

X-PAC III Grain Elevator Protection

Explosion Protection System Components

Advantages:

- Designed specifically for grain bucket elevators.
- Integral mounting flange and detection port cleaning assembly simplifies installation and maintenance.
- DOT and Transport Canada (TC) approved extinguishers enable transportation while pressurized - on site filling not required during installation.
- Lightweight - minimizes the need for reinforcing leg casings.
- Microprocessor-based control panel provides supervision, annunciation, and process interlock.
- Isolation extinguishers provided for dust extraction lines.
- Two detectors in AND configuration required for system actuation.



Application

The IEP Technologies X-PAC III Grain Elevator Protection System is a cost-effective solution to the explosion risk associated with grain bucket elevators. Explosion protection systems are a suitable approach for protecting grain elevator legs handling bulk raw grain per NFPA 61 Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities. The X-PAC III offers a significant advantage over vented elevator legs by providing explosion isolation extinguishers on the elevator inlet chutes, discharge chutes, and dust extraction lines. Isolation extinguishers mitigate the propagation of explosions to connected equipment where devastating secondary explosions can occur. This is a particularly important consideration for elevators feeding the main grain storage silos.

Description

The X-PAC III system consists of EX 200™ control units and four types of devices mounted on the bucket elevator. These are the Detector-Extinguisher Unit, the Extinguisher Unit, the Duct Isolation Unit, and the Shut-down Detector. Each device has a steel frame for mounting onto the bucket elevator. The Duct Isolation Unit is equipped with a flexible hose for mounting onto a dust extraction line. Typically, separate protection zones are provided for the elevator head and elevator boot. Upon detection of a deflagration, the extinguishers within that zone discharge DuPont FE-25™ suppressant into the process. Simultaneously the EX 200 control unit initiates shutdown of the process and activates an alarm.

Ordering Information

Description	Part Number
X-PAC III Detector-Extinguisher Unit	32-200000-020
X-PAC III Extinguisher Unit	32-200000-021
X-PAC III Duct Isolation Unit	32-200000-022
X-PAC III Shutdown Detector	32-200001-002
EX 200 Control Panel	32-091500-001
Transport Canada approved X-PAC III units are also available.	

Specifications

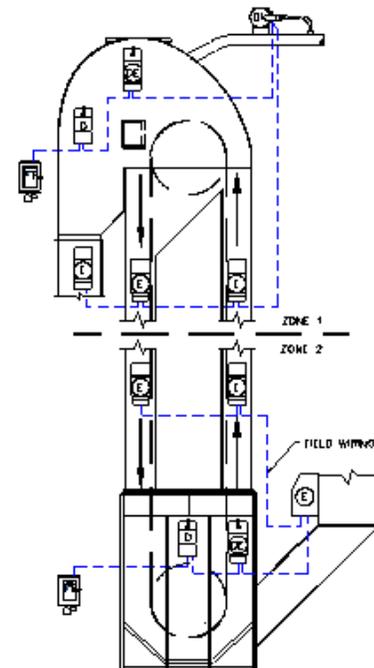
Control: EX 200 - refer to publication MC-515 for details.

Detection: Diaphragm operated explosion pressure detector - refer to publication MC-524 for details.

Overall Dimensions: All units: 12.75 inches (32.39 cm) deep, 21.75 inches (55.25 cm) high, 10.25 inches (26.04 cm) wide.

Approximate Weights: Detector-Extinguisher Unit 65 lbs (29.54 kg). Extinguisher Unit 50 lbs (22.67 kg) Duct Isolation Unit 50 lbs (22.67 kg) Shutdown Detector 21lbs (10.5 kg).

Typical Installation



- DE - X-PAC III Detector-Extinguisher Unit
- E - X-PAC III Extinguisher Unit
- DI - X-PAC III Duct Isolation Unit
- D - X-PAC III Shutdown Detector
- CP - EX 200 Control Panel