

Engineering Control Measures

It is recommended to install/implement where required the following engineering controls measures when using, transporting, moving, and storing compressed gas cylinders:

- Ensure appropriate ventilation is available in areas where the cylinders are used and stored
- Secure cylinders and lecture bottles in an upright position using the appropriate restraining devices.
NOTE: Securing devices for various sizes and shapes of compressed gas cylinders can be purchased from gas suppliers or safety equipment companies.
- Emergency Shutoff Switch – can be used at a remote location to cause pneumatic valves to shut, stopping gas flow. Switches should be non-electric so that arcs or sparks are not created around flammable gases.
- Gas Cabinets – hazardous gas cylinders should be housed in a gas cylinder cabinet. These cabinets can be equipped with sprinkler protection and ventilation.
- Flow Restrictors – can be used to limit hazardous gas flow to just over maximum flow needed, must be installed immediately downstream of each hazardous gas cylinder.
- Emergency Eyewash – must be present in areas where corrosive materials or gas is used
- Listed below are other control measures that can be used in conjunction with the aforementioned to control the risk of compressed gas use
 - Gas detection systems, alarms, etc.
 - Nitrogen purge system.
 - Flashback arrestors.
 - Leak monitors
- Place and tighten the valve protection cap on the compressed gas cylinder when the cylinder is not in use.
- If using flexible (non-fixed) tubing, for general practice, the recommendation is for the tubing to stay under 10 feet in total length. Contact EHS @ 951-827-5528 to assist you and the facilities manager to determine the proper engineering controls for the laboratory or workspace.