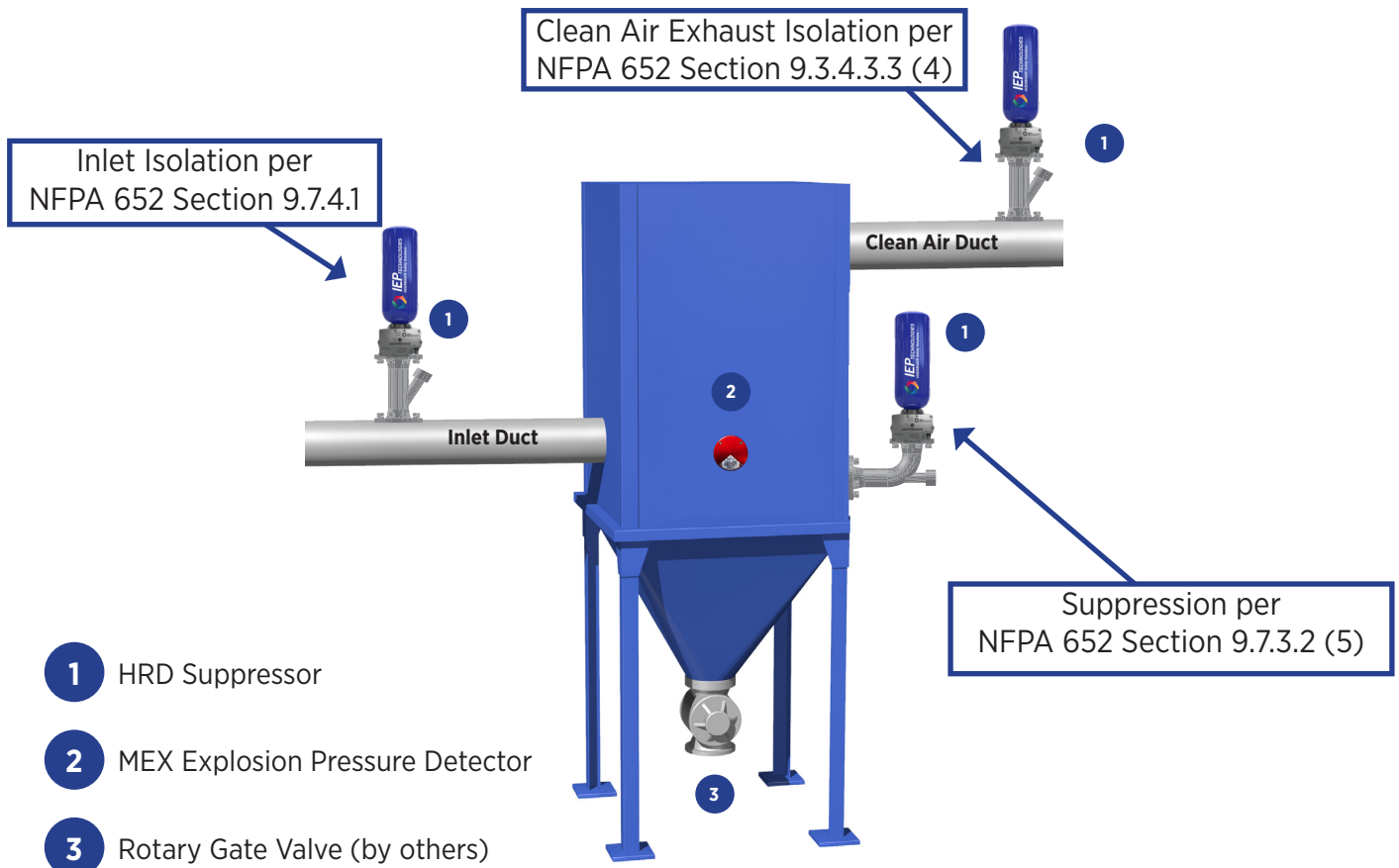




Air Material Separator Protection

Explosion Protection by Suppression and Inlet & Outlet Isolation per NFPA 652, Standard on the Fundamentals of Combustible Dust, 2019 Edition. Reference: OSHA Combustible Dust Directive NEP CPL 03-00-008.



