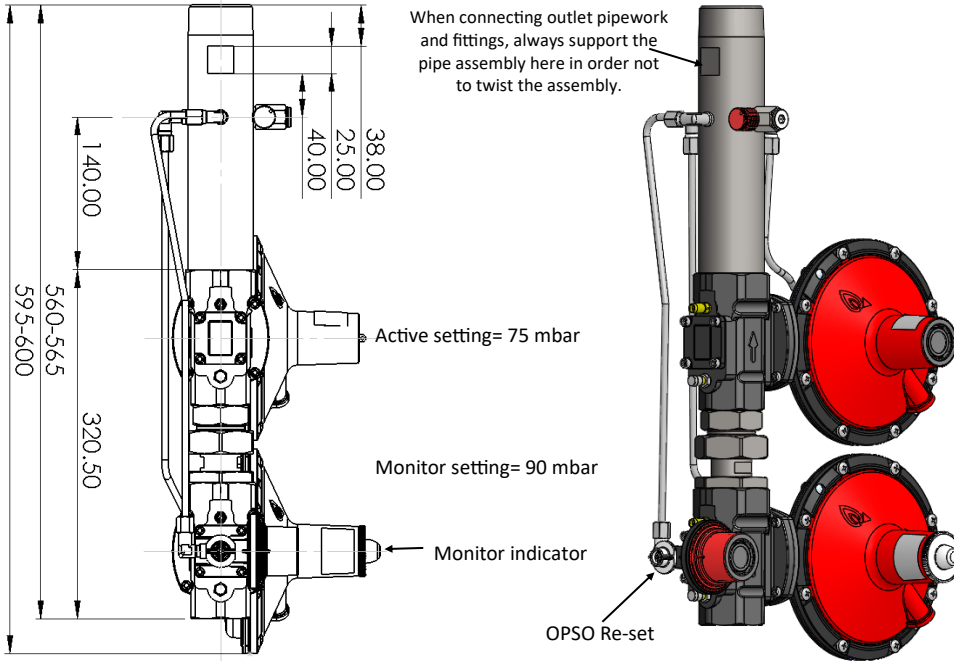




CLESE PART No.
006896CM

**2nd Stage Active Monitor + OPSO
BP24FC Regulator 150kg/h 2074kW**

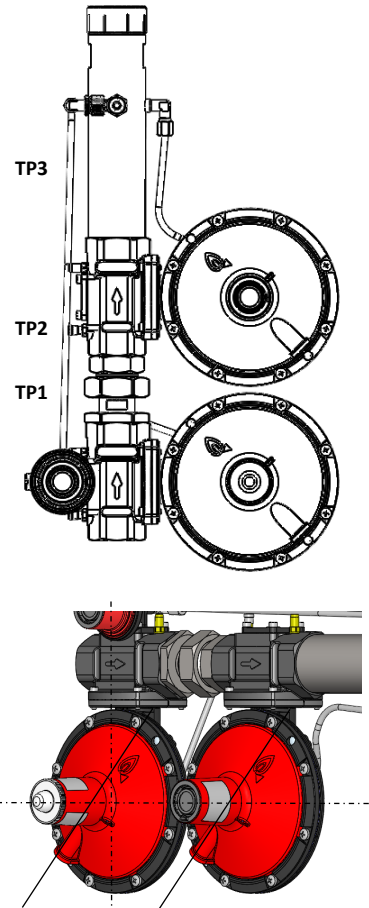
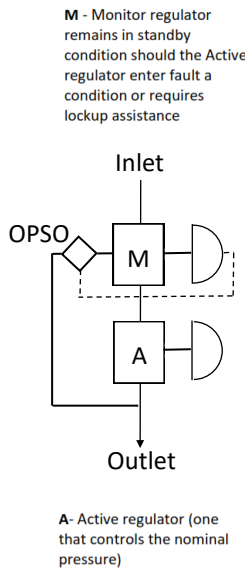
**SUPPLIED BY
CLESE
(UK) LIMITED**



Technical Information	
Regulator	BP24FC AM OPSO
Capacity kg/h (kW)	150 (2074) *
Set Pressure ACTIVE	75 mbar (65-80)
Set Pressure MONITOR	90 mbar (not adjustable)
Inlet Pressure	0.65—2 bar
Pressure Relief Valve	120 mbar (110-130)
OPSO Set Pressure	140 mbar (130-150)
Design Standard	EN16129 CE
Inlet connection	Rc1F ISO/7 (BSP)
Outlet connection	Rc2M ISO/7 (BSP)
Pressure test point	Schrader valve x 2

Principle of operation

1. The Monitor (M) regulator senses pressure at the outlet of Active (A) regulator. Monitor (M) regulator only responds to and controls the pressure at this point, not internally as a normal regulator.
2. The Monitor (M) regulator is set to operate 5% higher than the maximum lock up pressure of the Active (A) regulator (90mbar).
3. In normal operation, the Monitor (M) regulator remains fully open, as it is factory set higher (90mbar) than the Active (A) regulator (75mbar). Engineer adjustment of Active (A) regulator is only allowed between 65—80mbar. The static lockup value must not exceed 90mb.
4. In normal operation, upstream 1st Stage pressure passes through the Monitor (M) regulator directly to the inlet of Active (A) regulator.
5. Pressure measured at TP1 should be at a higher pressure than 1st stage pressure. When measured at no flow condition, pressure at Active regulator TP2 will be the final regulated pressure. When pressure is measured at TP1, in working flow conditions up to its maximum capacity, the intermediate pressure will show between 1st stage and approx. 300mbar.
6. Should any problems occur with the Active (A) regulator, the Monitor (M) regulator will take control at approx. 90mbar. Should this occur, a red indicator will show in the glass window on the Monitor (M) regulator. In this condition, both TP1 and TP2 will show the same pressure.
7. In this condition, TP3 measured pressure will be Monitor (M) pressure. If this is the case, Active (A) regulator will need adjustment to a lower setting, or the complete Active (A) regulator assembly to be replaced.
8. Monitor protection of the outlet pressure provides a more stable OPSO system and greater protection against nuisance tripping, due to pressure shunt.



