KAVLICO
Pressure Sensors

Medical Application
Ventilators

What is a Medical Ventilators?

It is a machine designed to move breathable air in and out of the lungs to aide a person that is having trouble breathing or is unable to physically breathe on their own. Ventilators are mainly used in emergency care, home care and intensive care and as a component of anesthesia machines.

How does it work?

A ventilator uses pressure to move air or a mixture of gases (like oxygen and air) into the lungs. This pressure is known as positive pressure. You usually exhale (breathe out) the air on your own, but in some situations the ventilator may have to perform this function for the person.

A ventilator can be programmed to “breathe” a specific number of times over a certain time frame, usually minutes. And it can also be programmed to trigger the ventilator to force air into the lungs. But, if you fail to trigger it within a certain amount of time, the machine automatically supplies air to keep you breathing.

Where are pressure sensors used on a ventilator?

Not all ventilators are the same but the common areas where pressure sensors are being used are as follows and as shown in the below diagram.

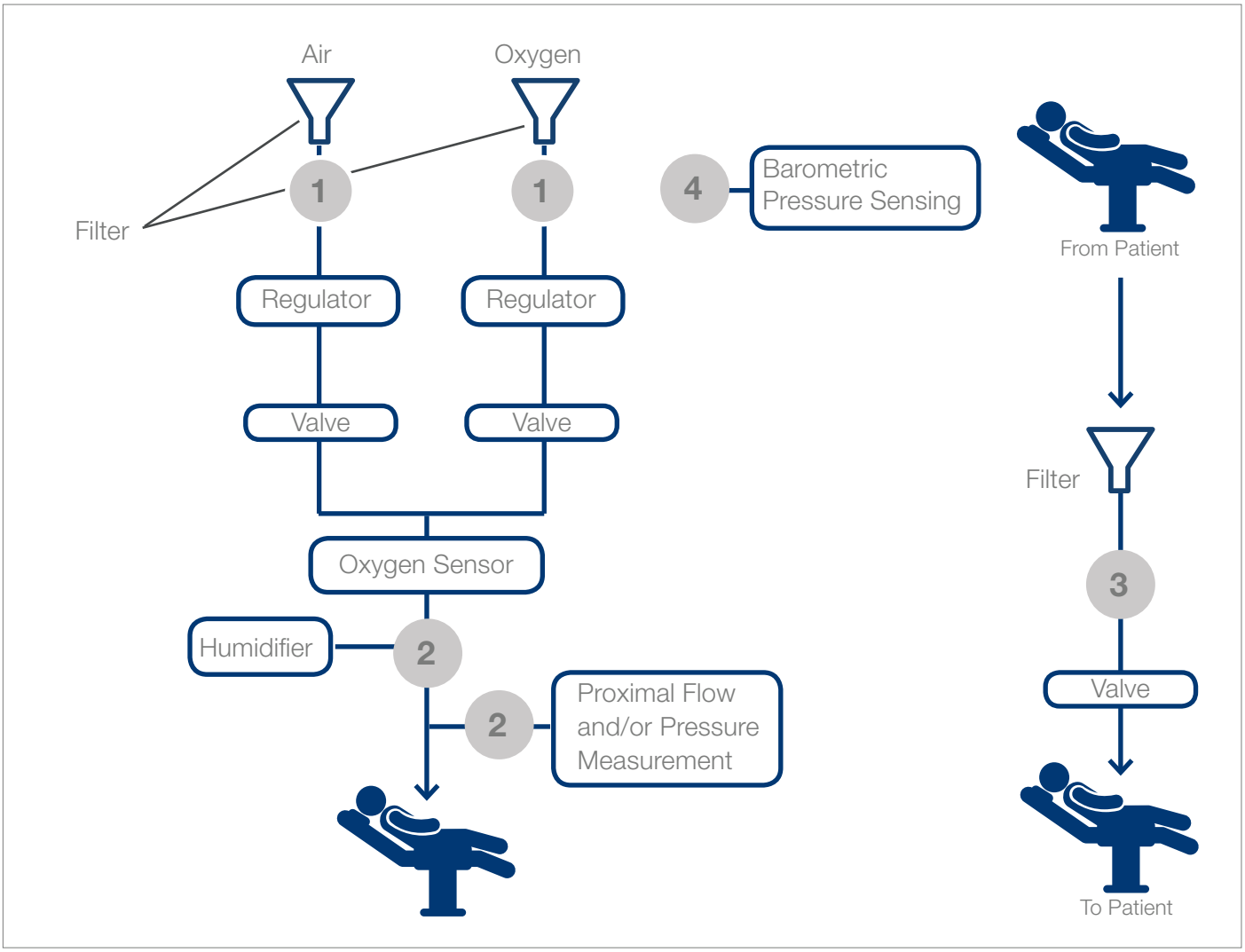
1. Measurement of pressure between the filter and regulator from the initial Air and Oxygen inputs.

2. After the Oxygen sensor, which measures the Air/Oxygen mix, a pressure sensor is used to measure pressure applied to the patient (inhalation) and in some Ventilators to measure pressure of the gases leading to an external humidifier.

3. Pressure measurement is also taken from the patient when breathing back (exhalation).into to the ventilator

4. Dependent on the physical location of where the ventilator is being used barometric pressure measurement is taken to offset any elevation changes

Sensor location	Product Series Recommendations
1	P500, P265 and PTA5000
2,3,4	P992, P993, P1K, P1J



Please note that these are just recommendations based on current applications. A thorough review by the end customer must be performed to determine the suitability of the product within their application.

To learn more about the product series, please contact us.