Key Excerpts from NFPA 652, 2019 Edition

9.7 Explosion Prevention/Protection

9.7.3.2 Explosion protection systems shall incorporate one or more of the following methods of protection: (5) Deflagration suppression systems in accordance with NFPA 69.

9.7.4 Equipment Isolation

9.7.4.1 Where a dust explosion hazard exists, isolation devices shall be provided in accordance with NFPA 69 to prevent deflagration propagation between connected equipment.

9.3.4.3 Clean Exhaust Air

9.3.4.3.3 Recycling of AMS exhaust to buildings or building compartments shall be permitted when all the following conditions are met: (4) Provisions are incorporated to prevent transmission of flame and pressure effects from a deflagration in an AMS back to the facility unless a DHA indicates that those effects do not pose a threat to the facility or the occupants.

Key Excerpts from NFPA 69, 2019 Edition

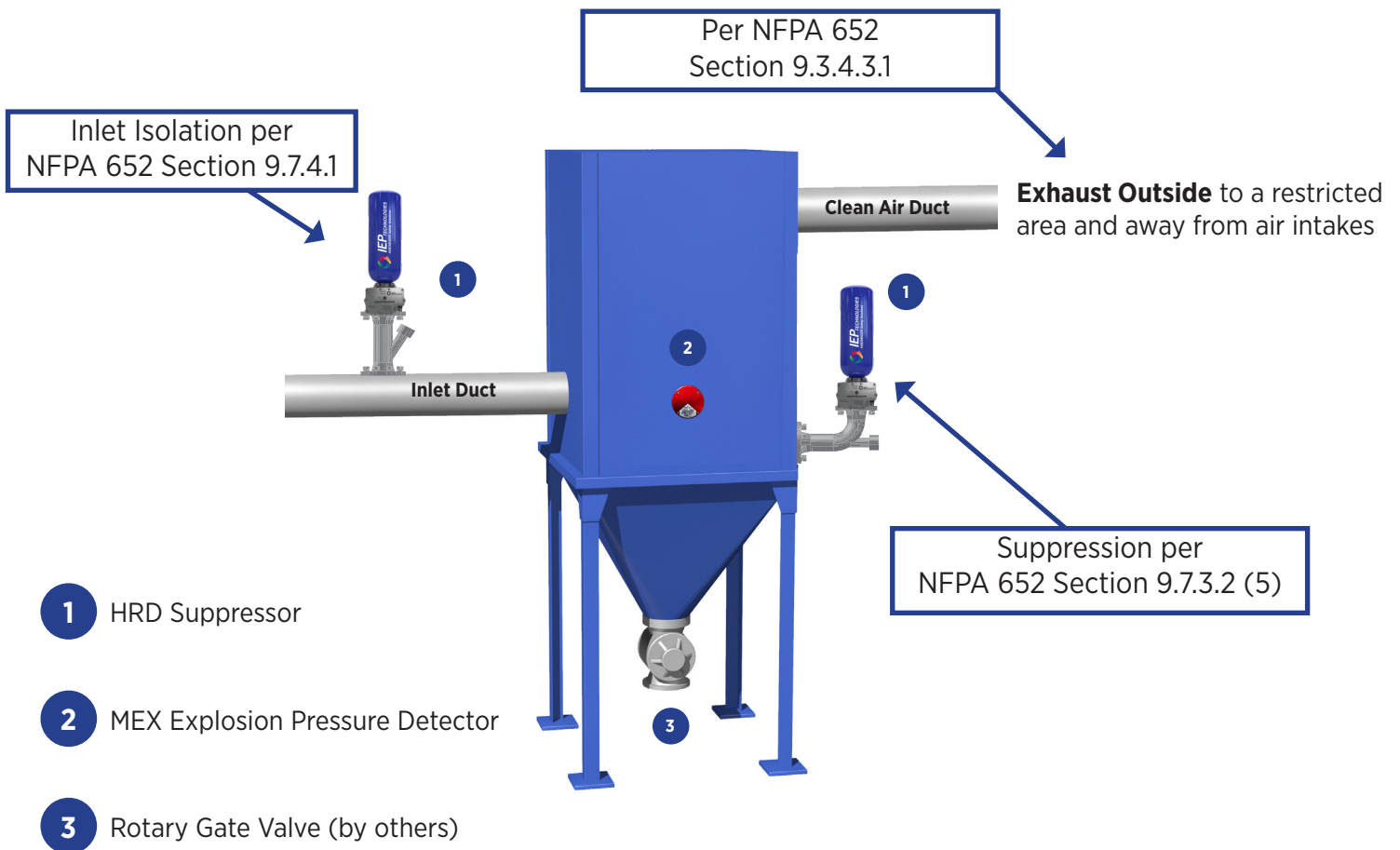
10.4.2 (11.4.1) System Design Verification

