

Comparative Analysis of Protection Levels

Level of Protection

Pros

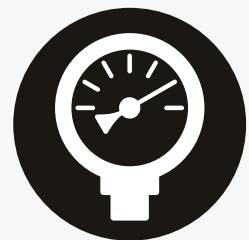
Cons



Level 1: Gas Detection Equipment

- + Real-time monitoring for early hazard detection.
- + Swiftly alerts occupants and responders to potential threats.
- + Vital for immediate response
- + Relatively cost-effective

- Primarily focused on detection
- May not address the root causes of toxic gas exposure comprehensively
- Does not meet "Shelter in Place" requirements



Level 2: Pressurization

- + Proactive approach to prevent toxic gas infiltration
- + Complements gas detection equipment for strengthened safety
- + Reduces the risk of gas exposure
- + Enhances overall safety within the building

- Relies on gas detection equipment and pressurization from HVAC system
- Does not meet "Shelter in Place" requirements



Level 3: Airlock

- + Comprehensive protection during extreme scenarios
- + Ensures safety when evacuating is impractical
- + Features advanced air leakage control
- + Safeguards occupants and the environment comprehensively

- The most complex and costly protection level
- Requires careful planning and maintenance
- Is not necessary for all facilities, leading to potential overinvestment