Product Data – FPS – Fabric Permeability System

PRODUCT OFFER

FPS is designed to measure the permeability of fabrics in air and is applicable to most types of fabrics including industrial fabrics for technical purposes, nonwovens and made-up textile that are permeable to air.

	FPS – Fabric Permeability System
Air permeability (R)	✓
ISO 9237 Standard	✓

Standard Measurement Range

	FPS – Fabric Permeability System
Air permeability (R)*	From 8.35 to 4 676 mm/s

*depending on the test area (5, 20, 50, 100 cm^2)

Hardware Specification

Sample holder specification

Test area (cm^2)	5, 20, 50 & 100
Sample height (mm)	Up to 90 mm

Airflow control specification

Airflow control range (Ln/min)	From 5 to 140
Differential pressure transducer (Pa)	0 to 750
Accuracy	2 %

Compressed air requirements

Operating pressure range	80 psig (5.5 bar)
Minimal operating flow	24 SCFM (680 SPLM)
Airflow quality*	Clean and dry

*10 micron filter or better is required

Main FPS unit

Acquisition card brand	National Instrument
Air inlet connector	1/2'' O.D. push-to-connect connectors*
Communication	USB 2.0 Type A
Temperature range	+ 0° to + 42° C
Maximum relative humidity	95 %, non-condensing
Power	100-240 VAC 50/60 Hz 50W
Dimensions	(516 x 471 x 382) mm

*A joint adapter from 1/2'' O.D. to metric tube is provided.

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SOFTWARE DESCRIPTION

FPS-X software controls the measurement and calculates the main properties and statistics of the measured properties.

Measured Parameters

(1) Air permeability (R)

Measurement steps

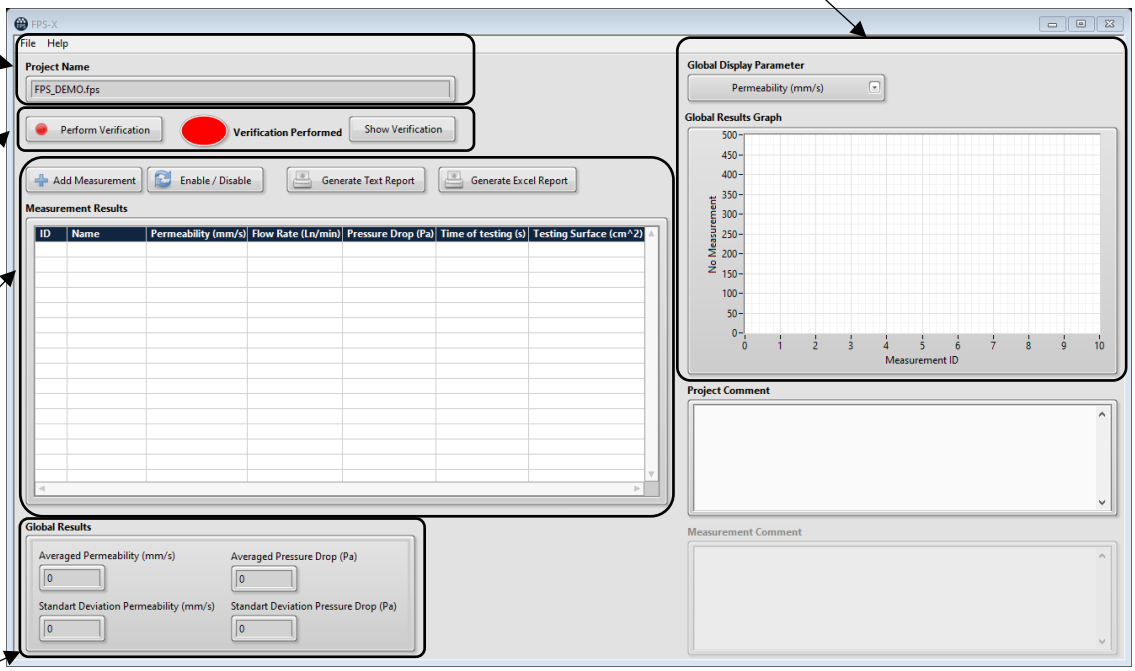
STEP 1 : Create a new project or open an existing one.

STEP 2 : Process verification with guided procedure.

STEP 3 : Add, edit or name as many measurements as required.

STEP 4 : Visualize and compare sample results. Export your graphics.

STEP 5 : Visualize global results.



FPS-X specifications

Compatibilities	Windows 8 and 10 32 or 64 bits
Result file type	.txt or .xlsx
Export graph file type	.txt or .xlsx or image

RELATED ACCESSORIES AND OPTIONS

Circular cutter

Available diameters*	29, 44.44, 100 mm
Maximum sample thickness	75 mm
Material	Stainless steel

*custom diameter available on demand

Sample slicer

Available diameters	29, 44.44, 100 mm
Maximum sample thickness	100 mm
Also include	Acoustic material knife

Foam-X software

Based on the sound absorption coefficient measured in impedance tube (ASTM E1050, ISO 10534-2), Foam-X computes all the acoustic parameters (e.g. equivalent fluid or poroelastic Biot) you need to model a single or an equivalent acoustic material.

Nova software

Nova predicts sound absorption and transmission loss (and more) of single or multilayer materials. Simulation is based on the acoustic parameters you determined with Foam–X or direct characterisation apparatuses such as a airflow resistance meter (SIGMA), a porosity meter (PHI), a tortuosity meter (TOR), and a mechanical analyzer (QMA) or using directly the measured transfer matrix obtain using our transmission tube.

ANNEX 1 – FPS – FABRIC PERMEABILITY SYSTEM