



LUXFER
GAS CYLINDERS



Care and Maintenance

A guide to industrial gas cylinder safety

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Inspection

Visual inspection of cylinder and valve

- Inspections should be conducted in clean, well-lit, well-organized surroundings, free from grease and other hydrocarbons. Required inspection equipment: an internal inspection light of extra-low voltage, 2x magnification mirror, suitable cylinder clamping and cleaning equipment.
- Always wear safety equipment, including protective gloves, eye protection and safety shoes.
- The cylinder must be empty before inspection. Check to see if the cylinder has a siphon tube (which screws into the valve and extends to a point slightly above the cylinder bottom).

Cylinder markings

Typical markings for a permanent gas cylinder according to TPED

Stamping Positions:

For Internal use only

Cyl. Diameter:

Nose ref:

Packing Req:

VALVE WEIGHT

CAGE WEIGHT

COLLAR WEIGHT

CIRCLIP WEIGHT

GAS WEIGHT

Line	Char Size	Description
1	3 mm	1"x14 UNS GB LUXFER 955- <input style="width: 30px; border: 1px dashed black;" type="text" value="1"/> AA6061 T6
2	3 mm	PW90 PH135BAR <input style="width: 30px; border: 1px dashed black;" type="text" value="2"/> KG 1.6L 3.4MM
3	3 mm	<input style="width: 20px; border: 1px solid black; border-radius: 50%; text-align: center;" type="text" value="H"/> ISO7866 USA/M9905 <input style="width: 20px; border: 1px solid black; border-radius: 50%; text-align: center;" type="text" value="3"/> <input style="width: 20px; border: 1px dashed black; text-align: center;" type="text" value="4"/>
4	3 mm	<input style="width: 20px; border: 1px solid black; text-align: center;" type="text" value="π"/> <input style="width: 30px; border: 1px dashed black;" type="text" value="5"/> ISO7866 NL <input style="width: 20px; border: 1px solid black; border-radius: 50%; text-align: center;" type="text" value="6"/> <input style="width: 20px; border: 1px dashed black; text-align: center;" type="text" value="4"/>
5		<input style="width: 60px; border: 1px solid black;" type="text" value="5mm stamp"/>
Base	3 mm	LUK <input style="width: 20px; border: 1px dashed black;" type="text" value="7"/> 090Z66 <input style="width: 20px; border: 1px dashed black;" type="text" value="8"/> <input style="width: 20px; border: 1px dashed black;" type="text" value="9"/>

Notes

1. Luxfer serial number
2. Empty weight of cylinder only
3. Stamp of dot approved independent inspection body (e.g. LRQA)
4. Year/Month initial test (e.g. LRQA = 0343)
5. Notified body reference No. (e.g. LRQA = 0343)
6. Stamp of TPED independent inspection body (e.g. LRQA)
7. Batch number
8. Cast Number
9. Inspection stamp of extrusion shift

	Marking	Meaning
1	1" x 14UNS	Thread Specification - Important to ensure the correct valve is used with your cylinder
2	GB	Country of Manufacture
3	LUXFER	Cylinder Manufacturer
4	955 - xxxx	Cylinder Type Number and Serial Number (xxxx) - This number is recorded by Luxfer which means, if ever necessary, the entire manufacturing history of your cylinder can be traced
5	AA6061 T6	Alloy of construction / Heat treatment condition
6	PW 90	Working pressure (BAR)
7	PH 135 BAR	(Test Pressure) - Shows the pressure that the cylinder should be tested to - this must not be exceeded
8	1.11 kg	Empty weight of cylinder only
9	1.6 L	Water capacity / internal volume
10	3.4 mm	Design minimum wall thickness
11	UN	United Nations Packaging symbol
12	ISO 7866	Technical standard used for design, manufacturing and testing
13	USA / M9905	Indication that design is approved for use in the USA / Luxfer UK DOT approval number.
14	LRQA Stamp	Stamp of DOT Approved Independent Inspection Body
15	2023/xx	Year and Month of initial test

	Marking	Meaning
16	π	Mark of conformity for Transportable Pressure Equipment Directive (2010/35/EU)
17	(LRQA) 0343	Notified Body reference number
18	ISO 7866	Manufacturing specification
19	NL	Country of approval of inspection body
20	[STAMP]	STAMP OF TPED INDEPENDENT INSPECTION BODY (e.g. LRQA)
21	2023 / xx	Year and month of initial test

Filling

Before filling

- Check the details on the neck of the cylinder is correct and to ensure correct pressure is used.
- Check the general quality of the cylinder and for neck damage.
- Inspect the cylinder wall for dents, gouges or corrosion.
- Check the thread quality prior to fitting the valve to ensure of no damage.

How to do it safely

- Check the condition of the valve thread and the 'O' ring.
- Clamp the cylinder correctly.
- Hand fit feel the valve into the cylinder and using correct torque value and correct torque equipment, torque in the valve.
- Record the serial number and weight of the empty cylinder and valve. Luxfer's cylinder weights are very consistent.
- Carefully connect the filling adaptor and slowly begin filling the cylinder. Closely watch the pressure gauge and fill to working pressure.
- When you reach the desired pressure, stop filling. Never overfill!
- If attaching any labels, make sure that required safety labels are on the cylinder. These labels (which vary by country) help protect cylinder users and the public at large.

Warnings

- **Never** overfill a cylinder! Fill only to the rated capacity stamped on the cylinder crown.
- **Never** tamper with the cylinder valve. Replace these attachments as necessary only with manufacturer- approved components.
- **Never** remove, obscure or alter labels or cylinder markings.
- **Never** expose cylinders to a temperature exceeding 265°F (130°C).

General safety

Storage and handling

- Store the cylinder in a dry, well-ventilated area at a room temperature of 70°F (21°C).
- Keep the cylinder away from any heat source.
- Keep the cylinder above ground level to avoid possible contact with moistures.
- Keep the cylinder above ground level to avoid caustic cleaning agents.

For your safety

Follow these precautions when using a high-pressure aluminium cylinder:

Explosion Hazard: Improper use, filling, storage or disposal of a Luxfer cylinder or failure to heed this warning may cause property damage, serious injury or death. Use and maintain the cylinder in strict accordance with the following instructions: e.g. Compressed Gas Association (CGA) Guidelines

- Keep the cylinder out of reach of children.
- Do not alter or modify the cylinder or related components.
- Do not over-pressurize the cylinder.
- Only properly trained personnel should fill the cylinder.
- Always fill and use the cylinder in an upright position to avoid damage to the valve. Check for leaks, and do not fill the cylinder if it is leaking.
- Aluminium cylinders subject to action of fire or heated to temperatures of 350°F (175°C) or more must be withdrawn from service and condemned. Cylinders exhibiting fire damage, arc burns or torch burns must be condemned.
- Inspect for damage each time a cylinder is to be filled. Do not fill a damaged cylinder; remove it from service and have it inspected by a certified re-qualifier. Do not alter or change a valve.
- Only trained personnel should remove valves.
- Do not use corrosive paint strippers or corrosive cleaners, which will damage aluminium cylinders.
- Protect cylinders from heat, damage and corrosion.

