



Technical Information Sheet - TIS No 12 : 2006

HANDLE GAS CYLINDERS SAFELY Information for Customers Handling Gas Cylinders

Musculoskeletal disorders (MSD's) caused by the improper handling of gas cylinders are one of the most common occupational illnesses in the gas industry.

Gas cylinders are generally heavy and are relatively unstable due to the base diameter to height ratio. Large cylinders can weigh over 100kg when full and being tall and thin they are easily toppled over. This TIS has been produced to help users of large gas cylinders to handle them in a safe manner.

1

Cylinders are heavy and should be handled with care. Cylinders should not be dropped or subjected to impact when being moved or used.

To handle cylinders safely you will need specific training in handling techniques. Speak to your employer or gas supplier for further information in training that may be available.



2

Assess the risk before lifting or moving the cylinder.

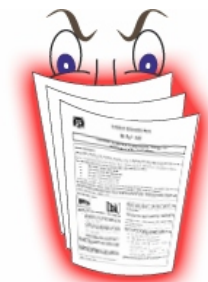
The Occupational Health and Safety Act (Act No 85 of 1993 amended by Act No. 181 of 1993 and by the Labour Relations Act 1995) was promulgated to ensure health and safety in the workplace and is complemented by the General Safety Regulations it contains. This Technical Information Sheet identifies the specific precautions to take when moving the cylinders in your workplace.

- Ensure that you know the weight of the cylinder being handled.
- Check how far and over what type of surface cylinder is to be moved. You should clear away any obstructions and debris on the route. Ensure that you know where you want to put the cylinder before you start to move it.
- if the cylinder is to be moved for a distance greater than a few meters, consider using a suitable trolley or other means of transport.
- Wet or cold cylinders are even more difficult to handle as they affect your ability to hold the cylinder securely.
- **Be aware of your limitations.** Ask yourself if you have the ability and technique to safely move the cylinder - if not, **SEEK HELP.**

Before handling or using gas cylinders you must understand the properties and hazards of the gas.

Check the cylinder label to ensure you have the correct gas.

The properties and hazards associated with the gas are given in the safety data sheet so take time out to read it. If in doubt ask the supplier for advice.



3

Always use appropriate personnel protective equipment.

Eyes, hands and feet should be protected when handling or using cylinders. Many injuries to the foot affect the metatarsal (instep) bone. Footwear with metatarsal protection is recommended.



4

Do not move cylinder with the valve open. When the cylinder is empty or you have finished with it, please return it to the supplier. The valve must be closed before transporting.



5

If cylinders are leaning over in their pallet or storage bay, do not attempt to straighten them by yourself. Get help and make sure that you know what everyone is to do to avoid trapping each other's fingers or being hit by a falling cylinder. Always make sure that cylinder restraints are securely fastened after moving cylinders.



6

Avoid injury by using correct lifting method when raising a large cylinder from the horizontal position.

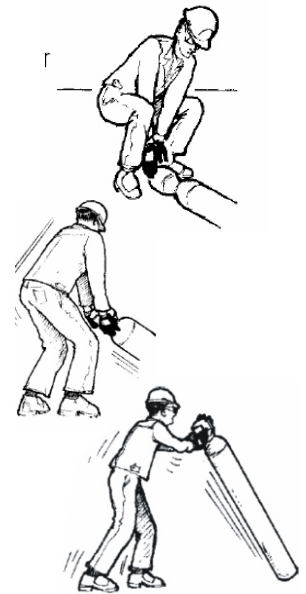
Foot position: hip width apart with one slightly in front of the other, astride the valve end of the cylinder.

Bend the knees to lower your body. This will enable your thigh muscles to do most of the lifting.

Ensure that the valve guard is secure then take a firm grip using both hands. Only lift using the guard if it has been designed for this purpose, otherwise grip the cylinder neck.

Keep your back straight throughout its length. This does not mean it has to be vertical. Doing this will help prevent a slipped disk. Pull your chin in so that your back is locked in a straight line and look in front rather than at the ground.

Lift decisively with smooth non-jerking motion. It is done initially by straightening the legs then following through with the arms at the same time walking forward until the cylinder is upright.



7

When the cylinder is upright do not leave it free standing, but move it to a safe storage area.

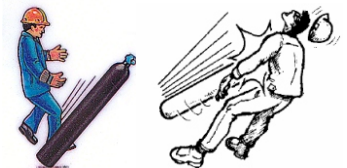
The 'churning' method requires the use of both hands. One supports the cylinder whilst the other rotates the cylinder (away from the body). It requires the cylinder to be tilted slightly (again away from the body). The method takes some practice and should only be attempted on a firm, even surface.



8

NEVER ATTEMPT TO STOP A FALLING CYLINDER. GET OUT OF THE WAY!

Thank you for reading and following this guidance, it will help ensure your safety.



For further technical and safety information, please contact your supplier



Acknowledgment
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