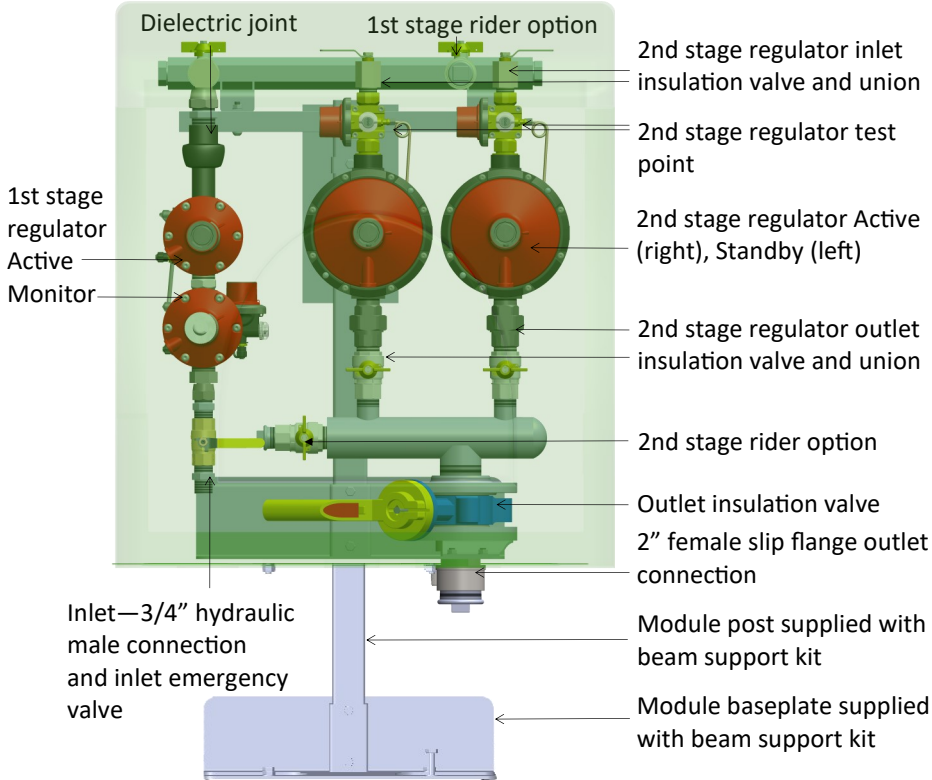




**CLESSE PART No.**  
**UUTS2ST60KG**

**UNDERGROUND MODULE 1ST & 2ND**  
**STAGE 60kg/h (830kW/h)**

**SUPPLIED BY**  
**CLESSE**  
**(UK) LIMITED**



Technical Information	
1st Stage Regulator	AP2 AM OPSO
2nd Stage Regulator	BP 2403 OPSO
Capacity kg/h (kW)	60 kg/h (830kW/h)
1st Stage Inlet Pressure	2.5–16 bar (operating)
1st Stage Outlet Pressure	1.2 bar ACTIVE 1.75 bar MONITOR
2nd Stage Outlet Pressure ACTIVE / STANDBY	75 / 70 mbar
2nd Stage Lockup	Up to 98mbar
1st Stage OPSO Set Pressure	2.5bar (2-4)
2nd Stage OPSO Set Pressure	130 mbar ACTIVE 140 mbar STANDBY
Limited Relief Valve (PRV)	110 mbar
Inlet connection	3/4" HYDRAULIC MALE
Outlet connection	DN50 PN16
Operating temperature	-20°C to 50°C

### First Stage

The principle of operation of the AP2 Active Monitor regulator is described in AP2 regulator instruction (006880MD). Please obtain a copy of these instructions prior to commencing any work on this regulator. If you need to replace the regulator, use the hydraulic connection to remove the regulator and request replacement. Do not replace the special hydraulic connection from the inlet of this regulator. If you need different style / size connection, please contact Clesse UK for solution. To maintain gas supply, use the first stage rider facility located at the top manifold between the two 2nd stage regulators. Use appropriate regulator set to 1.2 bar outlet pressure. Do not connect tank pressure directly to this manifold, as it will result in damaging 2nd stage regulators.

#### QUICK REFERENCE FOR CHECKING NORMAL OPERATION

##### Normal Operation

TP 1 and 2 show the same pressure (tank pressure)

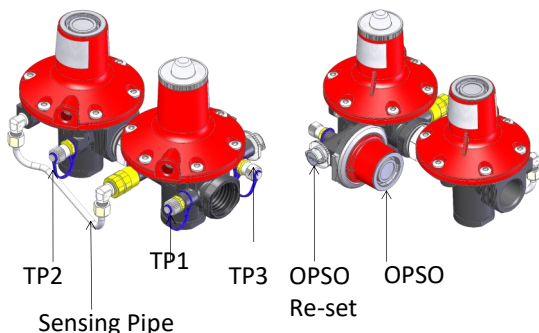
##### Incorrect operation

TP 2 and 3 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, 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/MOPSOTSKIT** to check the correct functioning of Active Monitor regulator and verify settings of OPSO.



