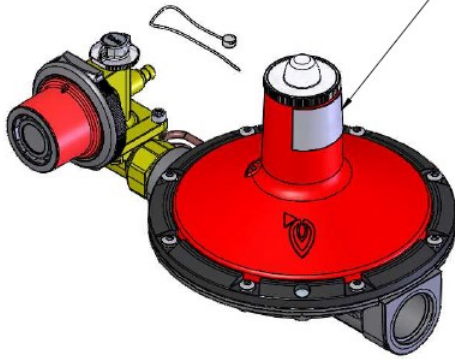| CLESSE PART No. 006846CB | 2ND STAGE BP2403 37mbar 553—830kW | SUPPLIED BY CLESSE (UK) LIMITED |
|---|---|---|

NOVACOMET BP2403-OPSO/UPSO
SECOND STAGE    VENT OUTDOORS
0,5-2 bar  G.23/H.19  (36/17)
37 mbar  EN 16129  Δp5
PROPANE 40 kg/h  (552kW)-(60kg/h @ 1 bar)
PRV 75 mbar - OPSO 100 mbar - UPSO 28 mbar

| Technical Information | |
|---|---|
| Regulator | BP2403 UPSO OPSO |
| Capacity kg/h (kW) @ min inlet pressure | 40kgh (553)* |
| Set Pressure | 37 mbar (33-45) |
| Inlet Pressure(2nd Stage) | 0.5-2 bar |
| Limited relief Valve | 75 mbar |
| OPSO Set Pressure | 100 mbar |
| UPSO Pressure | 28 mbar (27-30 mbar) |
| Design Standard | EN16129 |
| Inlet connection | Rc3/4F ISO/7 (BSP) |
| Outlet connection | Rc1F ISO/7 (BSP) |

## Assembly Instruction

1. Check the contents of the box, ensuring that the regulator meets the pressure and capacity of the installation and all items are present and not damaged.

2. This regulator requires 1st Stage pressure reduction to 4 bar or below. Due to liquefaction at low ambient temperatures, Clesse recommends the use of inlet pressure of 2 bar or below. The regulator has been marked to show this.

3. If the regulator is to be fitted as a wall mounted assembly, then a wall mounting bracket can be fitted to the regulator part No. UUBRACKETSET1.

4. When installed, ensure that the second stage regulator vent is positioned so that rain water does not enter and allows drainage of any water condensate.

5. Before fitting regulator to wall end PE kit, ensure that the pipe is clear of any debris. Clesse recommends use of a Clesse inline filter, part code 040910AC.

6. Perform a gas tightness test to the requirements of UKLPG COP22 or BS 5482:1 – 2005, to suit the installation. There is a test point on the second stage regulator test, only use a small 3.5mm flat bladed screw driver and avoid over tightening when finished.

7. Fully commission assembly checking operating pressures only when the appliances are available and connected. Otherwise, check for soundness and lockup before leaving. The regulator is pre-set at the factory and does not normally need adjustment when used. If operating pressure adjustment is required, see overleaf.

8. Use Leak Detection Fluid on the test point and OPSO flange (if fitting the wall bracket), checking for any leakage, wiping off any remaining residues. If not using LPG for test media, purge the assembly fully before leaving site.

9. Adjustment of UPSO is not possible. The OPSO and Limited Relief Valve setting is pre-set and should not require adjustment.

10. Fit the OPSO seal passing the wire through the regulator hole in the OPSO body and clear plastic OPSO cap.

## Engineer information on regulator design:

Regulators manufactured to EN16129 standards— are now set to give OPSO setting typically between 90 and 110mb on a 37mb regulator, with the relief valve system operating at 75mb. This not only satisfies statutory requirements in the UK but offers greater resistance to inconvenient OPSO tripping found on regulators designed to BS3016.

## Range Rated Capacity:

The regulator is rated to the lowest inlet pressure, pressures above this will mean that higher capacities can be reached. Use the table opposite to determine the correct inlet pressure for the demands of the installation. Careful selection of 1st stage regulator such as the AP40 or APS2000 together with correct LPG storage and pipe sizing must be considered.
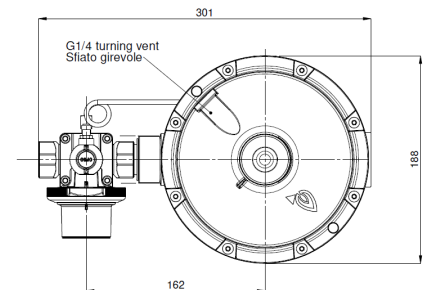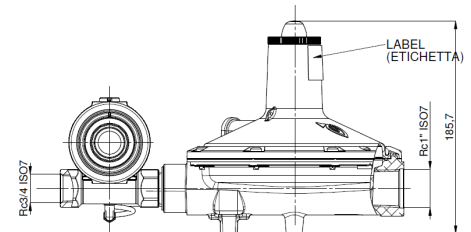
| Operating Conditions | Settings |
|---|---|
| Lock-up Pressure | 50mb or less |
| Operating pressure | 37mb +/- 5mb |
| Operating temperature | -20°C to 45°C |
| Max Operating Inlet Pressure | 2 bar (4bar max) |
| Optional pressure by replacement spring or ordering direct from Clesse (UK) Ltd | 50mb (50-100) Special order up to 200mb |
| Optional vent location and special builds available | |

| * Regulator Capacity kg/h (kW) | Inlet Pressure bar |
|---|---|
| 40kgh (556kW) | 0.5 |
| 60kgh (830kW) | 1 |

