

Fig.4 T1

Fig.4 T2

Fig.5

OPSO INDICATION

To verify that the regulator has activated or in event of no gas downstream of the regulator:

- Visually check the clear plastic reset button **B** on the side of the regulator (FIG.4 T1) - View from the angle shown in the drawing
- If the OPSO has activated, a red mark (Shown here in black) will be visible through the reset button **B** as in FIG.4 T2
- If nothing is visible FIG.4 T1 then it is likely that the device has not activated and that there may be other reasons why there is no gas downstream of the regulator i.e Check that the cylinder valve is not closed (turn anti-clockwise to open), exhausted gas cylinder, blocked cylinder connecting hose (wall mounted version) due to excess flow intervention, blocked inlet filter or appliance fault or pipework blockage.

OPSO: CONSIDERATION BEFORE RESETTING

If the indication inside the reset button **B** shows red (FIG.4 T2) then the OPSO safety device will need to be reset. Follow the [Reset](#) instruction.



If after resetting the device continues to trip closed repeatedly then this could be due to an abnormal situation and therefore consideration should be given to inspect the installation.

IN THIS CASE DO NOT CONTINUE TO USE, turn off at the cylinder valve/ and any Emergency Control Valve (ECV) if fitted and contact your competent registered gas installer.

OPSO: RESET

- If connected to the gas cylinders then turn off at cylinder valve/s. by turning in a clockwise direction
- Ensure all down stream gas appliances are turned off
- Any Emergency Control Valve (ECV) handle is in the open position normally handle is vertical position in-line with the pipework.
- Hold the regulator with both hands (FIG.5) and push the OPSO reset button **B** with the thumb until the button engages with the red internal indicator.
- Then continue to push hard the button to reset the latching mechanism. Continue to push the button until it stops, the distance of travel will be 7mm until then OPSO is fully latched into place.
- Release the button **B** which will return to its normal position (FIG.4 T1) and if successful there should be no red indicator visible when viewed.

- Reopen the cylinder valve by turning in a anti-clockwise direction .– DO THIS SLOWLY to ensure the gas passes slowly through the regulator without creating a surge in pressure.
Opening the gas cylinder too fast may on some small installation the safety OPSO system to close or with wall mounted version cause any excess flow valves within the hose connections to activate preventing gas to flow
- Once the CSR OPSO safety system is re-established proceed to turn on, and re-commission gas appliances
- If after resetting and commissioning appliances the OPSO continues to trip/shut off **DO NO CONTINUE TO USE**, turn off at the cylinder valves and ECV if present and contact your competent registered gas installer.

Turning off and Disconnecting the cylinder—when changing gas cylinders ensure the gas cylinder valve is turned fully closed, ensure all appliances and any pilot lights have been turned off and gone out. Never disconnect the cylinder with the gas left or appliances not extinguished.



PRESSURE ADJUSTMENTS (FIG.6)

The regulated pressure and OPSO trip-off pressure are factory set and adjustments are not normally required. Some models of wall mounted version can be adjusted and event that this is needed, and has been authorised, should only be performed by a competent registered gas installer.

Remove the plastic plug cap **J** (FIG.6) and use (4mm Allen key) to adjust the pressure.

Screw in or Unscrew to reach the required outlet pressure. Put the plastic plug cap **J** (FIG.6) back in place after setting.

Adjusted pressure must be always within the outlet pressure range indicated on the label.

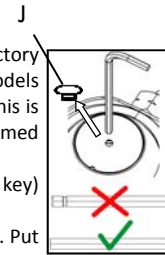


Fig.6



7. MAINTENANCE

The operation of the regulator and the gas installation shall be checked periodically. In normal conditions of use, in order to ensure correct operation of the installation, it is recommended that this device shall be changed within 10 years of manufacture.

In severe operating conditions it shall be inspected frequently by a suitably component person and if required replaced sooner.



INSTRUCTION TO BE KEPT BY THE USER

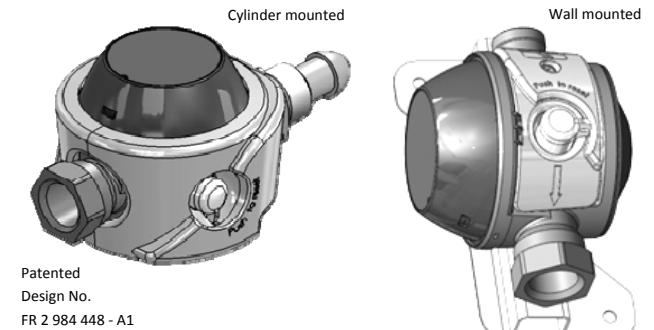
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CLESSE (UK) Ltd
Drakes Broughton Business Park
Worcester Road, Drakes Broughton
Persnore, Worcestershire
WR10 2AG
United Kingdom
Tel.: +44 (0)1905 842020
Fax: +44 (0)1905 842021
Email: sales@clesse.co.uk

