- Sound construction and unique design minimizes maintenance.
- Valve seat and liner materials available for any application.
- Minimal reconditioning required following actuation.
- No gate deformation when subject to explosion pressures up to 150 psig.



Application

The IEP Technologies Explosion Isolation Valve provides a solution for vital explosion isolation applications. It operates in milliseconds to provide a mechanical barrier within a pipeline. NFPA 68 and NFPA 654 highlight the importance of installing explosion isolation barriers to mitigate explosion propagation between interconnected process equipment. These barriers may be chemical, which can be provided by IEP Technologies High Rate Discharge Extinguishers, or mechanical such as IEP Technologies High Speed Isolation valves. Typical applications for the valve include explosion isolation on dust collectors, mills, fans, vapor recovery lines, dryers, and other interconnected process equipment.

Description

The IEP Technologies High-Speed Isolation Valve has a stainless steel body incorporating a full ported stainless steel valve gate. The valve is designed to withstand a 150 psi pressure wave from an explosion without deformation. Closure is achieved in milliseconds by rapidly discharging nitrogen into a piston actuator. The nitrogen is supplied by an IEP Technologies High Rate Discharge bottle. Detection is typically provided by an IEP Technologies explosion pressure detector. The detector is monitored by a IEP Technologies control unit which provides supervision, alarm, system actuation and process shutdown.

Specifications

Process Pressure: Full vacuum to 30 psi (2 bar).

Deflagration Event Pressure: 150 psi (10 bar) maximum.

Flange Drilling: ANSI B16.5 150# or DIN 2501 PN10.

Actuation: Piston operated from nitrogen supply provided by IEP Technologies high strength alloy steel bottle rated to DOT 4BA500 or TC 4BAM.

Body Gate Material: 316 stainless steel.

Gate Shroud Material: 316 stainless steel.

Piston/Weldment Material: Painted mild steel.

Seat Material: Ethylene Propylene Rubber (EPDM, Nordel) or Fluorocarbon Rubber (Viton®, FKM).

Liner Material: Ultra-high molecular weight polymer (UHMWP) or filled PTFE (Teflon®).

Ordering Information

