Compressed Gas Safety

How to Properly Secure Compressed Gas Cylinders

All gas cylinders must be secured in stands or with chains or straps and capped when not in use to prevent them from falling.

From the Safety Self-Assessment, Question 72:

Cylinders must be secured at all times with proper securing devices such as straps and clamps. The screw on cylinder caps must be in place at all times when a regulator is not connected to provide mechanical protection. Regulators must be removed and cylinder caps replaced prior to movement of compressed gas cylinders. (The torque on the valve assembly created by a cylinder falling and landing on the regulator assembly creates an increased risk of violent cylinder leakage).

Approved methods:

a. Gas cylinders should be strapped / chained to a secure fixture at a height of 1/2 to 2/3 of the cylinder height.

b. Wall mounted supports that are properly secured to the wall.

c. Floor supports that prevent tipping and do not create a trip hazard.

d. Bench supports that are properly maintained (tightened to the counter or table).

e. Capped and strapped to an approved cylinder cart.

f. Other unique devises that adequately secure and support the cylinders and present no other hazard.

Unapproved methods (including but not limited to):

a. Missing or no restraining strap

b. Gang strapping (strapping one cylinder to another)

c. Strapping of more than one cylinder with a single strap (cluster or group strapping).

d. Strapping to an unsecured object or fixture.

e. Frayed, broken, torn or damaged, restraining straps

f. Bungee cords, string, plastic chain, or any other material that is not capable of restraining the cylinder properly.

What follows are pictorial examples of cylinder securing products that can be purchased or constructed.
Single cylinder mounts (floor):
Single cylinder mounts (Bench):
Multi-cylinder mounts (wall):

Multi-cylinder mounts (bench):

Multi-cylinder mounts (Floor):
Small-cylinder mounts (Lecture bottles):
Other-cylinder mounts:
Uni-strut-cylinder mounts (Fixed):