CLESSE Industries
Z.I. le Bois Joli
CS 80118
63808 Cournon d'Auvergne
France
Tel.: +33 (0)4 63 66 30 01
Fax: +33 (0)4 73 84 73 36
Email: commercial@clesse.eu

www.clesse.co.uk

Low Pressure Regulator with CSR OPSO Customer Safety Reset Over-Pressure Shut Off



Patented
Design No.
FR 2 984 448 - A1

Registered design in EC and ROW - CSR 485 - No 002116475-0001



1. GENERAL USE AND APPLICATIONS

When fitted on an LPG installation it is used as pressure reducing device and is classed as a low pressure single stage regulator.

The regulator is connected downstream of the gas cylinder either directly to an LP gas cylinder or wall / post mounted, directly adjacent to the cylinder, using an appropriate inlet hose connection kit to the cylinder or pair of cylinders when using a manual changeover device — *installation and technical guidance is contained in this document.*

This regulator is normally the final pressure reduction to gas appliance/s such as - Heating, Gas fire, BBQ, cooker, oven, water boiler, etc...)



The regulator is fitted with a "Consumer Safety Reset " (CSR) version of a safety device called an "Over-pressure Shut-Off" (OPSO) valve, that is specifically designed to be reset by the consumer in much the same way as other safety reset devices around the home. By using a "Push to Reset" system with visible indication the user can re-establish the gas supply in event the regulator shuts down due to an overpressure event. If however the regulator continues trip closed then the product will need to be replaced and/or investigated by a registered and competent gas installer to check the gas system.

Meets the recommendations of HSE Guidance Note L56 Edition 2013 and fulfils the requirements of new installation standards BS6891:2014 Installation of low pressure gas pipework of up to 35 mm (R1½) in domestic premises.



2. TECHNICAL DATA AND CONSTRUCTION

Designed standard:	EN16129
Temperature range:	-20°C / +50°C
Outlet pressure:	37mb Propane and 29mb Butane
Capacity:	4kg/h (55kW) Propane version 2.5kg/h (35kW) Butane Version
Inlet Pressure range:	1-16bar
Inlet connection:	Propane in UK - POL G 5/8" LH Propane in Ireland - LH 21.8" Nut Butane in UK - LH 21.8" Nut M20 - When connecting with a hose to cylinder
Outlet connection:	1/2 Rc - BSPT
Pressure Relief Valve:	75mb (PRV) of limited type (propane only)
CSR OPSO:	125mb - see additional information in this leaflet

Patented Design No.	FR 2 984 448 - A1
Registered design No.	EC and ROW - CSR 485 - No .002116475-0001



Note this regulator version is not suitable for Caravans or Motor Caravans designed and complying to EN1949 which operate 30mb gas appliances.

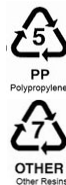
Main components of the regulator are as follows

- Body and cover: made of Zinc alloy
- Diaphragm, pad and gaskets: LPG resistant elastomer rubbers Complying to EN549



Recyclable Content

Made from 99% recyclable material— typically
Non Ferrous metals 87% , 3% ferrous metals and 9% plastic
Packaging is made of recyclable cardboard



3. OPTIONAL FEATURES OR SAFETY DEVICES

This regulator can also be equipped with additional features

- Pressure relief valve ("PRV") - Propane versions only
- Wall mounting bracket - E in Fig 2
- Adjustment of outlet pressure wall mounted versions otherwise pressure is fixed and does not require to be adjusted.



Where pressure adjustment is carried out, this shall only be done by a competent and suitably qualified person.

When present ("PRV" is marked on the label), it allows relief of thermal expansion of the gas in no-flow condition where possible over-pressure may occur and result in unnecessary trip-off of the OPSO valve.



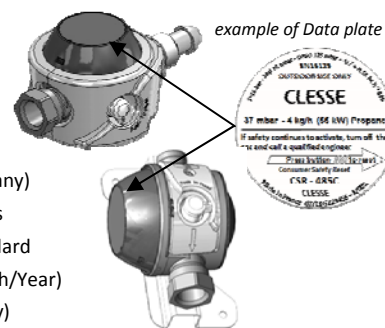
Warning: gas may be relieved from this valve through the vent holes of the regulator unit. Therefore versions fitted with a PRV must not be fitted indoors where there is a risk of discharge into property or any restricted or unventilated area such as basements or cellars.



