



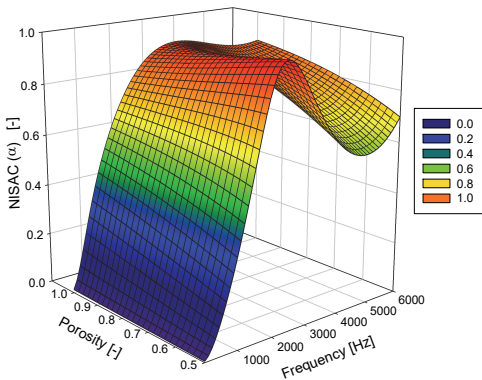
Alfa Acoustics - Porosity test rig is based on Boyle's law. The principle is to reduce the volume of an enclosure where a material sample is placed. While doing so, the pressure will increase in the enclosure compared to the atmospheric pressure. This increase of pressure depends on the volume of the enclosure and the volume accessible to the air inside the porous medium. By measuring the pressure increase it is possible to determine the open porosity of the material.

Porosity is one of the important parameter for sound absorbing acoustic materials (Biot Parameter). The sound absorption coefficient is mostly governed by porosity of sound absorbing materials.

Field of Application

Quality Control of Acoustic Materials – Highly useful for quality control of acoustic materials during manufacturing process.

Simulation – Important parameter for simulation in softwares like VAOne, Virtual Lab, SEAM, etc.



Effect of Porosity on Sound Absorption

Test Materials

- Open-cell foams
- Glass wool, Mineral wool
- Cellular, Granular materials, fills
- Felts, Fibers
- Concretes, Open Porous Asphalts

Technical Specifications

Porosity Test Rig	
Overall Dimensions	0.45 x 0.55 x 1.2 m (L x B x H)
Sample Diameter	100 mm
Sample Thickness	5-100 mm
Airflow Source	Pneumatic Piston
Porosity Range	0.3 - 0.99 [-]
Applications	Foams, Fibers, Felts, Natural Sound absorbing materials, etc.

Salient Features

- Low Cost and Perfect for Quality Control

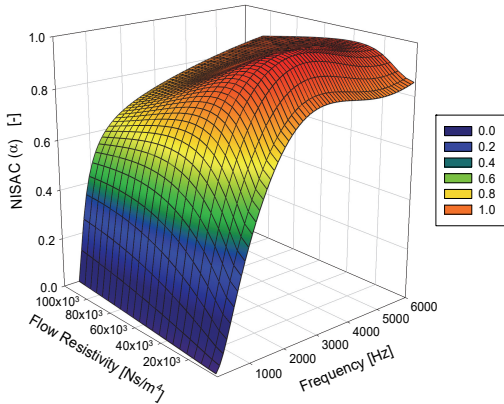


Alfa Acoustics - Airflow Resistivity test rig is designed as per ASTM C522 / ISO 9053 standards. This method requires simultaneous measurement of air pressure difference across the open cell acoustic sample with respect to air volume velocity. The test rig consists of a specially designed transparent sample holder for holding acoustic test samples. A pressure pump is used to suck the air through the sample and the rate of airflow through the sample is controlled by a pressure regulator..

Field of Application

Quality Control of Acoustic Materials – Highly useful for quality control of acoustic materials during manufacturing process.

Simulation – Important parameter for simulation in softwares like VAOne, Virtual Lab, SEAM, etc.



Effect of Airflow Resistivity on Sound Absorption

Test Materials

- Open-cell foams
- Glass wool, Mineral wool
- Cellular, Granular materials, fills
- Felts, Fibers
- Concretes, Open Porous Asphalts

Technical Specifications

Salient Features

Airflow Resistivity Rig	
Overall Dimensions	0.45 x 0.55 x 1.2 m (L x B x H)
Sample Diameter	100 mm
Airflow Source	Pressure Pump
Standards	ASTM C522 / ISO 9053
Airflow Resistivity Range	500 - 1000000 Ns/m ⁴
Applications	Dash Insulator, Headliner, Hood Insulator, Trim Parts, Resistive Scrims

- Designed as per National / International Standards
- Low Cost and Perfect for Quality Control