Supplement A



Stationary situation

Both oxygen cylinder and wall gas are connected to the inlets of the solenoid valve. The solenoid valve must be powered and active when the wall-gas connector is connected. The valve position blocks the inlet of the oxygen cylinder. At the same time, the inlet of the wall gas is open. The outlet only receives the gas mixture coming from the wall gas to the oxygenator.

Transition phase (stationary to ambulatory)

The wall-gas connector will be detached at the same time or just after the power of the solenoid is detached. This results in an inactive electromagnet which switches the solenoid valve. In this situation, the oxygen cylinder inlet is open, and the wall gas inlet is blocked. This allows the oxygen from the cylinder to flow towards the outlet.

Ambulatory situation

The electromagnetic is unpowered, so the outlet of the change-over valve only receives the oxygen from the oxygen cylinder.

Transition phase (ambulatory to stationary)

The wall-gas connector must be attached at the same time or just before the power of the solenoid. This results in an active electromagnet which switches the valve. This blocks the oxygen cylinder inlet and opens the wall-gas inlet. The outlet only receives the gas mixture coming from the wall gas.