

Notes for handling Compressed Gas Cylinders and Regulators.

Handling.

Where possible use a dedicated cylinder gas trolley to move the cylinder as close as possible to the destination.

Check label and colours match the gas.

Check fill pressure matches cylinder, some gases and mixes are supplied at different pressures.

When manual handling is necessary always tilt the cylinder gently towards yourself. Do not tilt too far, this makes control more difficult.

Never leave a cylinder standing upright unattended, there is no restraint available. Try and use a corner to position the cylinder to prevent anyone pushing by and knocking it over.

NEVER move a cylinder with a regulator attached. The valve on a cylinder has a through bore angled off axis. If the cylinder was to fall and shear the valve off it will just spin. If the regulator was attached the cylinder will take off like a missile!

If a cylinder should fall, do not try and stop it. A full cylinder weighs in excess of 75kg!

If a cylinder does shear the valve off stand well clear! As well as the risk of being hit there will also be the risk of asphyxia.

Equipment

Only use equipment rated for the gas, purity, inlet pressure and outlet pressure.

All regulators will indicate the above.

Never tamper/replace the fittings on a regulator.

The Inspect & Replace dates should be checked. They will be 5 years after the manufacture date. Follow your local protocols.

There are two potential types of regulator, pressure or flow, they control pressure or flow not both!

NOTE: CHBH MEG have regulators that control pressure.

Fitment

NEVER blow off gas from a cylinder without equipment fitted.

Offer up a regulator bull nose carefully, trying not to bump the sealing face.

Align the stem of the regulator with the valve and turn the male nut to screw in finger tight.

When the regulator nut feels finger tight, gently turn the regulator body 1/4 turn anti-clockwise then clockwise whilst gently turning the nut with your fingers.

Using a cylinder spanner tighten, then using the palm of your hand gently strike, expect the nut to turn a further 1/4 turn.

Operation

Before opening the cylinder, ensure the cylinder valve pressure has been relieved from the regulator's diaphragm, usually by turning anti-clockwise until it screws all the way out.

Gently open the cylinder.

Only one gauge should show a pressure rise, this is the contents of the cylinder; ensure this matches what you expect (some high purity gases will be over £500/cylinder).

Leak test the joint on the top of the cylinder to ensure no leaks, use only specific leak detector like *snoop*.

If no leak you can proceed to set the pressure and operate according to the task/experiment.

Another way to leak test is to set pressures and close the cylinder valve and observe pressure drop.