10.4.2.1 (11.4.1.1) System design methodology and application range shall be supported by appropriate testing and certified by a recognized testing organization acceptable to the authority having jurisdiction.

10.4.2.2 (11.4.1.2) The system design shall be based on testing relevant to the application.



Explosion Protection by Suppression and Inlet Isolation per NFPA 652, Standard on the Fundamentals of Combustible Dust, 2019 Edition. Reference: OSHA Combustible Dust Directive NEP CPL 03-00-008.



Key Excerpts from NFPA 652, 2019 Edition

9.7 Explosion Prevention/Protection

9.7.3.2 Explosion protection systems shall incorporate one or more of the following methods of protection: 5) Deflagration suppression systems in accordance with NFPA 69.

9.7.4 Equipment Isolation

9.7.4.1 Where a dust explosion hazard exists, isolation devices shall be provided in accordance with NFPA 69 to prevent deflagration propagation between connected equipment.

9.3.4.3 Clean Exhaust Air

9.3.4.3.1 Exhaust air from the final AMS shall be discharged outside of buildings to a restricted area separated from clean air intakes for the building.

Key Excerpts from NFPA 69, 2019 Edition

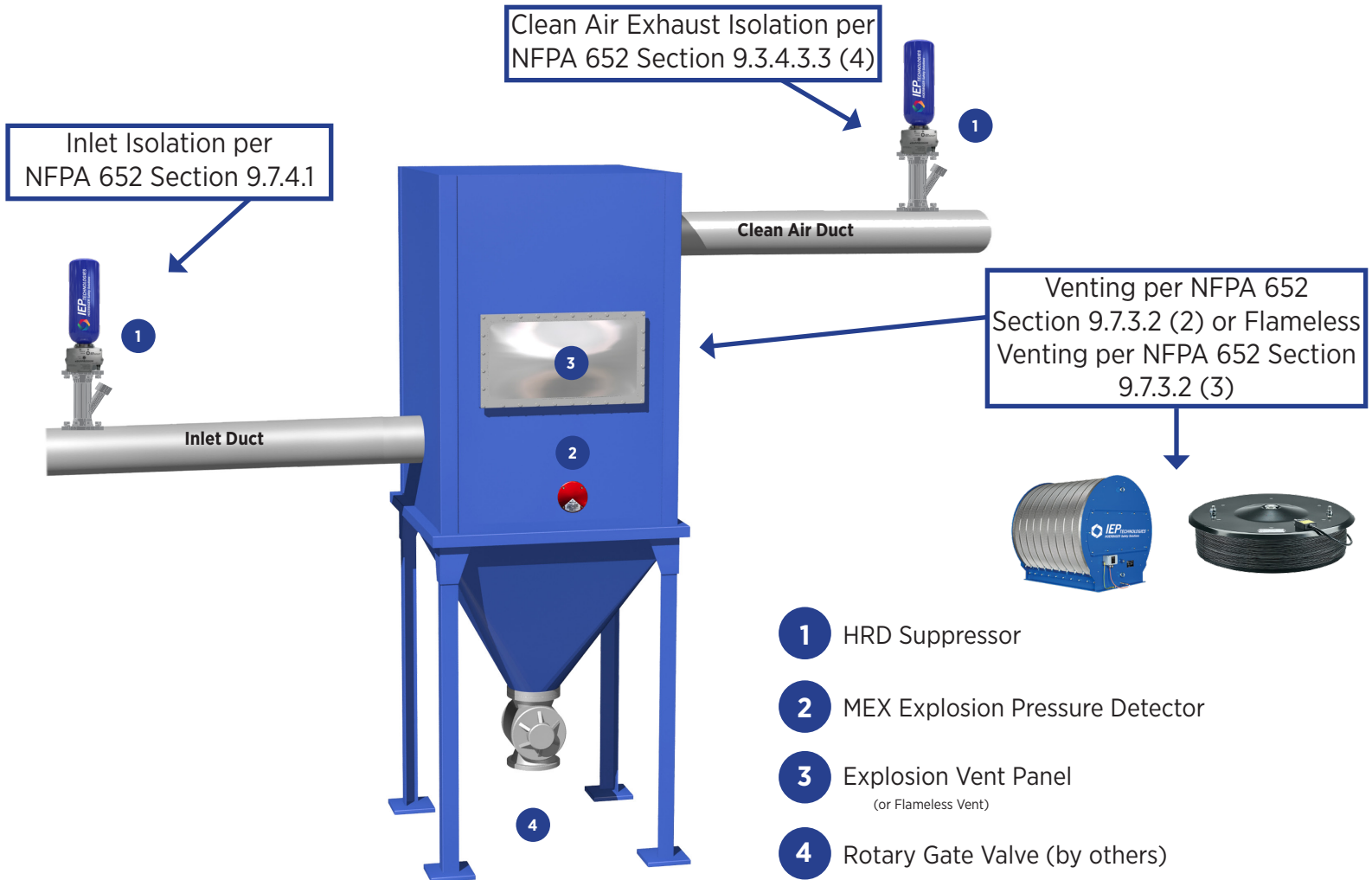
10.4.2 (11.4.1) System Design Verification

10.4.2.1 (11.4.1.1) System design methodology and application range shall have been supported by appropriate testing and verified by an independent party acceptable to AHJ.

10.4.2.2 (11.4.1.2) The system design shall be based on testing relevant to the application.



Explosion Protection by Venting and Inlet & Outlet Isolation per NFPA 652, Standard on the Fundamentals of Combustible Dust, 2019 Edition. Reference: OSHA Combustible Dust Directive NEP CPL 03-00-008



Key Excerpts from NFPA 652, 2019 Edition

9.7 Explosion Prevention/Protection

9.7.3.2 Explosion protection systems shall incorporate one or more of the following methods of protection: 2) Deflagration venting in accordance with NFPA 68 or (3) Deflagration venting through listed flame-arresting devices in accordance with NFPA 68.

9.7.4 Equipment Isolation

9.7.4.1 Where a dust explosion hazard exists, isolation devices shall be provided in accordance with NFPA 69 to prevent deflagration propagation between connected equipment.

