

MANUAL HANDLING OF CALOR GAS CYLINDERS

(Compliance with the Manual Handling Operations Regulations 1992)

Be aware that regulations are in force which aim to reduce the number of injuries at work, particularly those occurring from the manual handling of loads and articles such as LPG cylinders

WHAT YOU MUST DO:

AS AN EMPLOYER - Carry out an Assessment (i.e., a survey) of the methods your employees use when handling cylinders. You must advise them of the best ways to lift and move cylinders and reduce unnecessary handling by providing equipment or rearranging methods of working.

AS AN EMPLOYEE - You must follow the instructions of your employer and use equipment provided. If a hazardous situation arises during work, you must take care to protect both yourself and others who may be at risk.

CALOR GAS STANDARD CYLINDER WEIGHTS ARE:

NOMINAL CYLINDER SIZE	TARE WEIGHT (Empty Cylinder Weight)	GROSS WEIGHT (Total Weight Cylinder and Gas)
3.9 / 4.5 Kg	5 kg - 6 kg	8.9 kg - 10.5 kg
5 / 6 / 7 Kg	6 kg - 10 kg	11 kg - 17 kg
12 / 13 / 15 Kg	13 kg - 20 kg	25 kg - 35 kg
18 / 19 Kg	18 kg - 20 kg (+ 5kg*)	36 kg – 39 kg (+ 5 kg*)
47 Kg	38.6 kg - 50 kg (+ 10kg*)	85.6 kg – 97 kg (+ 10 kg*)

*Some older types of cylinder are heavier

CARE NEEDED WHEN HANDLING CYLINDERS:

HAZARDS	ADVICE
Cylinders may be wet, dirty and slippery.	Use gloves; ensure firm grasp on handhold shroud and base ring if lifting. Wear protective footwear.
'Empty Cylinders' may contain an unknown quantity of gas	Test by 'rocking' cylinder to feel liquid movement and take account of additional weight.
Cylinders contain liquid which moves when handled	Maintain grip on cylinder until liquid movement reduces, particularly on taller cylinders.
Cylinders are heavy!	Be aware of your personal limits, taking account of the weights listed above.
Cylinders have projections and are stored in tightly packed stacking arrangements	Maintain an alert attitude when staking cylinders. Watch fingers, elbows, shins and ankles.

METHODS OF HANDLING CYLINDERS:

Whenever possible, use mechanical lifting or moving aids for handling cylinders.

On occasions, the only practical methods of moving cylinders will be by handling manually.

If you are manually handling cylinders regularly, you must be instructed in the best handling techniques by suitably trained and experienced Instructors.

3.9 / 4.5 / 5 / 6 / 7 Kg CYLINDERS

May be carried 2 at a time, one in each hand, arms straight to sides. Keep back and neck straight and use a hooked grip on cylinder handle. When lifting above elbow height, handle and position cylinders singly. Cylinder stacks above 2 cylinders high are unstable unless supported by side rails or other means.

12 / 13 / 15 Kg CYLINDERS

Nominally empty cylinders may be carried 2 at a time, one in each hand, arms straight to sides. Nominally empty, part full or full cylinders should only be handled one at time when lifting, using both hands. Keep back and neck straight, maintain a grip on the 'hand hold' of the shroud and basering. Avoid twisting movements of the upper body, move feet and whole body to turn. Lifting and lowering full cylinders more than 1 metre from the ground (or feet) should be avoided. This allows cylinders to be stacked 3 high in an interlocking pyramid. Do not overreach when placing cylinders on a stack arrangement and release one hand at a time to prevent trapping fingers.

18 / 19 Kg CYLINDERS

Move nominally empty, part full and full cylinders by 'churning' (i.e., tilting cylinder from the vertical and rolling on the basering edge whilst maintaining control with the shroud) rather than lifting, carrying or dragging. Try to avoid the need to manually lift full cylinders. If lifting aids or handling equipment is not available, seek assistance for lifting or lowering any cylinder that has to be placed in an awkward position. If space permits, store cylinders singly in uniform stacks on even, horizontal ground rather than stack 2 high.

47 Kg CYLINDERS

Move nominally empty, part full and full cylinders by 'churning'. If cylinders have to be loaded or unloaded to or from vehicles, it is advisable to have an adjacent platform or handling equipment available for ease of transfer. If such equipment is not available, assistance with lifting or lowering must be sought. With practice, it is possible to manoeuvre cylinders into difficult positions by a tilting and churning action.

FINAL POINTS TO REMEMBER

Do NOT roll cylinders on their sides; in such conditions they are not under control which may result in damage or injury. Do NOT throw or drop from vehicles or platforms; DO lower or lift in a controlled manner.

Be aware that taller cylinders can topple if placed on a sloping surface

Be aware that damage can occur to shrouds and baserings. Check 'bolt on' or 'screw on' shrouds are not loose before lifting. Damaged baserings may cause a cylinder to churn in an erratic manner or fall over while manoeuvring, or not stack evenly.

Work at a steady rate, concentrating on the factors that could be hazardous and take precautions.

REFERENCES, GUIDANCE BOOKS, OTHER INFORMATION:

Manual Handling Operations Regulations 1992, SI 1992/2051.

Manual Handling, HSE Guidance on Regulations, L23.

Getting to grips with Manual Handling, a short guide for employers, HSE INDG 143.