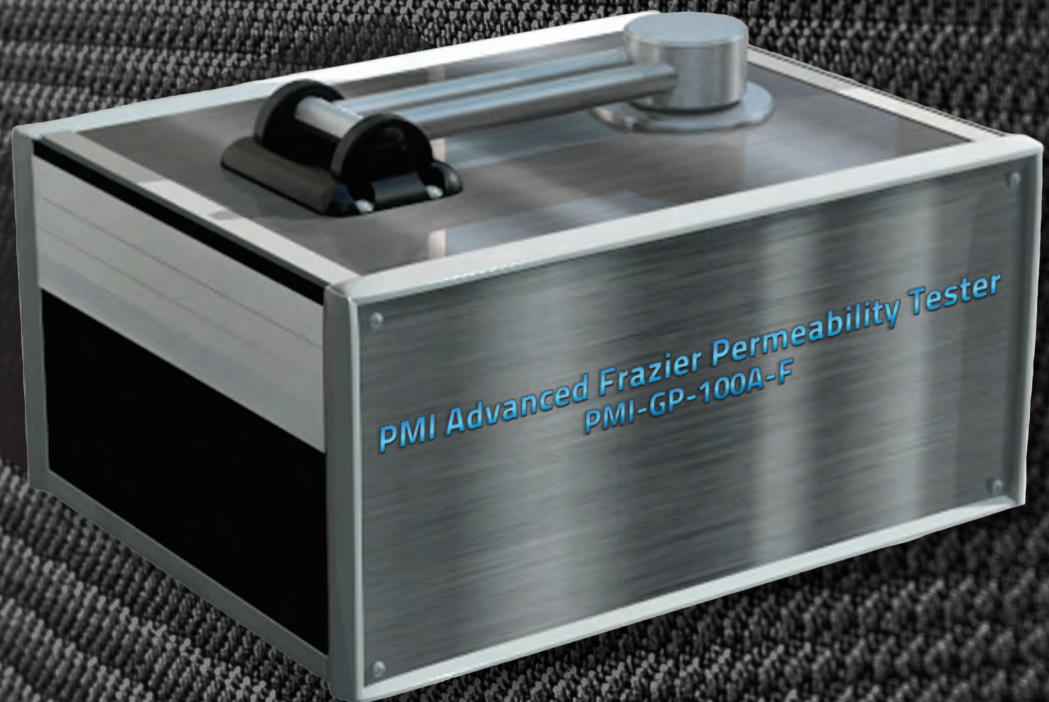# THE PMI ADVANCED FRAZIER PERMEABILITY TESTER

PMI-GP-100A-F

The PMI fully automatic Advanced Frazier Permeability Tester is for measuring air permeability according to standards IS:11056-1984, DIN 53887, ASTM D-737-96 ASTM D 3574, EN ISO 7231, BS-5636, ISO-9237/7231, JIS L 1096A, EDANA 140.1,

PMI Porous Materials, Inc.

Not just products...*solutions!*

Description

The PMI Advanced Frazier Permeability Tester is able to calculate fabric resistance (woven, knitted and non woven textile materials) to the passage of air like parachute. The machine provides fast and accurate measurement of gas permeability of solid, cylindrical and sheet samples. Featuring nondestructive testing and fast results, our tester is perfect for both R&D and quality control.

Applications

Industries worldwide utilize PMI permeability testers for R&D and quality control. Applicable industries include: Automotive, Battery, Biotechnology Separator ,Ceramic, Filtration, Fuel Cells, Geotextiles, Nonwovens, Paper, and Textiles.

Principle

Our Advanced Frazier Permeability Tester is used to determine the permeability of porous solids. A gas such as air is forced to flow through the test sample. Measurements of the steady-state flow rate and the corresponding pressure drops provide the necessary data for calculation of the Permeability using darcy and other units.

Optional Features

- Permeability measurement of high flow rate samples
- Permeability of samples under compressive stress
- Use of elevated test temperatures and a wide variety of gases

Features

- Fully automatic
- Windows-based software handles all control, measurement, data collection, and report generation; complete manual control also possible
- Comes with a PC computer equipt with real-time graphical LCD test display that depicts testing status and results throughout operation
- Non-destructive testing
- Length of test approximately 1 minute
- Wide range of acceptable sample types and sizes
- Multiple sample chambers available
- Minimal maintenance required
- Units in Frazier
- Automatic, pneumatic sample clamping
- Interchangeable test head

Includes: PC, Cords, Compressor, Frazier Apparatus, Sealing Fluid, Timer and User Manual