9.3.4.3 Clean Exhaust Air

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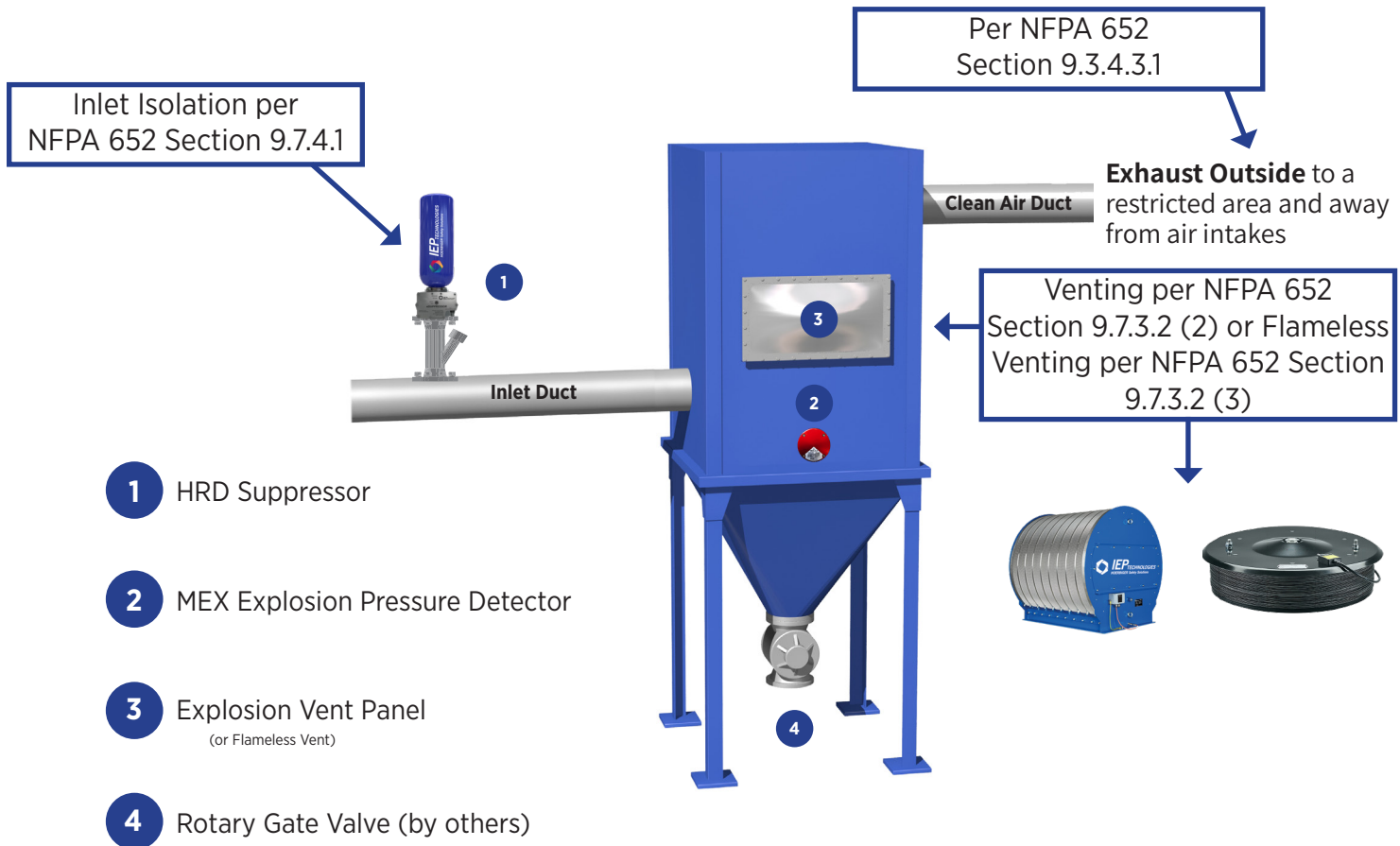
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