Always ensure the regulator vents are point downwards in order to drain any condensation

QUICK REFERENCE FOR CHECKING NORMAL OPERATION

Normal Operation

TP 1 shows intermediate pressure (after 1st stage).

Incorrect operation

TP 1 and 2 show the same pressure (elevated regulated pressure) and the red indicator shows fully in Monitor (M) regulator window.

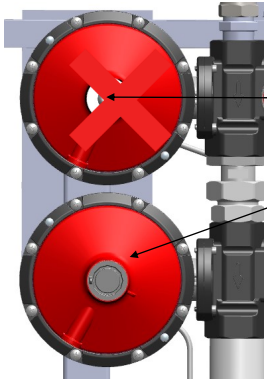
- If the red indicator is fully visible then the regulator needs to be checked by a qualified gas engineer, or the complete unit replaced.



This regulator needs to be periodically inspected. Use the correct servicing kit **UUA/MOPSOTSTKIT** to check the correct functioning of Active/Monitor regulator and verify settings of OPSO.

*Operating Conditions	Settings
Outlet Pressure Range	65-80 mbar
Inlet Operating Pressure to achieve declared capacity	0.65-2 bar
Operating temperature	-20°C to 50°C
OPSO Sensing Method	External sensing to Active regulator
Lockup Pressure	Up to <20% above nominal pressure
Maximum Incidental Pressure	3.5bar (max OPSO setting upstream)

Nominal Pressure Adjustment



Regulator adjustment is not normally required, as the regulator has been factory set at flow conditions. In the event adjustment is required, only adjustment of the Active regulator is permitted.

Do not adjust the Monitor regulator unless you have the correct service tool kit, adequate training, and qualification.

1. Remove the black cap by the cover and adjust to give the desired pressure, with lockup no greater than indicated overleaf, by adjusting the internal screw ring to give the desired outlet pressure.
2. Reset the cap on the cover.

ENSURE THAT THE PRESSURES SELECTED ARE SUITABLE FOR THE DOWNSTREAM PIPEWORK.

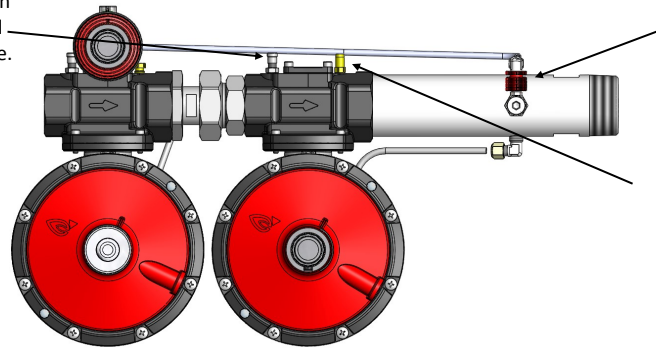
Correct Nominal Pressure Adjustment

A nominal flow rate of minimum 10% of the regulator capacity needs to be used, and a minimum of 0.65 bar inlet pressure should be available, observing the regulator's maximum pressure setting requirements on the front of this document and the installation pipework restrictions (whichever is lower).

Once set, check the lockup at zero flow, ensuring the pressure does not exceed that stated in the front of this document or installation pipework restrictions (whichever is lower).

Regulator Working Pressure Test Point

In normal condition this test point will show inlet pressure.



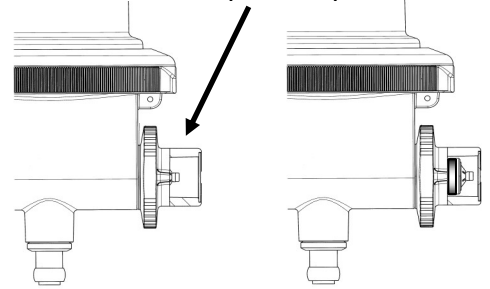
This test point should be used to test the working pressure of the regulator.

Due to nature of externally sensing regulators, this test point should never be used for testing the working pressure of the regulator. It can only be used to measure lock up pressure and to perform leak test.

Over Pressure Shut Off (OPSO) Reset

1. Over Pressure Shut Off must be reset by a qualified gas engineer, who should establish any cause for tripping, particularly if this device trips repeatedly.
2. The device is fitted with a sealing wire, this must be replaced when reset (not shown).
3. The upstream gas supply can remain off. Before re-establishing gas supply, ensure all downstream appliances and pipework are turned off.
4. Remove sealing wire and unscrew the OPSO reset cap; in doing so, this will begin to engage the reset spindle.
5. The OPSO cap is attached to the green reset indicator inside and is used to pull the device to reset. Pull the cap firmly.
6. When reset, replace cap, finger tighten, and reseal with new wire seal.
7. If the device continues to trip, consult your gas supplier or qualified engineer as soon as possible.

Unscrew OPSO cap reset and pull



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.