### Second Stage

The regulators used on this module are BP2403 (006842CB). Both regulators have been configured as a traditional twin stream set up, with the right regulator being **Active** (set to 75mbar) and the left regulator being **Standby** (set to 70mbar). The OPSO has been set lower on the Active stream to protect gas supply in case of any problems with the active regulator. The OPSO on the Standby stream has been set higher to allow for a continuing gas supply if the Active OPSO trips.

Both regulators are equipped with limited relief valves, which are set to 110mbar. The limited relief valves should not be adjusted unless necessary.

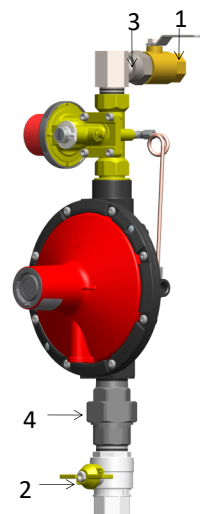
**Only adjust regulators if you have received training from the manufacturer and are competent.**

In case of failure, each stream (regulator) can be replaced individually, while the other stream (regulator) continues to supply gas.

To replace one of the streams (regulators), turn off the inlet and outlet insulating valves 1 & 2, then disconnect at the unions 3 & 4.

Replacement regulators can be obtained from Clesse UK, quoting part code 006842CB.

If you need specific information, please refer directly to the regulator instruction or contact Clesse UK.



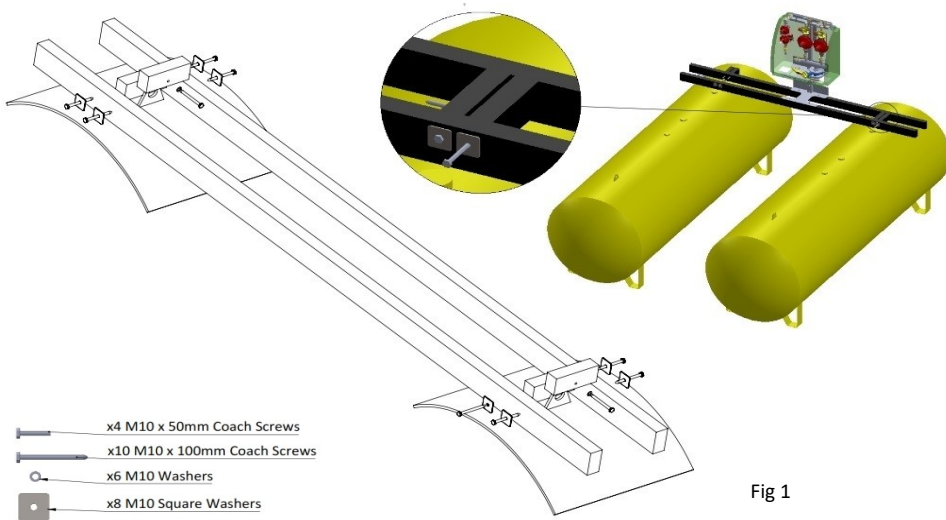
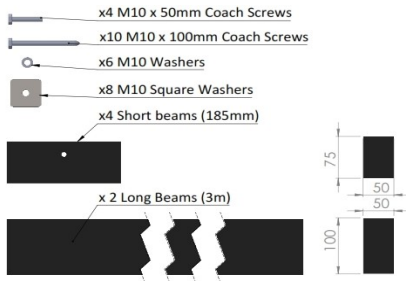


Fig 1



**Assembly Instruction:**

1. Assemble the underground module support kit as shown above (Fig. 1). It is advisable to drill a pilot hole prior to bolting the plastic beams together.
2. Gently lay the module on its back and loosen the 4 x M8 bolts that hold the module to the support post (Fig.2). Replace the short transportation post with the longer support post supplied with the support kit. Ensure that end of the support post is 325mm from bottom of the GC2 kiosk.
3. Tighten the M8 bolts with moderate strength (don't overtighten as this will result in breaking off the captive nuts).
4. Lift the whole module (2 man lift) and insert support post in dedicated slot on the baseplate.
5. The completed module and baseplate should then be located on the beams in the desired position and bolted to the beams with the 10mm bolts supplied. You will need to drill an 8mm pilot hole for these.
6. Make sure that bottom of the kiosk is at the same height as the top of the tank turrets Fig 3. If necessary adjust the height.
7. Assemble and commission the module in accordance with the module instructions.

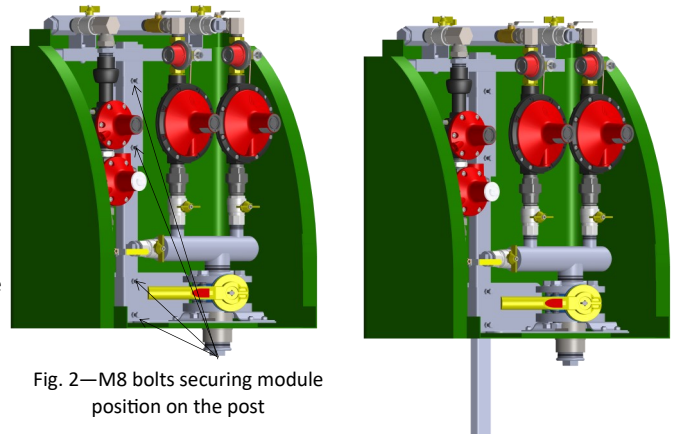


Fig. 2—M8 bolts securing module position on the post

Fig. 3

