



# scuba safe

The **responsible** divers guide to cylinder care!



## before you dive!

It's vitally important that you **read and understand these guidelines** before you fill or use your Luxfer Cylinder!

Keep this leaflet safe for future reference.



perfectly evolved for the deep

Luxfer's revolutionary lightweight scuba cylinders have been developed to combine optimum safety with outstanding performance and durability even in the toughest underwater conditions.

### BENEFITS INCLUDE:

- ✔ Clean internal surface and good corrosion resistance - the ideal combination for stored breathing gases!
- ✔ Exceptional strength and durability!
- ✔ Flat base for upright storage without a boot!
- ✔ Lightweight and easy to carry!
- ✔ High quality external surface finish!



# take good care of your cylinder

Although Luxfer's Scuba cylinders have been designed to exceed stringent performance and safety standards, it's up to you to ensure that your cylinder is always kept in peak condition by carefully following Luxfer's recommendations for continued care and maintenance.

### REMEMBER!

- ! By taking care of your cylinder you'll be rewarded with many years of safe, trouble-free service
- ! Protect it from damage and never abuse or modify it
- ! Neglecting the cylinder could result in irreversible deterioration and a potential threat to personal safety
- ! Wash your cylinder in fresh water and dry after each use.

# before filling



## For new cylinders

- ! Ensure that your cylinder is fitted with a compatible valve and associated components
- ! When using oxygen-enriched air, oxygen or nitrox mixtures, ensure that the cylinder is fitted with an oxygen or nitrox-compatible valve assembled with an oxygen-compatible o-ring and lubricant
- ! Establish that the filling facility is suitable for providing a controlled oxygen-enriched air-fill, which must be totally free from oil carry-over and loose particulate
- ! If there's no assurance that the valve, o-ring and lubricant used is oxygen compatible or that the filling conditions conform, Luxfer recommend that you don't fill the cylinder until oxygen suitability is confirmed
- ! If you choose a standard air-fill only but decide to switch to an oxygen-enrich fill at a later date, remember to ensure that your cylinder is oxygen-clean and that your valve and associated accessories are oxygen-compatible and clean.



## for continued use of the cylinder

- ! Check that the cylinder is within its re-test period (see BSEN1802:2002)
- ! NEVER fill a cylinder that's outside its re-test period
- ! Visually examine the cylinder for evidence of damage from previous use or transportation. If in doubt (ie the cylinder shows signs of ANY damage) take it to a re-test station for an expert opinion and/or hydro-testing
- ! Determine if the cylinder shows external corrosion from poor storage, particularly after lengthy storage. If corrosion is evident, take the cylinder to a re-test station for an expert opinion and/or hydro-testing
- ! An appropriate valve (with the correct thread) should be torqued into the cylinder using calibrated torque wrenches with correctly fitting engagement heads. Torquing of valves should be in line with ENISO 13341:1997 for aluminium parallel threads.

# filling

- ! Before you connect the cylinder to the compressor ALWAYS verify the rated filling pressure
- ! NEVER fill the cylinder or allow it to be filled beyond the maximum rated working pressure (PW) shown on the cylinder neck
- ! If you suspect or hear a hissing sound - stop filling immediately. NEVER fill or use a cylinder that is leaking. The cylinder must be taken to an approved re-test station for a thorough examination. Never try to tighten the valve if leaking around the cylinder neck
- ! ALWAYS check for leaks after filling and before use by immersing the cylinder into a tank or container of water. Take enough time to thoroughly check for even the smallest escaping bubble!
- ! It is strongly recommended that extreme care is taken to avoid any moisture transfer into your diving cylinder or buoyancy aid during filling. Buoyancy aids should not be filled from a diving cylinder.



# Care and maintenance of your new cylinder



## safety on the move

Keep your cylinder in top condition by following these common-sense guidelines:

- ! **Always secure your cylinder safely when in transit** - a dry wooden box or sturdy cardboard container is ideal
- ! **Prevent the cylinder from rolling about** - any impact could damage the shell by indenting, scratching, gouging, scoring or chipping off protective paint finishes
- ! **Do NOT throw the cylinder onto sand or ground** - it may impact against a hidden hard object that could cause damage
- ! **Take care to avoid dropping your cylinder** - as well as damaging an empty cylinder, dropping a charged cylinder could shear the valve
- ! **Prevent the cylinder from being exposed to direct sunlight or where the sun is directed through windows or clear glass roofing.**  
Keep your cylinder cool. Filled cylinders that become warm (up to 60°C) could result in breathing difficulties due to the temperature of the contained gas. Never expose your cylinder to temperatures in excess of 60°C.



## cleaning and storage

- ! **After use, thoroughly wash the outside and boot assembly** with clean water containing mild soap or detergent, rinse off and wipe dry with a towel.  
It is advisable to remove the cylinder from its backpack and the boot for regular cleaning



- ! Keep the **threads and cylinder interior** dry and free from contamination of any sort
- ! **ALWAYS** ensure your cylinder maintains a slight positive pressure up to 20 bar
- ! **NEVER** store the cylinder on bare concrete or any surface that may hold moisture
- ! Cylinders used as part of a bouyancy aid **must be washed in fresh water and thoroughly dried** after each use.