4. MARKING

The following information is displayed on the regulator data plate

- Range of inlet pressures
- Factory set outlet pressure
- Declared capacity
- Reference type of gas
- Set OPSO trip pressure.
- Set PRV opening pressure (if any)
- Type of connection or threads
- Reference to the design standard
- Production date: xx/yy (Month/Year)
- Unique serial number—(if any)



5. INSTALLATION AND POSITIONING



Installation, inspection and maintenance must be performed by persons with the necessary competency in relation to the type of gas and required usage. When used to supply gas through fixed pipework to appliance covered by the GSIUR Regulations 1998 then the installer must be suitably qualified and registered by Gas Safe.

Before starting - make sure that the regulator suits the installation in terms of

- Gas cylinder type. Ensure connection is compatible to that of the regulator i) inlet connection **A** - ii) The outlet connection **D** (see 2. Technical Data and Construction) for connection type used
- Mating faces of cylinder connections are clean and not damaged and that any filter fitted to inlet connection **A** is in place. Where elastomer gasket / washer is used on a cylinder connection, make sure this is present and in good condition, such as on a UK Butane or ROI Propane cylinder.
- Installation pipework or hosing. The outlet connection **D** can be fitted with various types of connections. Ensure these are approved for use with LPG, its pressure and that a suitable thread sealant is used such as Clessetite to EN751:2 or PTFE tape to EN751:3 .When connected to hose or tubing use a Low Pressure nozzle suitable for 8mm tubing to BS 3212 type 1 or hose type 2. - BS EN 16436 Class 1 tubing and Class 2 hose is also suitable.
- Location should be considered. Propane regulators must always be used outdoors, it shall be positioned or protected against direct penetration by rain or submersion which could cause water accumulation on the atmospheric side of the regulator diaphragm. Also protect from other contaminants i.e. snow, dust, mortar, fat and oil...) which can obstruct the vent **C** on wall mounted version Fig 2.
- Positioning and Orientation. Cylinder mounted regulator Fig 1 shall be fitted in the horizontal plane with the data plate uppermost when connect - ed to a cylinder and in the vertical plane with outlet connection **D** downward when connected to a suitable wall block connection. Wall mounted version Fig 2 shall be orientated inlet connection uppermost as in Figure 2



The Cylinder mounted regulator Fig 1 has the vent protected by the integrated plastic cover located at **C**. This provides sufficient protection in normal weather conditions such as rain and dust when installed correctly. Replace if damaged - replacement can be purchased from your supplier.



This regulator is not suitable to be used in marine saltwater situations.

Before installing this regulating device and first commissioning

- Ensure that cylinder valves are closed by turning clockwise before fitting this regulator and that no sources of ignition are nearby.
- Thoroughly clean (blow through) upstream tubing. We recommend to install a filter upstream to the regulator if not connected directly to a cylinder.
- Connect the inlet **A** and outlet **D** following the gas passage direction, indicated by the arrow **H**. Use a spanner, to apply the correct connecting torque.
Propane cylinders use a 'female' left hand threaded connection check that this is clean and not damaged
Butane cylinders have a 'male' left hand threaded connection
- After the installation is completed, open the upstream valve on the cylinder **G**, reset the safety valves CSR if required (see over leaf) and check the sealing of the connections using a relevant leak detection fluid - **Never use a flame.**

Fig.1

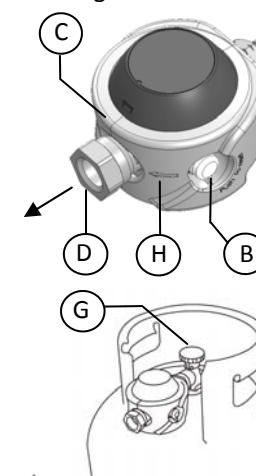


Fig.2

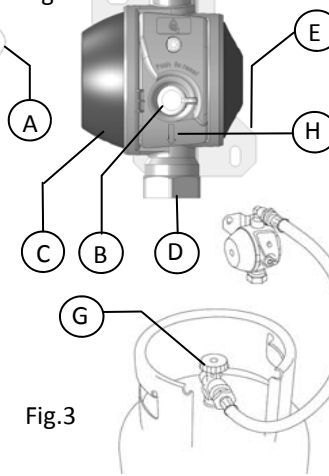


Fig.3



6. CSR OVER PRESSURE SHUT OFF VALVE OPSO



The CSR OPSO safety valve stops the gas flow in the event of regulated pressure being greater than a defined value (called "trip pressure") when gas pressure exceeds more than which the pipework or gas appliances downstream were designed for. The overpressures are mainly due to malfunctioning of the regulator or adverse, condition such as:

- Liquid LPG entering the regulator
- re-liquefaction of LPG in the pipes.
- debris on the seat
- Excessive thermal expansion
- Ice blocking
- Abnormal operation inappropriate use or setting of the regulator

Should any of the abnormal conditions be present the device will activate and close off the gas supply to protect the downstream installation and appliances.