



Valendor Accurate Inflation System[©] (AIS)

Technical Information and Key Features

It's widely recognized that the bursting volume of condoms is defined by parameters as the amount of air (in normal liters), the pressure (gauge pressure) at burst, the temperature of the air inside the condom and the atmospheric pressure.

To ensure an accurate determination of bursting volume and bursting pressure, each individual chamber of Valendor AIS is equipped with a Mass Flow Controller, a sensor for gauge pressure, a sensor for atmospheric pressure and a temperature sensor for determination of the temperature of the air let inside the condom.

Mass Flow Controller

The Mass Flow Controller in Valendor's AIS provides a stable flow rate and an accuracy in volume with a tolerance less than $\pm 1\%$, a unique feature for the Valendor system.

The Mass Flow Controller allows for the AIS to operate at the maximum allowed flowrate due to the high accuracy in the flowrate readings. The higher flowrate and Mass Flow Controller will shorten the time for testing and increase the accuracy of true inflated volume.

Pressure sensor

The pressure sensors are high static transducers with stainless steel membranes. Made to last for decades.

The pressure sensors inside the AIS chambers are individually self-tared before starting the test cycle, thus further enhancing the accuracy of the results.

Individual temperature sensors

The temperature of the inserted air is measured throughout the test in each chamber and used in the calculation of the true volume of the condom at burst.

Individual sensors for atmospheric pressure

Each chamber automatically collects data of the atmospheric pressure during the test. The data is used in the calculation of the true volume and pressure of the condom at burst.

Calibration

Calibrations traceable to international normal can be performed in-house using Valendor's Displacement Calibration Instrument (DCI). The intelligent software's user-friendly interface makes it easy to insert compensation values, when needed.

Software

The software of Valendor's Accurate Inflation can easily be installed and run on any modern desktop or laptop computer. The system also allows for remote support of Valendor technicians to solve problems or assist with installing the software to a new computer in case of computer crash. This feature has been highly appreciated since the AIS has been proven to be durable enough for every day operation for 20+ years and counting.