



Fig 6.6 - Example of Gas Distribution Schematic

Note: See below for Gas Flow Summary of the Gas Distribution Schematic

A Gas Inlet Manifolds

As you can see from the diagram, each of the gases—nitrous oxide, oxygen and AIR—enters its respective gas inlet manifold, where the gas is distributed to other parts of the machine.

B Pipeline Inlets

Pipeline supplies of each gas enter the appropriate gas inlet manifold through the pipeline inlets.

C Cylinder Supplies

Cylinder supplies of each gas flow through tubing leading from each cylinder to its respective gas inlet manifold.

D O₂ Flush Button

Oxygen flows through the O₂ flush regulator **M**, where its pressure is reduced to 35 psi before entering the O₂ flush valve. When the O₂ flush button is pushed, the flush valve opens and supplies a high flow of O₂ to the breathing system.

E Drive Gas

The drive gas tubing has a direct connection from the gas inlet manifold to the ventilator, which uses oxygen to pneumatically power some of its components. The oxygen taking this path is called as drive gas since it helps close valves and also pushes the bellows down to force gas to the patient.

F System Switch

After passing through the alternate O₂ control **K**, oxygen continues to the system switch. When the system switch is turned ON, oxygen travels into the gas mixer **G** through the alternate O₂ inlet.

G Gas Mixer

The gas mixer has direct connections from the AIR, oxygen and nitrous oxide manifolds. As mentioned above, oxygen also enters the gas mixer through the alternate O₂ inlet after passing through the system switch.

Inside the gas mixer, selector valves open or close to allow oxygen and a balance gas (either nitrous oxide or AIR) to flow into the mixer. Flow control valves then open proportionally to allow the proper amount of oxygen and balance gas to mix together, forming the mixed gas that makes its way over to the electronic vaporizer **H**.