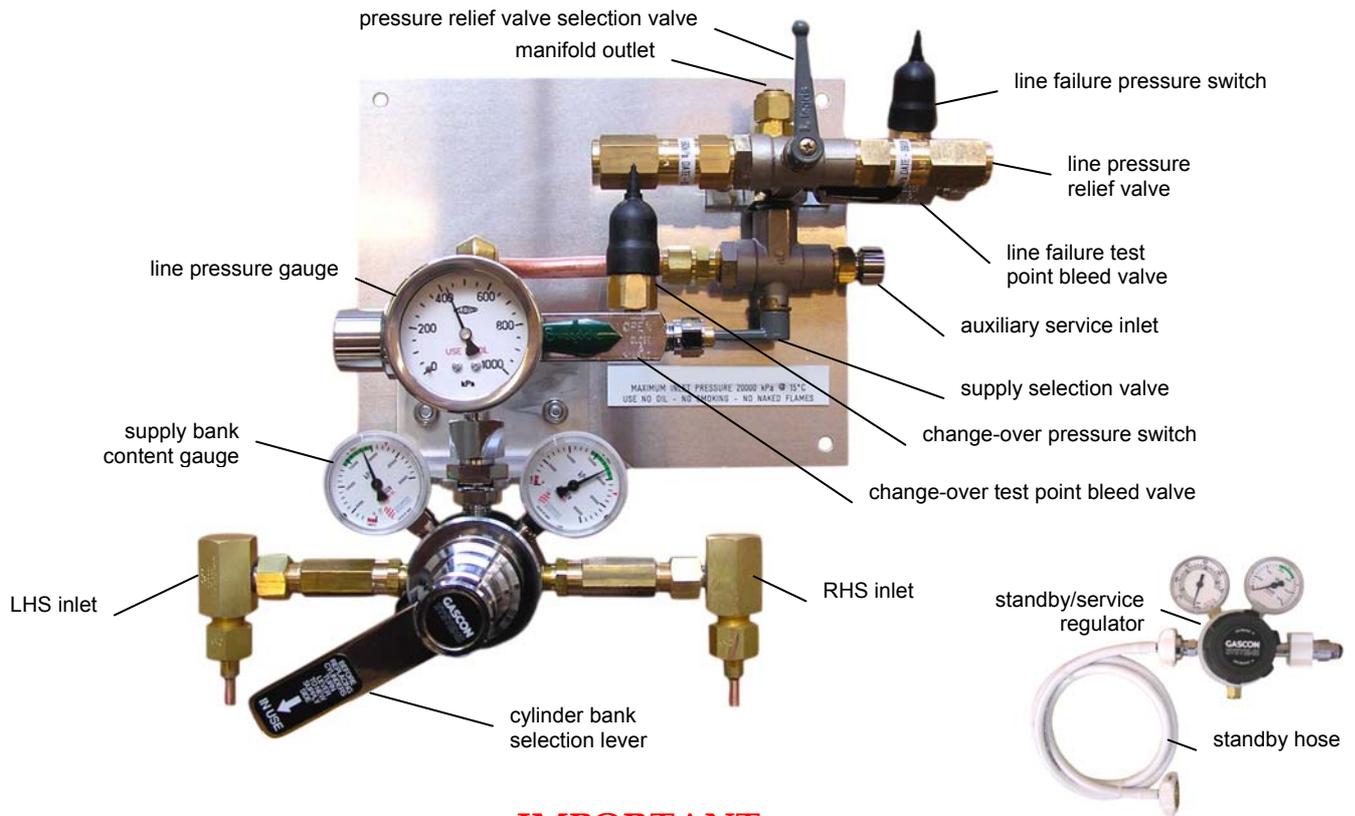


MEDICAL AUTOMATIC CHANGE-OVER MANIFOLD OPERATING INSTRUCTIONS



IMPORTANT

- Do not use oils or greases on the manifold or associated components
- Open all valves SLOWLY and FULLY to ensure the pressure increases gradually.
- Do not remove the plastic caps in cylinder valve outlets until ready for use.

TO PUT THE MANIFOLD INTO OPERATION

1. Ensure that **supply selection valve** is in the middle "off" position.
2. Ensure that each cylinder valve outlet is clean. Momentarily open then close each cylinder valve to blow out any foreign matter and ensure that each cylinder is full. Close each cylinder valve lightly to make slow opening easier, (after connection to the manifold).
3. Connect cylinder leads to the cylinder valve. Ensure that the ends of the leads are not contaminated with any foreign matter, or that they are not damaged.
4. Move the **cylinder bank selection lever** to the left or right to select the bank of cylinders to be *in-use*, (the opposite bank will now be *reserve*).
5. Slowly and fully open all cylinders.
6. Partially move the **supply selection valve** to the RHS position to allow the pipeline system to pressurize slowly. When fully pressurized, move the valve fully to the RHS position.

NOTES:

To avoid damage to the control mechanism, the downstream system must be pressurized in a controlled manner.

An auto change-over manifold is a critical item in a medical gas supply system. It should be placed on a planned maintenance schedule as detailed in the maintenance instructions supplied with the manifold.

WHEN IN-USE CYLINDER BANK IS DEPLETED

1. Move the **cylinder bank selection lever** to the opposite side (new *in-use* side)
2. Close and remove all empty cylinders.
3. Ensure that each new cylinder valve outlet is clean. Momentarily open then close each cylinder valve to blow out any foreign matter and ensure that each cylinder is full. Close each cylinder valve lightly to make slow opening easier, (after connection to the manifold).
4. Connect the new cylinders, open all cylinder valves slowly and fully.
5. Observe the contents gauge to check that the newly fitted cylinders are full.

Test Point Bleed Valves

Test point bleed valves are fitted to both the change-over and line failure pressure switches. During normal operation these should be in the "open" position. To test the function of the alarm system, or fit a test gauge during servicing, they need to be moved to the "closed/bleed" position

Auxiliary Service Inlet

The manifold has an auxiliary supply inlet for servicing, or in case of a manifold failure. Ensure the standby/service regulator is fitted to a cylinder, and the hose is connected to the auxiliary service inlet. When required, slowly and fully open the cylinder valve and adjust regulator to required line pressure. To select the auxiliary supply slowly move the selection valve fully to the RHS position.

Pressure Relief Valve Selection Valve

This valve is used to isolate the relief valves one at a time so they can be removed for testing. When in normal operation the valve should be in the "middle" position as shown.

It is recommended that the manifold only be shutdown for servicing. It is normal practice to leave the manifold in an operating condition when not in use. Each time the manifold supply cylinders are changed over, the *reserve* cylinders becomes the *in-use* cylinders, and the previously *in-use* cylinders become the *reserve* cylinders.