Accessories

- Different size of test heads: 5cm2, 20cm2, 25cm2, 38cm2, 50cm2, 100cm2
- Includes: PC, Software required for PC interface, Compressor, Frazier Apparatus, Sealing Fluid, and Timer

Specifications*

- Sample Size: 5 cm^2 to 100 cm^2 test area
- Pneumatic Clamping: (180±30)N
- Pressure Range: Up to 15" water column
- Pressurizing Gas: Clean, dry or compressed air (Or any other nonflammable and noncorrosive gas)
- Pressure controller: 0.5 ± 0.01 inch water
- Accuracy: 0.15% of reading
- Mass Flow Transducer Range: 200 LPM
- Power Requirements: 220-230V, 50Hz
- Dimensions: 30" H x 19" W x 18.5" D
- Weight: 25 Kg
- Permeability measurement according to ISO 5636-3 and 5 standards

* *Other specifications for this machine are available. Specifications are subject to change without notice.*

PMI Software

GP-100A-F Report

Porous Materials, Inc. Automated C522A Machine
20 Dutchmill Rd. - Ithaca, NY 14850 - (607) 257-5544
Operator: PMI
Lot Number:

1/31/12
3M
C522
Air
Sample ID: TEST MATERIAL
Number of Data Points: 5.0
Data Collection Interval(Seconds):   5.0
Sample Diameter (CM):   10.2
Sample Thickness (CM):   2.969
Sample Weight (G):   1.0
Sample Bulk Density (G/CC):   0.018342544800926616
Sample Absolute Density (G/CC):   0.0
Starting Pressure (Pa):   0.0000   Pa

Data Set #1 :

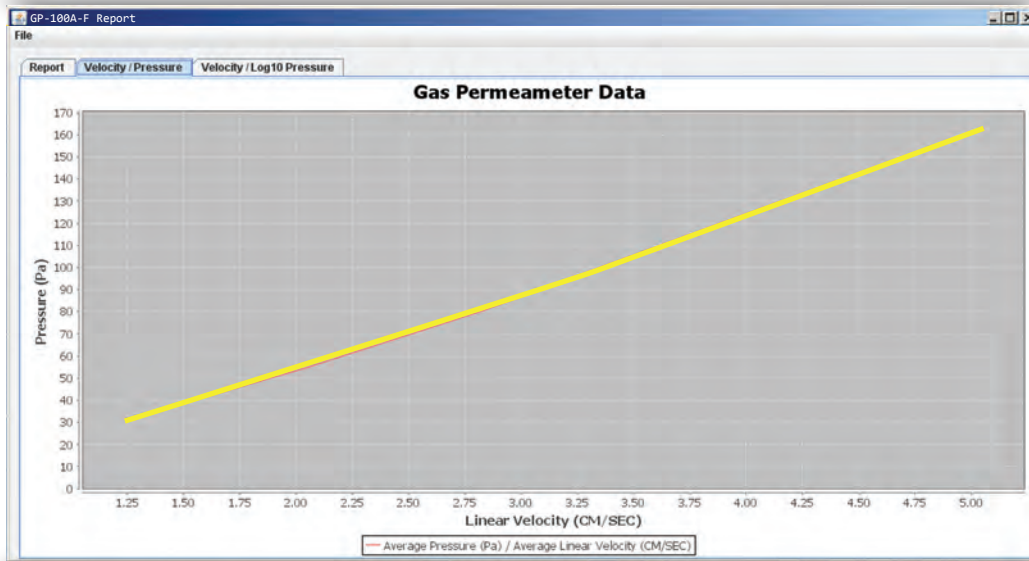| Targeted Velocity (CM/S.	Average Flow (SCCM)	Average Linear Velocity (	Average Pressure (Pa)	Specific Air Flow Resist.	Air Flow Resistivity (rayl/.	Effective Fiber Diameter.
1.0	5827.33	1.189	1.813	152	5139	∞
2.0	10461.33	2.134	3.395	159	5358	At 32 SLPM
3.0	16555.33	3.377	5.435	161	5422	
4.0	20724.0	4.227	6.966	164	5550	
5.0	25860.67	5.275	8.653	164	5623	
			Averages:	160	5398	

Figure 1

PMI Software Report Screen

Figure 2
PMI Software Data Screen

Sales & Services

Our sales team is dedicated to helping our customers find which machine is right for their situation. We also offer custom machines for customers with unique needs. To find out what we can do for you, contact us.

We are committed to customer support including specific service products, short response times & customer specific solutions. To quickly & flexibly meet our customer's requirement, we offer a comprehensive range of services.

Customize your machine today!