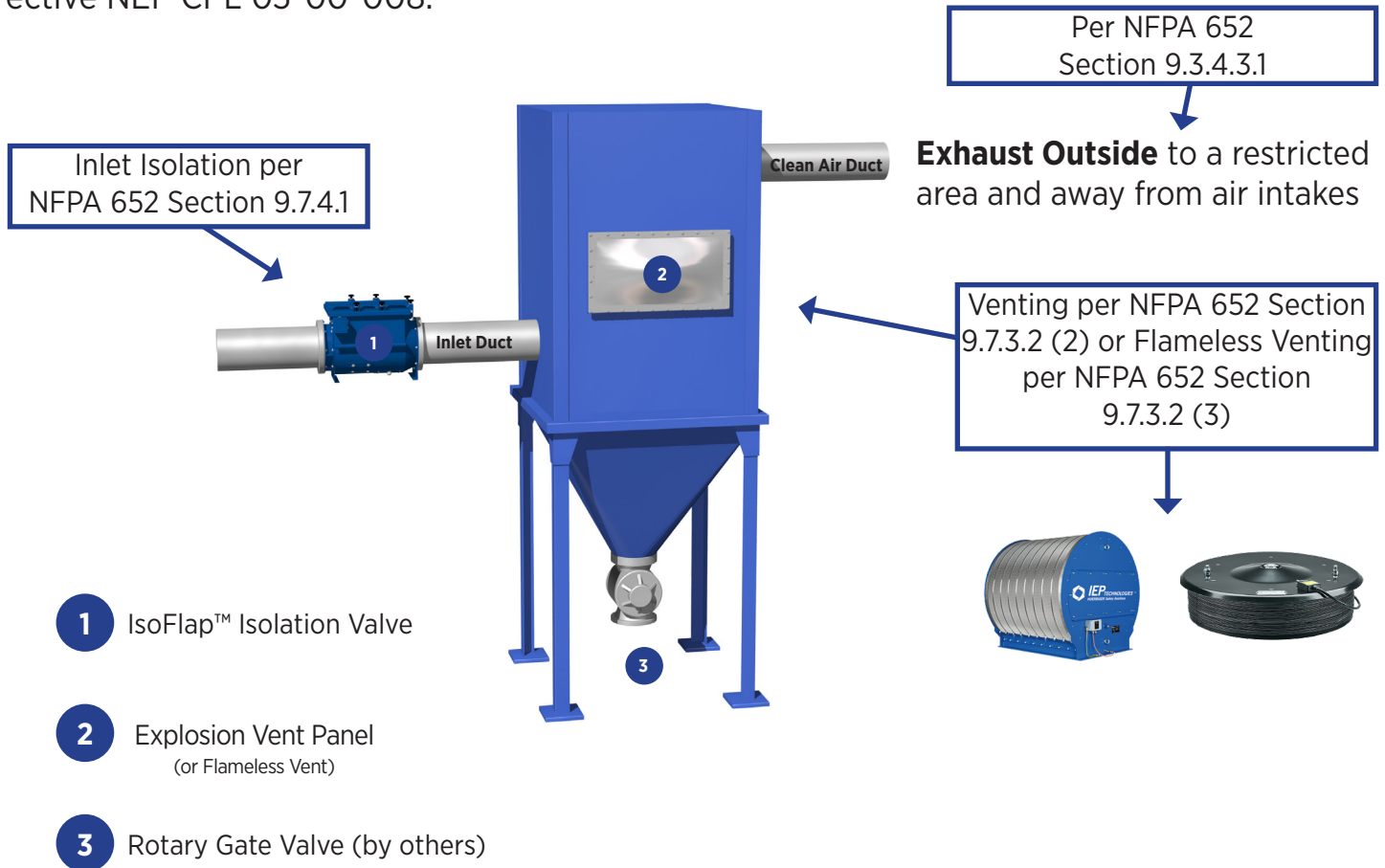
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Key Excerpts from NFPA 69, 2019 Edition

