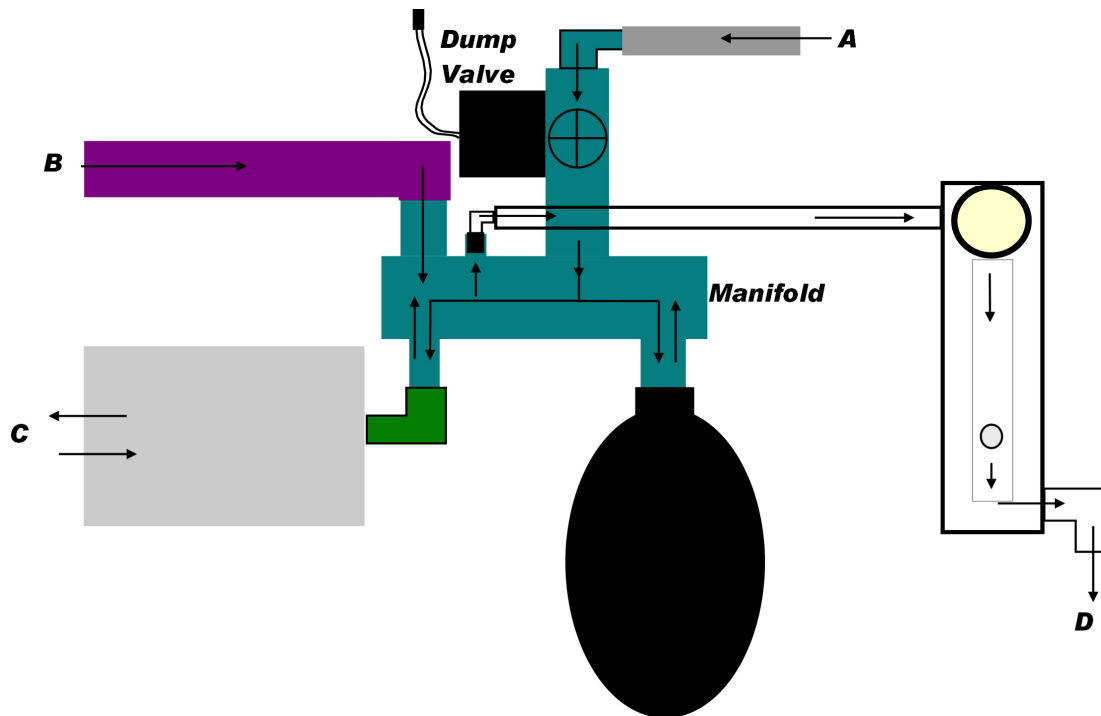


Operation of the Dump valve and gas scavenging systems from Tefonius



The Dump Valve represents the only exit point for gas from the patient circuit (A). This valve is normally closed so the patient circuit is a closed system. When the Dump Valve is opened, pressure in the patient circuit causes gas to flow through the valve to the manifold.

Gas from the manifold can then leave by two routes:

- Through the active scavenging circuit via the Scavenger flow meter and thence to the hospital scavenging system
- Through the Charcoal absorber canister, where volatile agents are scrubbed before entering the room air

Action of the Active scavenging circuit

When the Dump valve opens, gas from the patient circuit is dumped into the black reservoir bag. The continual gas draw of the active scavenging circuit removes this gas into the hospital scavenging system. How quickly this gas is removed is determined by the position of the flow control knob.

Once the patient gas has been dumped the Dump valve closes again, sealing the patient circuit. When the excess gas from the reservoir bag and the manifold has been removed, the active scavenging circuit then draws air back through the Charcoal canister. Air cannot be drawn from (B), the manual bag circuit because of the pressure relief valve, and air cannot be drawn from the patient circuit because the Dump valve is closed. Even if the scavenging rate is turned up full there is no problem as air will be simply pulled in through the Charcoal canister until the next time the Dump valve opens. If the scavenging system fails or is temporarily unavailable excess gas leaves via the Charcoal canister. This might also occur if a large volume of gas was dumped from the patient circuit that exceeded the capacity of the reservoir bag and the scavenge rate of the hospital scavenging system.