MFC International
by RESPIREX
ENGINEERED INFLATABLE PRODUCT SOLUTIONS

Single Stage Regulators

Product Manual

Index

WARNING:

Carefully read this manual before operating.

Ensure equipment is used only by trained personnel.

Do not discharge cylinder unless inflation hose is connected at both ends. Failure to do this could result in personal injury.

Do not leave discharging cylinder unattended. If inflation hose be comes disconnected it could result in personal injury.

NOTICE:

The manufacturer takes no responsibility for the consequences of actions not complying with the instructions given in this manual.

The purpose of regulators is to reduce the high pressure of the compressed gas in a cylinder from e.g. 200 bar (300) admission pressure P1 to a much lower output pressure (gauge) P2.

A regulator is a device designed to reduce a generally modified admission pressure to an output pressure which is as near constant as possible, even if the flow rate varies.

The pressure which develops if gas withdrawal is interrupted, does not count as output pressure in the sense of these remarks.

The nominal flow rate is that given in the table below for the gas flow rate specified for types of equipment used.

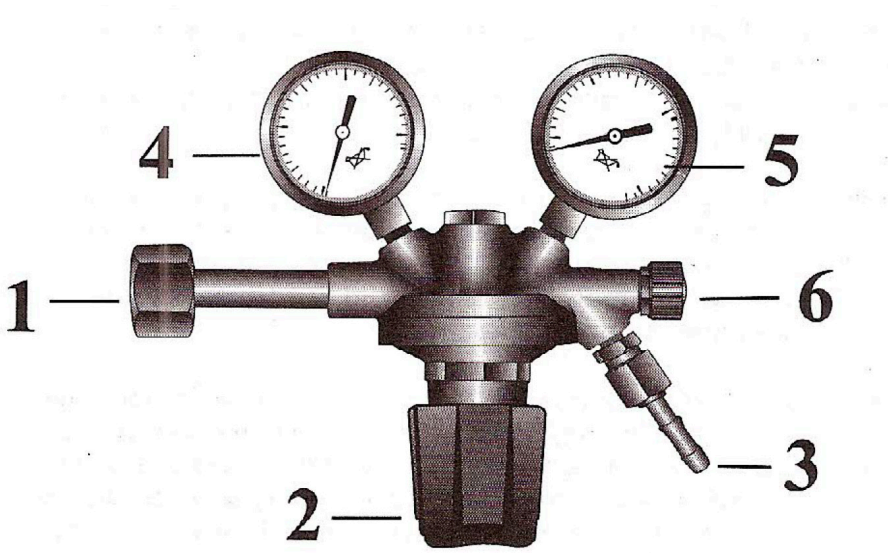
Components coming into contact with oxygen in oxygen regulators must be free of grease, glycerine, oil and any other lubricant. Leather must not be used in the high pressure part of oxygen regulators. Oxygen regulators must be designed and constructed in such a way as to prevent them from catching fire.

The connection between the regulator and the cylinder valve must be secure and absolutely gas tight. It must be configured in accordance with the gas type corresponding to DIN 477. Hand-tightened connections are permissible, provided they have been found suitable by a recognised test centre for use in conjunction with the regulator concerned.

Cylinder regulators for oxygen, acetylene and propane/butane must be provided with an output pressure gauge. Regulators for other gases must be provided with an output pressure or volume indicator. The configurations of the pressure gauges and pressure gauge unions must comply with DIN EN 562.

The adjustment range of the handwheel of any cylinder regulator must be restricted in such a way that the adjusting spring cannot be forced to a height where it is completely compressed. The handwheel must also be secured to prevent it from being unscrewed and removed completely. In addition, in the case of acetylene cylinder regulators, the depth to which the adjusting screw can be tightened must be restricted in such a way that the output pressure cannot exceed 1.5 bar (gauge).

Parts List



	Item List
1	Connection (DIN 477)
2	Handwheel for pressure adjustment
3	Hoseline connection (varies on customers preference)
4	Safety / cylinder pressure gauge (DIN EN 562)
5	Safety / working pressure gauge (DIN EN 562)
6	Shut off valve
7	Black plastic carry case (not shown)

Operational Instructions

1. Unscrew and remove the cap from the gas cylinder.
2. Inspect the thread on the gas cylinder valve for damage.
3. Screw-mount the regulator to the closed valve on the gas cylinder by means of the union nut (item 1), tightening securely with a wrench.
4. Check to ensure that the shut off valve (item 6) is securely closed.
5. Unscrew the handwheel (item 2) which is used for pressure adjustment as far as it will go. This will reduce tension on the pressure spring.
6. Connect the hoseline to the union (item 3).
7. Slowly open the gas cylinder valve. The pressure in the cylinder will now be indicated by the safety / cylinder pressure gauge (item 4).
8. Set the working pressure by turning the handwheel (item 2) clockwise until the desired pressure is indicated by the safety / working pressure gauge (item 5).
9. Slowly open the shut off valve, allowing gas to flow into the connected hoseline.
10. With the free flow of gas, a slight pressure drop may occur; if necessary readjust with the handwheel (item 2).
11. On finishing work, close the handwheel (item 2), fully relieve the pressure in the regulator by opening the shut off valve (item 6), then close the shut off valve (item 6).
12. Secure gas cylinders against falling over and protect them from excessive heat.
13. All the specified pressures refer to gauge pressures in bar.
14. Repairs may only be carried out by the manufacturer, or people certified by MFC International Ltd. If in doubt contact the MFC service department on +44 (0)1443 433 075. See page 9 for further information.

Troubleshooting

Effect	Cause	Solution
Drain valve blows up	Valve pin polluted or damaged.	Repair by MFC service department.
Poor or constantly fluctuating flow through the regulator	Contamination in valve due to loosening of the threaded nipple. This in turn loosens the sintered filter element in the connecting socket which then vibrates, allowing small particles to penetrate the valve.	Repair by MFC service department.
Difficulty in securing the union nut to the gas cylinder valve	Thread on cylinder valve or union nut damaged.	Replace cylinder or return regulator back to MFC service department for repair.
Safety / cylinder or working pressure gauge failure, needle passes beyond limit	Spring in pressure gauge broken.	Replace pressure gauge. **Caution:** When unscrewing and removing a pressure gauge, make sure that it is facing downwards, otherwise brass swarf could fall into the regulator

Care & Maintenance

Quarterly or after Operational Use

1. Visually check regulator and delivery hose for signs of damage.
2. Check thread of cylinder connector for damage.
3. Check cylinder connector is intact and in good condition.
4. Couple regulator to cylinder. Connect delivery hose to regulator (where applicable) and to product (of the operating pressure for the regulator) and charge product.

   Check contents gauge and regulated pressure gauge are functioning correctly. Check integrity of connections with brush and soapy water.
5. Thoroughly wipe dry the regulator before returning to store.
6. If there is any damage to the regulator, repairs and servicing may only be carried out by the manufacturer, or people certified by MFC International Ltd. If in doubt contact the MFC service department on +44 (0)1443 433 075.

Repairs

As a general rule, repairs/damaged products will need to be assessed in two categories: a) that which is repairable at the base, or b) serious damage that will need to be repaired by MFC International.

If in doubt as to the extent of the damage and the level of repairs necessary, please contact the MFC service department on +44 (0)1443 433 075.

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