Your life depends on your cylinder so **always** treat it with care and respect!

## testing check list

- ! **ALWAYS** ensure your cylinder is re-tested within the prescribed period for the UK and EEC (BSEN1802:2002)
- ! **ALWAYS** ensure that the cylinder attachments are maintained, serviced, inspected and handled in strict accordance with the manufacturers instructions.

## repair

- ! **If the painted surface is damaged do not ignore it!** Clean the area with fine wire wool and touch up the damage with a room-temperature air-drying aluminium primer followed by a room temperature drying gloss paint. Do not use paints with a curing temperature above ambient. For further information contact the manufacturer
- ! **Do not attempt to remove a damaged paint surface** with abrasive wheels, files, shot-blasting or aggressive chemicals. This may reduce the wall thickness making the cylinder unsafe for pressure storage
- ! **Do not leave valves open after use.** This allows moist-air intake that can cause internal corrosion
- ! If using stainless steel fixtures as a backpack clamp - **coat with a suitable plastic to insulate from the aluminium.**

## warning!

- ! **NEVER** alter or obscure the cylinder markings!
- ! **NEVER** fill or partially fill your cylinder with Oxygen, Oxygen mixtures or Nitrox unless the cylinder and valve have been properly cleaned and maintained for these mixtures!

Please fill out the details below and keep as a reference when re-testing or filling your cylinder.

Date Purchased	
Purchased From	
Cylinder Serial No	
Cylinder Capacity	
Charged Pressure	
Test Pressure	
Original Test Date	
Thread Size	

Distributed by:

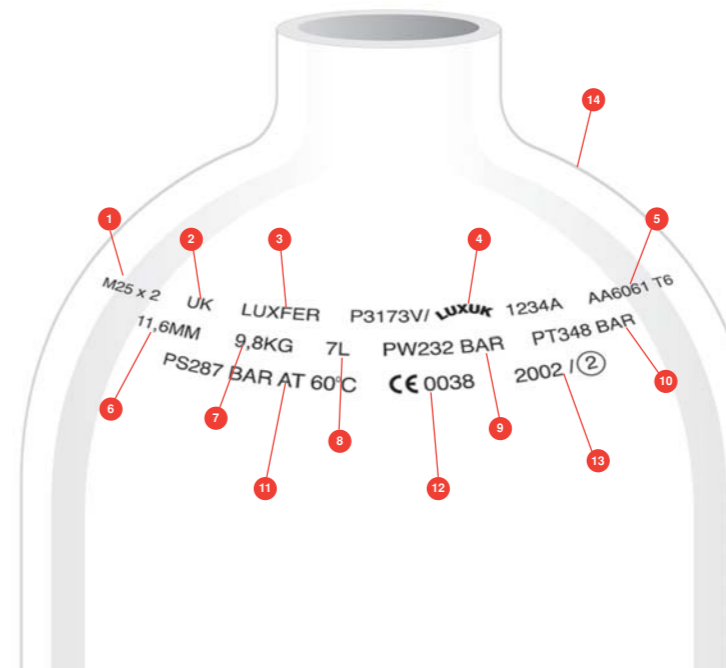
This leaflet is a general Guide to the use & care of your Luxfer Scuba Cylinder. If you have bought this cylinder as a single item only (ie. no valve fitted), you must also refer to Luxfer's PED Customer Information Sheet. If you bought this cylinder as part of a Scuba equipment assembly (ie. valve fitted etc.) you must also refer to the equipment assemblers PED Customer Information Sheet.



Luxfer Gas Cylinders, Colwick, Nottingham, NG4 2BH, UK. [www.luxfercylinders.com](http://www.luxfercylinders.com)  
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# important markings

The markings stamped on the neck of your cylinder contain important information which should be referred to when re-testing or filling.



- 1 Thread Specification** indicates the cylinder thread type and size. It is important to ensure the correct valve is used with your cylinder
- 2 Country of Manufacture**
- 3 Cylinder Manufacturer**
- 4 Cylinder Type Number and Serial Number** this number is recorded by Luxfer so that the entire manufacturing history of your cylinder can be traced
- 5 Alloy of Construction**
- 6 Design Minimum Wall Thickness**
- 7 Empty Weight of Cylinder Only** (kg)
- 8 Minimum Water Capacity** (litres)
- 9 Working Pressure** shows the pressure that the cylinder should be filled to. **NOT** to be exceeded
- 10 Test Pressure** shows the pressure that the cylinder should be tested to. **NOT** to be exceeded
- 11 Service Pressure** indicates the pressure which can develop inside the cylinder at the temperature shown. It should **NOT** to be confused with the working pressure (PW)
- 12 Mark of Conformity** to the Pressure Equipment Directive 97/23/EC & **Notified Body Identification Number**
- 13 Test Date** shows when your cylinder was first tested, with the year followed by the month or quarter of the test year shown in a circle
- 14 Customer/Trade Name** (on reverse of cylinder) for whom the cylinder was originally made (optional).