

Dust Collector Explosion Protection

What type of Explosion Protection Should be Used and Why?

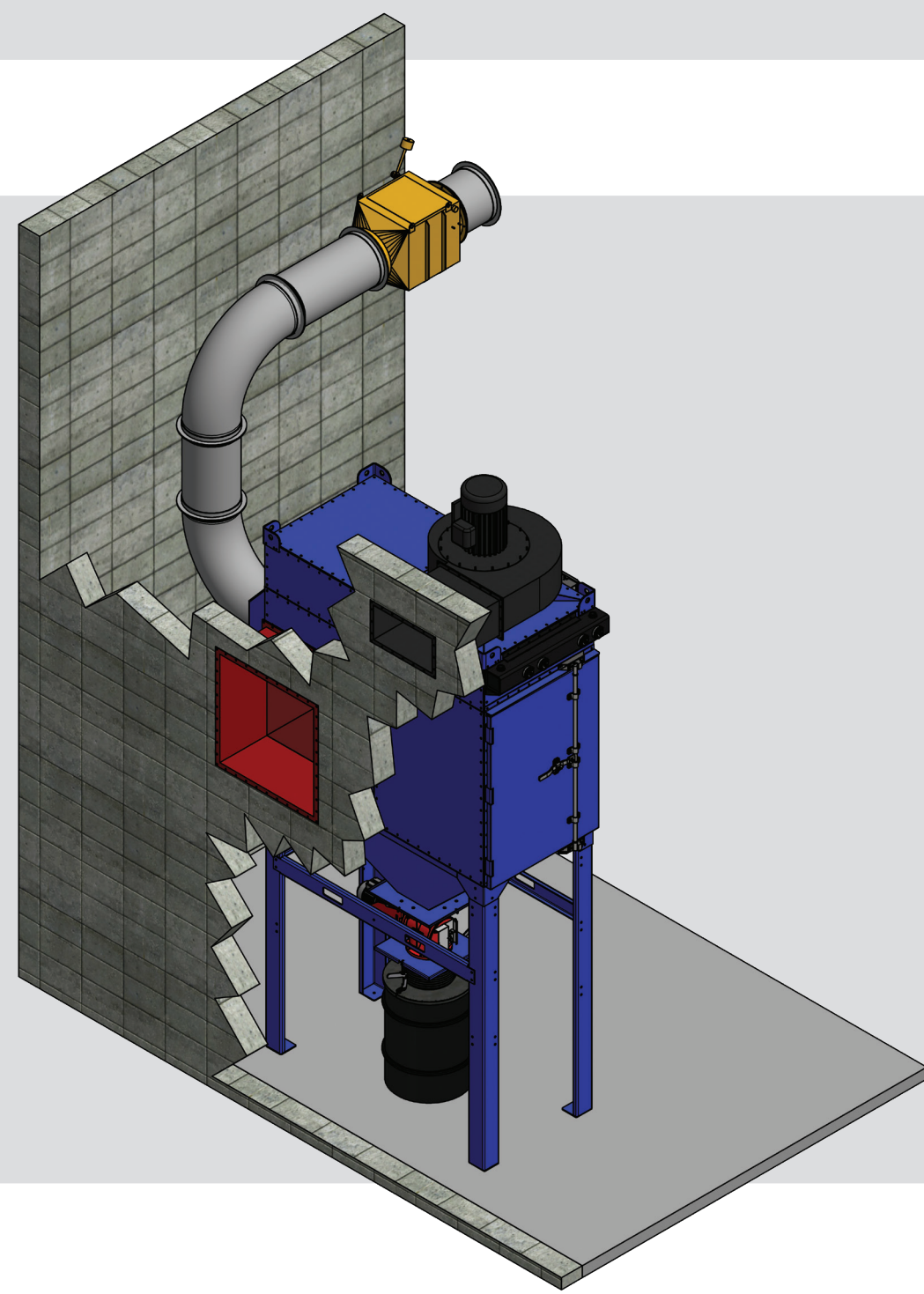
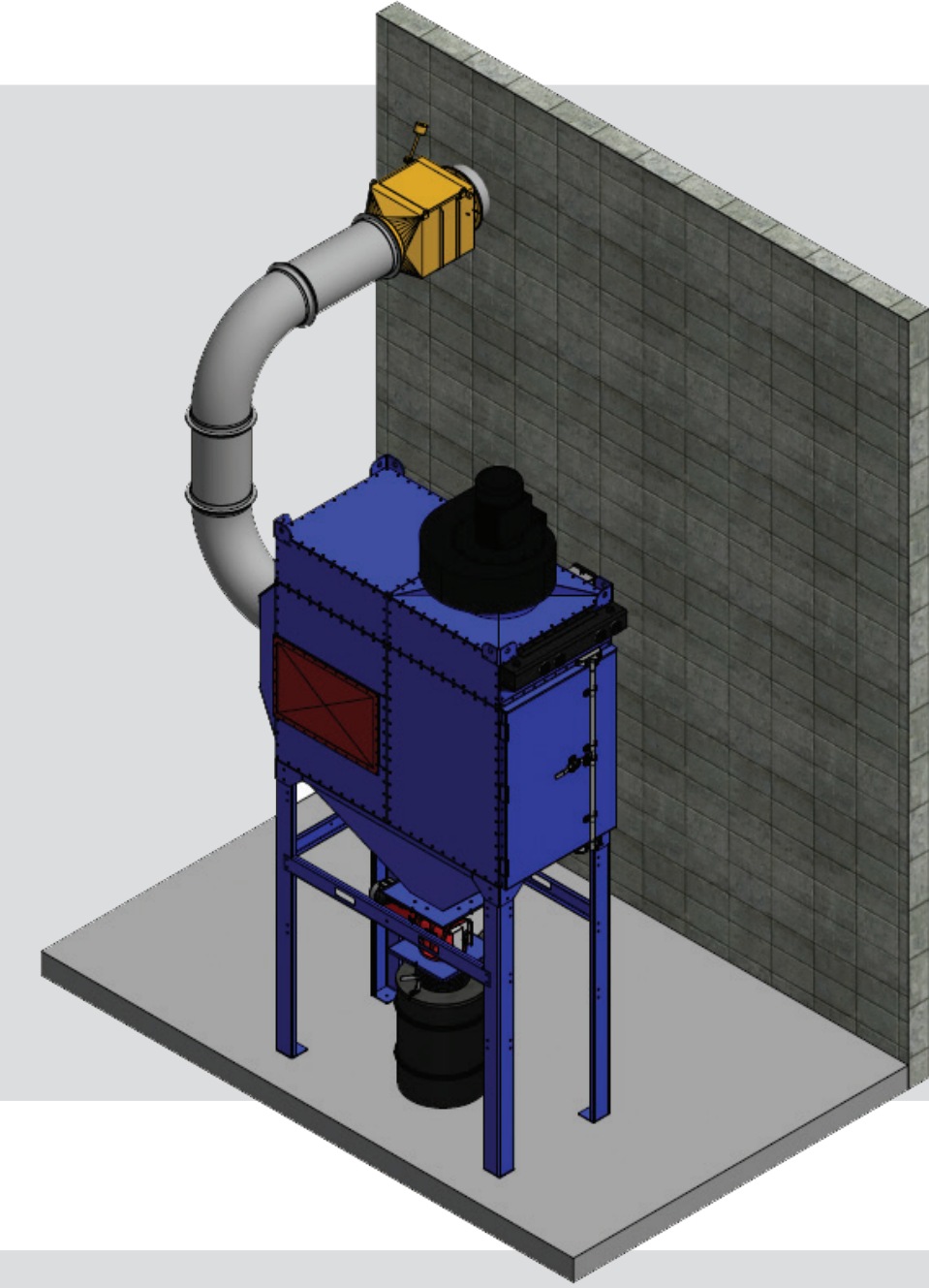
Collector Outside – Clear Safety Zone

