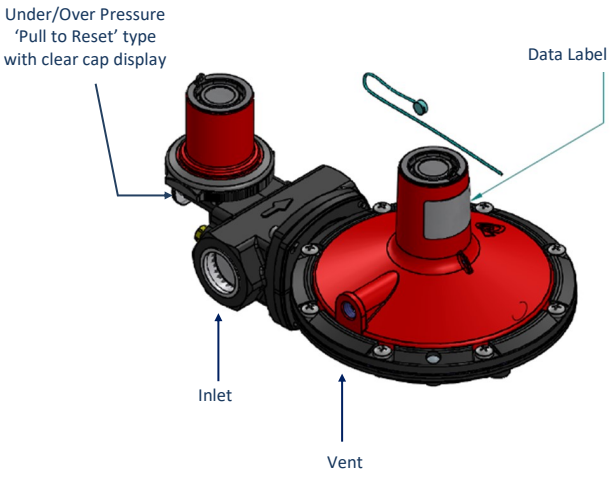
CLESSE PART No. 006847CB	2nd Stage UPSO OPSO 37mbar 60kg/h 830kW	SUPPLIED BY CLESSE (UK) LIMITED

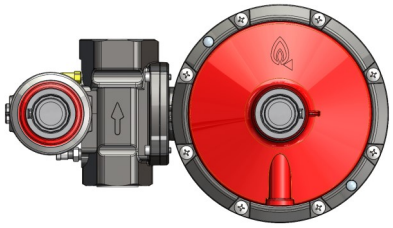


Technical Information	
Regulator	BP24S UPSO OPSO
Capacity kg/h (kW) @ min inlet pressure	60-90 kgh (830—1,250kW)
Set Pressure	37 mbar (32 - 45)
Inlet Pressure(1st Stage)	0.5 bar (0.3-2 bar)
Limited relief Valve	75 mbar
OPSO Set Pressure	130 mbar
UPSO Pressure	28 (27-30) mbar
Design Standard	BS EN16129 & CE
Inlet connection	Rc1F ISO/7 (BSP) (1")
Outlet connection	Rc1F ISO/7 (BSP) (1")

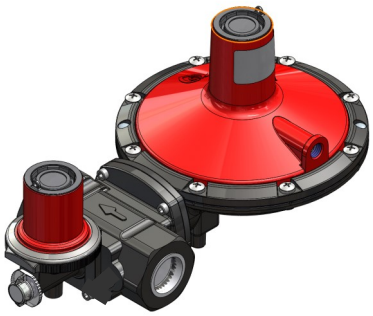
Item	Qty	Description
	1	BP24S 37mbar 2nd Stage Regulator 60-90kg/h

Assembly Instruction

1. Check the contents of the box, ensuring that the regulator meets the pressure and capacity of the installation. A visual inspection for damage and missing parts should also be completed.
2. This is a 2nd stage regulator and requires 1st Stage pressure reduction according to the inlet pressure specification (0.5-2 bar). We recommend fitting a Clesse 1st stage to guarantee performance.
3. If the regulator is to be fitted as a wall mounted assembly, the pipework immediately before and after the regulator should be supported.
4. When installed, ensure that the regulator vent faces downwards so that it does not collect rain water. See page 2 for instructions on how to rotate the vent.
5. Before fitting regulator to wall end PE kit, ensure that the pipe is clear of any debris. Clesse part code: 040911AB is recommended as an inlet filter.
6. Perform a gas tightness test to the requirements of UKLPG COP22 or BS 5482:1 – 2005, to suit the installation. Outlet pressure should be checked downstream of the regulator at high flow rates, the regulator does not come fitted with test points.
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.
8. Use Leak Detection Fluid on the test points and joints checking for any leakage, wiping off any remaining residues. If not using LPG for test media, purge the assembly fully before leaving site.



Install the regulator with vent pointing down or horizontal

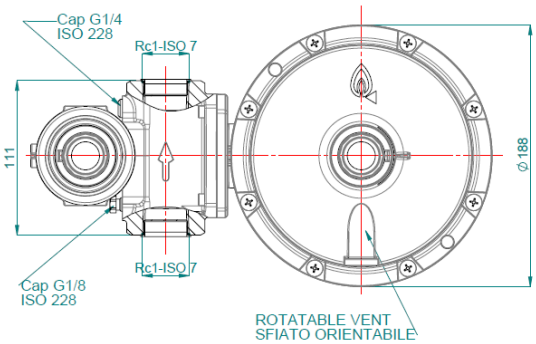


Useful Information

- This regulator is fitted with a limited relief valve and should be fitted outdoors.
- This regulator can achieve a maximum flow rate of 90kg/h (1,250kW), see table below for inlet pressure requirements to achieve various flow rates.
- See overleaf for new features

In accordance with BS6891

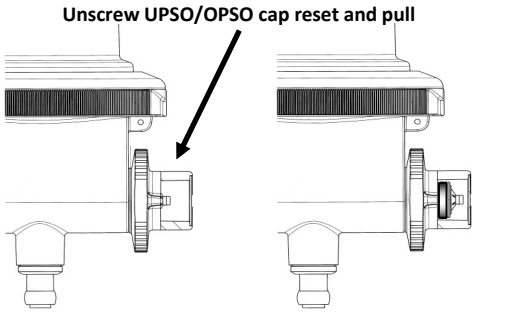
Inlet Pressure (Bar)	Flow Rate (kg/h)
0.3	50kg/h (691 kW)
0.5	60kg/h (830 kW)
0.75	70kg/h (968 kW)
1	80kg/h (1,106 kW)
1.5	90kg/h (1,250 kW)



Operating Conditions	Settings
Lock-up Pressure	50 mb or less
Operating pressure	37mb +/- 5 mb
Operating temperature	-20°C to 45°C
Max Operating Inlet Pressure	2 bar
Maximum Incidental Pressure	4 bar
Optional pressure by replacement spring or ordering direct from Clesse (UK) Ltd	None

Under/Over (UPSO/OPSO) Pressure Shut Off Reset

1. This regulator has the Under & Over Pressure Shut Off Reset combined.
2. If an over pressure situation is suspected, this should be investigated and reset by a qualified gas engineer.
3. If an under pressure situation has occurred i.e. gas storage run out, then the reset device can be reset by the consumer.
4. Before resetting the UPSO/OPSO, ensure all downstream appliances and pipework have been checked, isolated, & turned off. Generally, under pressure cut off is caused by a gas run out. If this not the case, please thoroughly investigate downstream appliances and pipework.
5. **Only when point 4 has been completed satisfactorily should an UPSO/OPSO be reset.**
6. When resetting, the upstream gas supply should be turned on and remain on.
7. The UPSO/OPSO reset is located under the clear cap, remove the sealing wire (if fitted) and unscrew the cap.
8. Gently pull the UPSO/OPSO reset, allowing sufficient gas to pass through to the downstream pipework before releasing.
9. Once reset, the green indicator should be clearly visible in the indicator window.
10. Screw the cap back in finger tight only.
11. If the device repeatedly trips, consult your gas supplier or qualified engineer as soon as possible.



Vent orientation

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