

# PURGE CONVERSION KIT FOR SINGLE FLARE UNIT



## DESCRIPTION

The kit of parts includes

- 3 off PVC vent stacks
- 1 off Flow meter
- 1 off Tee piece with flow control valve (for attaching to SFU steel top flange) & sample point
- 1 off End of line flame arrestor.

Maximum operating pressure 500mbar; depending on supply hose that may be lower.



## ASSEMBLY

**Do not over-tighten any connections, hand tight preferably.**

Fit the Tee piece with valves to steel flange on the top of the Flare unit.

Fit the flame arrestor to one PVC stack and then to the top connection on the flow meter.

Fit the remaining two PVC stacks to the base of the flow meter.

Join the two assemblies.

Connect the NG or LPG hose to the closed base 1" valve.

## OPERATION

Verify that the pipe size to the purge connection is large enough to provide the purge flow rate without excess pressure drops.

If the sizes are correct and the purge rate cannot be obtained, the pipe to the purge point may be too small.

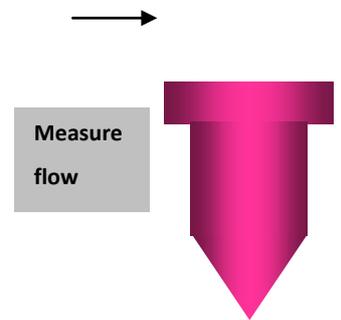
If possible, move the purge connection to a larger section of pipe and purge to that point before finishing the purge on the original smaller pipe. **If this is not practicable, a purge with nitrogen according to UP/1 must be carried out.**

A flow rate of below **3 cubic metres per hour** will be adequate for pipe sizes **below 50mm [2"] bore** and can be easily set by the 1" full bore manual valve.

For **50 mm [2"] bore** set the control valve to give a flow of **4.5 m<sup>3</sup>/h**.  
The primary meter must be U6 rating or larger.

For **80 mm [3"] bore** set the control valve to give a flow of **11 m<sup>3</sup>/h**.  
The primary meter must be U16 rating or larger.

For **100 mm [4"] bore** set the control valve to give a flow of **20 m<sup>3</sup>/h**.  
The primary meter must be at least U16 rating.



**The purge gases may be tested after 15 seconds of flow. The purge should be completed after a time in seconds equal to about 1.5 to 3 times the full length of the pipe plus any installed 'U' meter and hose in metres. For example, a 25m length of pipe, U16 meter [20m equiv] and the 5m of purge hose should purge in about 75 to 150 seconds at the correct flow rate for the largest pipe being purged. Where a 'U' meter is installed add 20m for U16 & 25, 30m for U40 & 60, and 35m for U100 & 160.**

During the purge, the flow rate may change. This is normal and is caused by the change in specific gravity as the flow of air is replaced by the gas. This flow can be adjusted to maintain the ideal minimum velocity.

It should not be necessary with this design of unit to monitor the gas pressure during purging since the indication of the correct flow on the meter shows that adequate pressure exists. Please note that if an electronic gauge is used it must be intrinsically safe if used in flammable environments. Do not forget to have any test instrumentation checked and calibrated at least annually.

**Never attempt to light the purge gases on the Flame Arrestor.**

On completion of a successful purge to gas, you should have achieved at least 90% concentration. Higher levels may not be possible due to the constituents of the gas itself.

When removing redundant pipework and gas meters it is essential to purge to air and to get less than 40% LFL or more than 20.5% oxygen. An optional airflow mover is available from GEA for gas to air purges.

**All removed pipework components must be capped or sealed correctly.**

**Open ended pipework must not be left.**

**Hoses should be purged free of gas before storage or loading into a vehicle.**

**Finally dismantle the components and store in the carry case.**