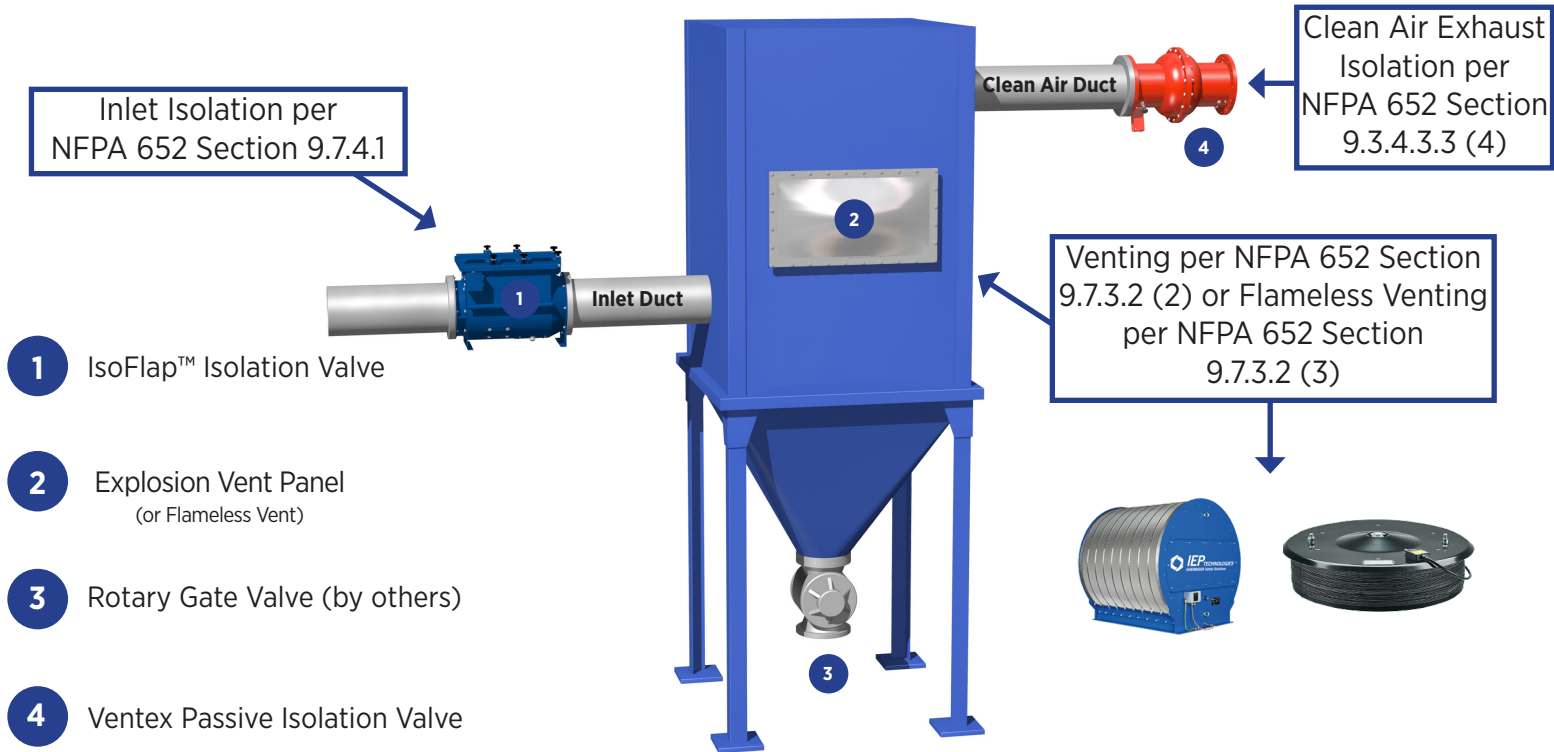
12.2.3.5 System Certification

12.2.3.5 (10.4.2.1) The flow-actuated flap valve deflagration isolation system design methodology and application range shall be supported by appropriate testing and certified by a recognized testing organization acceptable to the authority having jurisdiction.

12.2.3.5.1 A performance demonstration shall determine the following: (1) Minimum and maximum location placement distances from the expected ignition source (2) Minimum and maximum Kst (3) Maximum number of flow direction changes (4) Maximum dust loading (5) Maximum air velocity (6) Range of allowable Pred within the protected enclosure where the ignition might occur.



Explosion Protection by Venting and Inlet & Outlet Isolation per NFPA 652, Standard on the Fundamentals of Combustible Dust, 2019 Edition. Reference: OSHA Combustible Dust Directive NEP CPL 03-00-008



Key Excerpts from NFPA 652, 2019 Edition

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9.3.4.3 Clean Exhaust Air

9.3.4.3.3 Recycling of AMS exhaust to buildings or building compartments shall be permitted when all the following conditions are met: (4) Provisions are incorporated to prevent transmission of flame and pressure effects from a deflagration in an AMS back to the facility unless a DHA indicates that those effects do not pose a threat to the facility or the occupants.

Key Excerpts from NFPA 69, 2019 Edition

12.2.3.5 System Certification

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