Standards

- NFPA 652
- NFPA 68 (Venting)
- NFPA 69 12.2.4.4.1 (Rotary Airlock)

Protection

- Isolation on inlet line to collector
- Discharge directed to a safe unoccupied location (or outfitted with isolation to return back to the building or a process)
- Explosion venting on unit (Explosion relief panels directed towards an unoccupied area)
- Rotary airlock with close clearance as a form of isolation on discharge



Collector Inside – Vented Outside to Clear Safety Zone

Standards

- NFPA 652
- NFPA 68 6.8 (Venting Through Discharge Ducts)
- NFPA 69 12.2.4.4.1 (Rotary Airlock)

Protection

- Isolation on inlet line to collector
- Discharge directed to a safe unoccupied location (or outfitted with isolation to return back to the building or a process)
- Explosion venting on unit near exterior wall. Relief vent directed through the wall with properly sized discharge duct (Explosion relief panels directed towards an unoccupied area)
- Rotary airlock with close clearance as a form of isolation on discharge

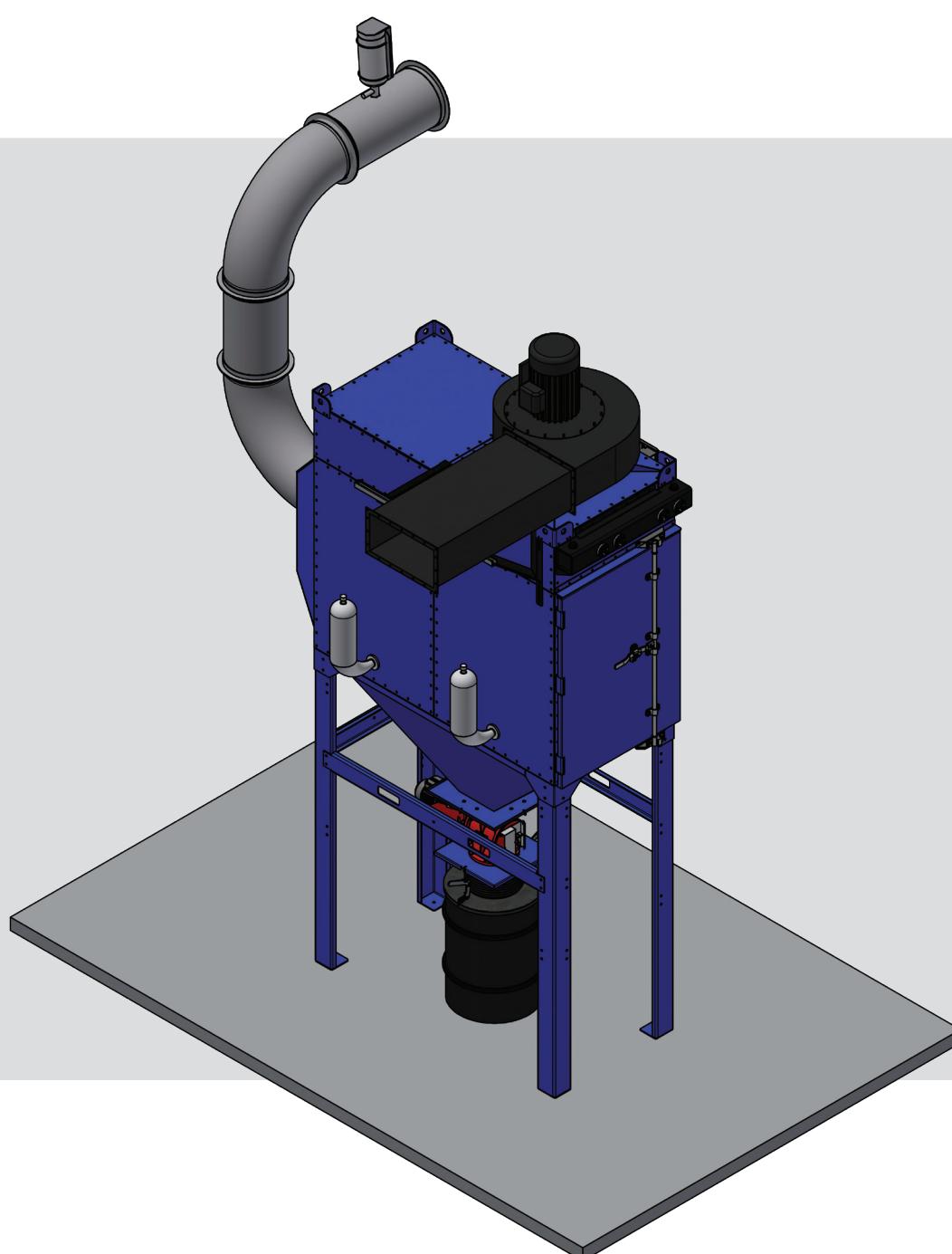
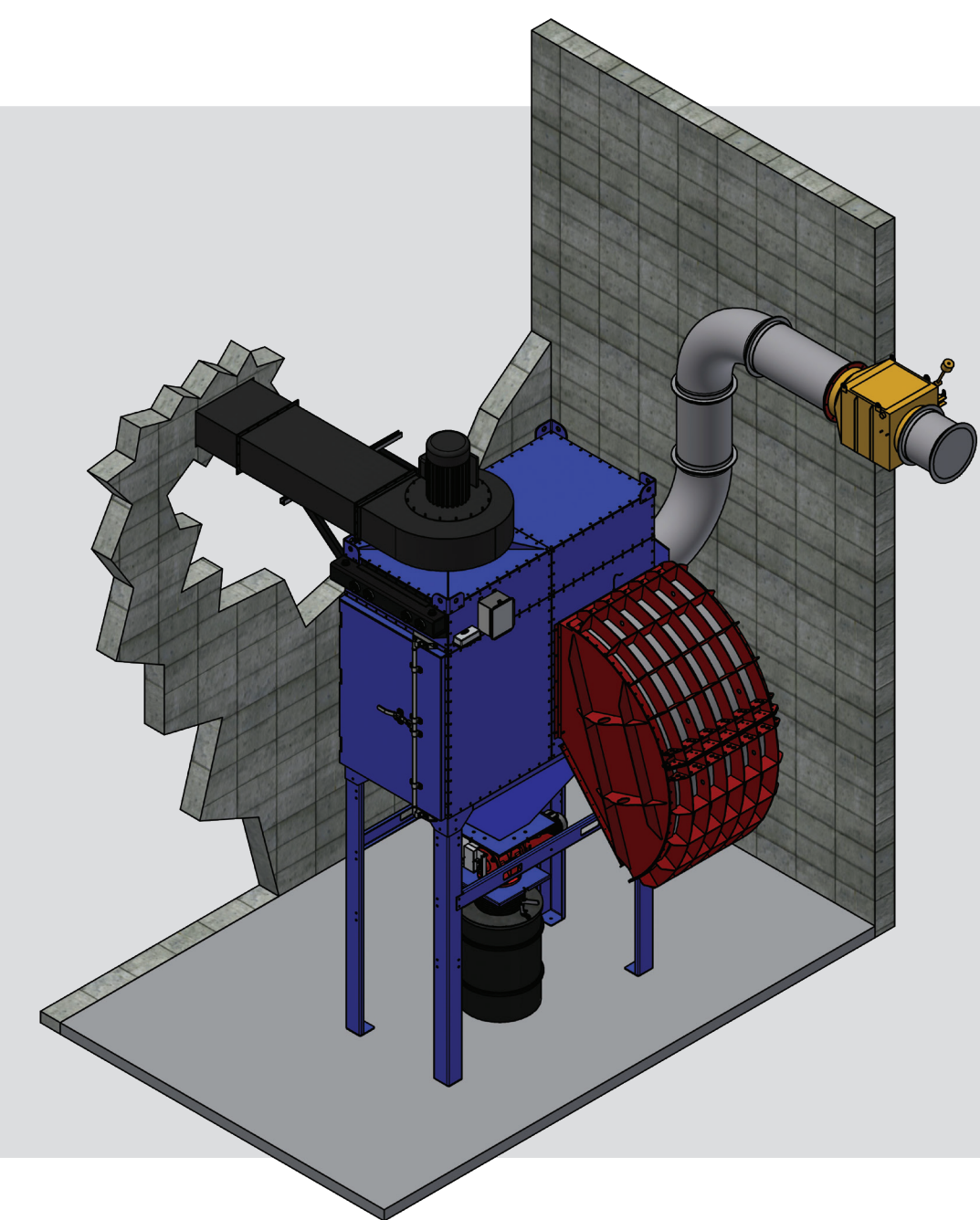
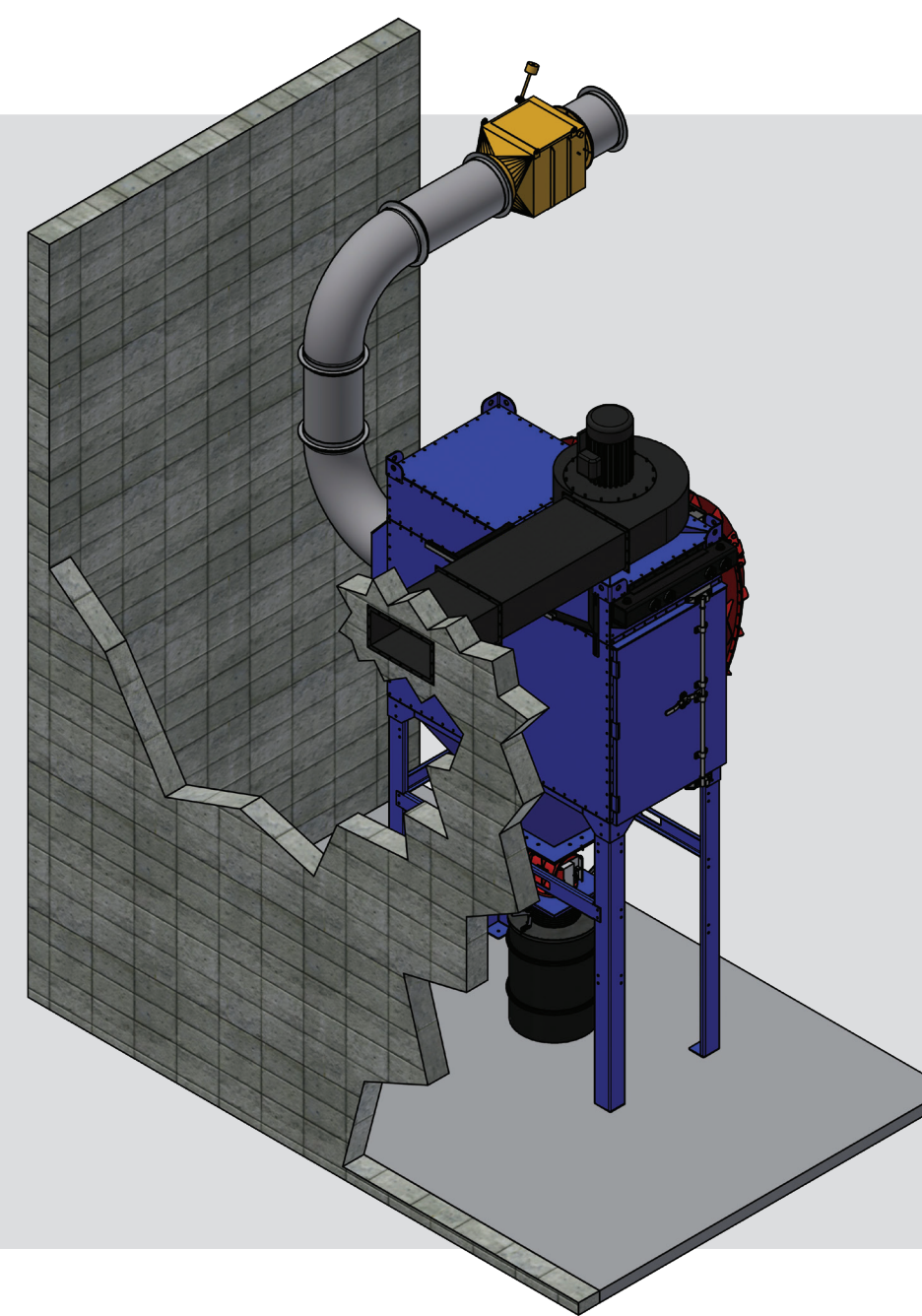
Collector Inside – Flameless Vent

Standards

- NFPA 652
- NFPA 68 6.9 (Venting with Flame Arresting and Particulate Retention)
- NFPA 69 12.2.4.4.1 (Rotary Airlock)

Protection

- Isolation on inlet line to collector
- Discharge directed to a safe unoccupied location (or outfitted with isolation to return back to the building or a process)
- Explosion venting into a Flameless vent (flame arresting device)
- Rotary airlock with close clearance as a form of isolation on discharge



Collector Inside – Suppression

Standards

- NFPA 652
- NFPA 69 Chapter 10 (Deflagration Control by Suppression)
- NFPA 69 12.2.4.4.1 (Rotary Airlock)

Protection

- Isolation on inlet line to collector
- Discharge directed to a safe unoccupied location (or outfitted with isolation to return back to the building or a process)
- Chemical Suppression system designed to withstand a deflagration inside of the unit
- Rotary airlock with close clearance as a form of isolation on discharge

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