## Over Pressure Shut Off Valve Reset

Requires resetting

Unscrew OPSO cap reset and pull

Regulator OPSO set
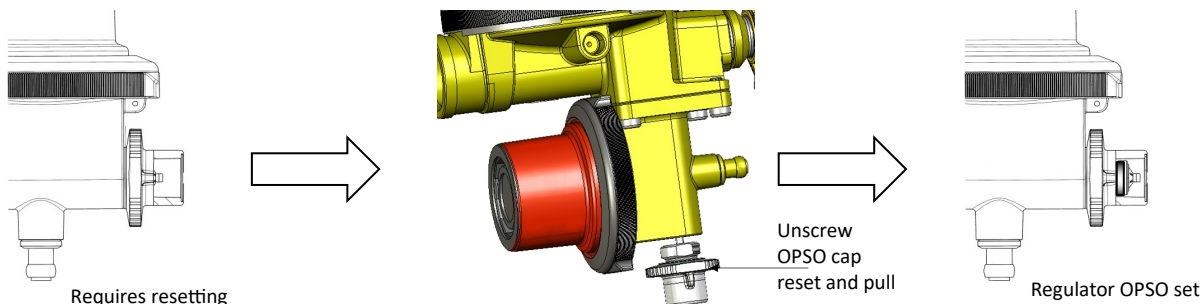
1. Over Pressure Shut Off must be reset by a qualified gas engineer, who should establish any cause for tripping, particular if this device trips repeatedly .
2. The device is fitted with a sealing wire, this must be replaced when reset.
3. If the OPSO has tripped together with UPSO, the OPSO must be reset first.
4. Gas supply does not require to be turned on, but ensure downstream valves have been turned off before resetting.
5. Remove sealing wire and unscrew the OPSO reset cap, in doing so this will begin to engage the reset spindle.
6. The OPSO cap is attached to the green reset indicator inside and is used to pull the device to reset—pull the cap firmly.
7. When reset, replace cap, finger tighten, and reseal with new wire seal. If required, proceed to reset UPSO.

## Under Pressure Shut Off Valve Reset

No gas downstream

Requires resetting

Pull to Re-set UPSO

Gas downstream
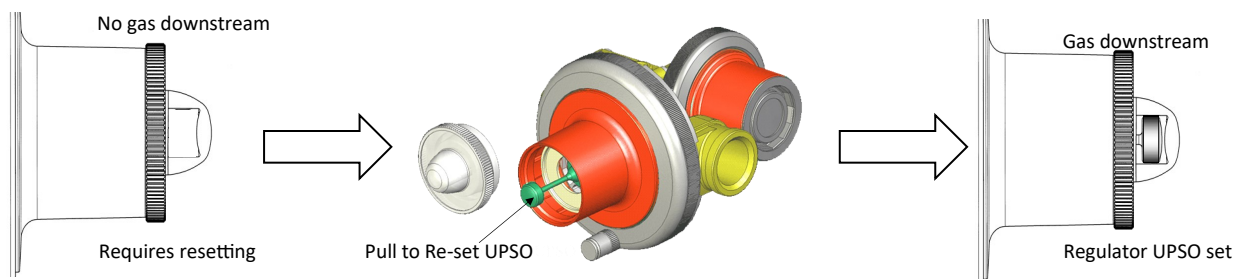
Regulator UPSO set

Before resetting the Under Pressure Shut Off:
1. Ensure any valves downstream of the regulator are closed before introducing gas into the pipework.
2. Check gas is available, turned on upstream of the regulator and that the OPSO is also set.
3. Unscrew the large clear plastic cap on the main body of the regulator as shown.
4. Under cap is the green UPSO reset, spindle, gently pull the green re-set and hold in this position whilst downstream pipework fills with gas.
   **Do not push the spindle after this point.**
1. Replace cap, finger tighten, and commission the installation if required.
2. When reset, the green spindle is clearly visible under the clear cap, as shown above, with the best viewing angle from the side.
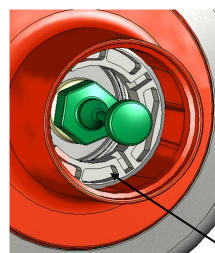
## OPSO Adjustment
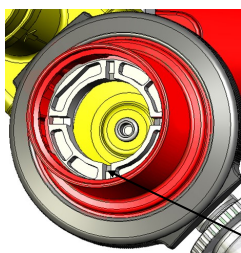
OPSO adjustment is not normally required. In the event that this is required:
1. Remove the black OPSO cap and adjust to give the desired pressure.
2. Reset OPSO and recheck settings.

Adjust here to alter OPSO pressure

## Nominal Pressure Adjustment

Regulator adjustment is not normally required. In the event that this is required:
1. Remove the clear cap, remove and discard the white plastic tamperproof disc, and adjust to give the desired pressure.
2. Replace the cap.

Adjust here to alter outlet pressure

### Vent orientation — "Rotatable Vent"
Breather vent orientation is made easier by the Rotatable Vent cover, to prevent water from entering and/or accumulating in the regulator, either by rain, humidity, or condensation. The operation can be carried out on site by a qualified engineer.

1. Unscrew the 8 screws, one by one.
2. Rotate and orientate the regulator cover with vent oriented downward.
3. Redo the 8 screws alternately.
4. Perform a leak test to ensure the installation is sound and the vent cover is sealed.

### Rotatable Diaphragm Case
After installation into the pipework, it's easy to rotate the diaphragm casing to fit into confined spaces or to position the vent downward as advised previously. Please proceed as follows:

1. Slack off (with a hexagon wrench), one by one, the 4 screws around the flange.
2. Rotate and orientate the diaphragm casing as necessary.
3. Redo the 4 screws alternately.
4. Perform a leak test to ensure the installation is sound and the Rotatable Vent cover is sealed.