



Northeastern University

Environmental Health & Safety

Compressed Gas Cylinder Fact Sheet

If your laboratory contains compressed gas cylinders, please read the following guidelines to ensure that they are being stored and used in a safe manner, according to the regulations.

1. Securing

- A minimum of 1 strap or chain (1/4" diameter) must be fastened around the cylinder above the center of gravity, which is about 2/3 of the way up
- Cylinders must be secured at all times
- Do not use wire, rope, or a frayed strap
- The strap or chain must be secured to a bracket, mounted either on a wall or a lab bench
- Cylinders should be secured vertically, unless they are on a cart specifically designed for horizontal storage

2. Storage

- The names of the gasses being stored should be prominently posted at the storage area
- If gasses are toxic (Health rating 3 or 4) they should be stored in a locked area only accessible by authorized personnel
- Cylinders should be stored in a well-ventilated area, as most gasses can be asphyxiants
- Cylinders that accept a valve cap should be stored with the cap securely on
- When not in use, the valves should be closed on all cylinders
- Store cylinders away from flammable or combustible liquids, and away from corrosive chemicals or fumes which may damage the cylinders
- If stored outside, the bottom of the cylinder must be protected from the ground
- Storage temperature must not exceed 125 F
- Must be labeled as "full", "in use" or "empty"
- The door sign on the lab must state that compressed gas is being used

3. Transport

- Cylinders must be transported on specifically designed hand trucks
- Cylinders must never be dragged, rolled, or lifted by the cap
- Do not allow cylinders to be transported while touching each other, or close enough to strike each other
- Always secure cylinders in a container when lifting with a crane or truck, do not use electromagnets, or ropes
- When transporting using a hand truck, only transport one cylinder at a time

4. Cylinder Regulators and Valves

- Never use a compressed gas cylinder without a regulator
- Only use connectors for the gas and pressure they are designed for (ex, flammable connectors are reverse threaded)
- Ensure that valves are always accessible
- Always use safety glasses, and open valves slowly
- Do not tamper with or attempt to fix cylinders, valves, or regulators
- Never use a hammer or wrench to force a valve open
- Avoid using plastic tubing for gas, it can leak

5. Cylinders, valves, caps, and brackets must all be regularly inspected for damage or corrosion. If any problems are found, please report them immediately to EH+S at 617-373-2769 or email ehs@Northeastern.edu

These are the different types and sizes of cylinders most common in laboratory use.

	Steel							Aluminum		
	4K	T	K	S	Q	G	R	AT	AS	AQ
Height in (cm)	51 (130)	55 (140)	51 (130)	46 (117)	31 (79)	20 (51)	14 (36)	54 (137)	48 (122)	33 (84)
Diameter in (cm)	9.25 (24)	9.25 (24)	9.0 (23)	7.4 (19)	7.0 (18)	6.0 (15)	5.1 (13)	10 (25)	8 (20)	7.3 (18)
Average Weight lb (kg)	145 (66)	143 (65)	133 (60)	76 (35)	65 (30)	29 (13)	14 (6.4)	90 (41)	48 (22)	30 (13)
Water Capacity lb (kg)	100 (46)	108 (49)	97 (44)	60 (27)	32 (15)	16 (7)	8.1 (3.7)	106 (48)	65 (29)	34 (16)

Dimensions and capacities are approximate and may vary slightly.

