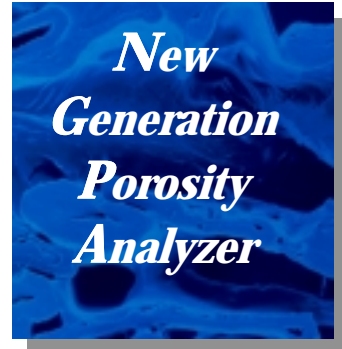
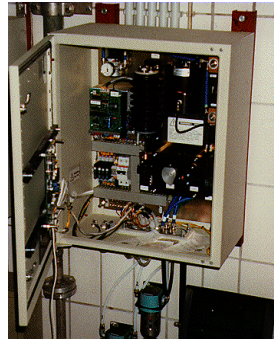
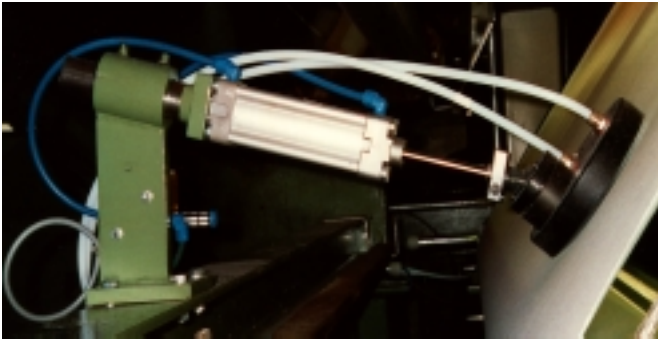


# MICROPERM® 600 Smart by Avatron®

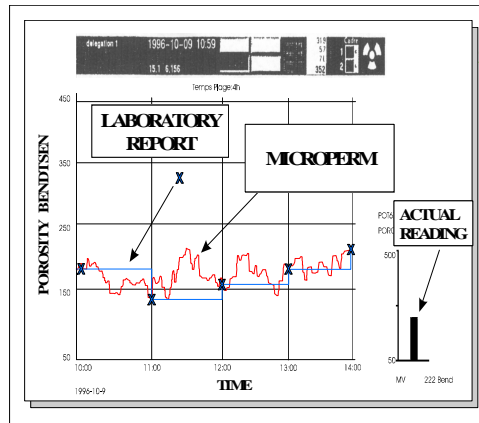
## On - Line Porosity Analyzer



### MORE THAN 15 YEARS EXPERIENCE IN ON-LINE ANALYZING

After the success of the Classic version, Avatrons engineers have further developed the hardware and software to effectively measure nonwovens, filter papers and glass fibers as well as very dense sheets.

The **MICROPERM® Smart** offers great accuracy in measuring and calculating the variations in porosity in the moving web.



### ADVANCED ANALYTICAL INTELLIGENCE

Non linear variables are controlled physically and by using mathematical software models. Now it is possible to measure the paper only and for each individual measurement eliminate such disturbing factors as: *air leakage, loss of pressure and excess air brought by the moving web.* The parameters of calculation software are done individually for each installation.

### Includes operating system : PC and Printer

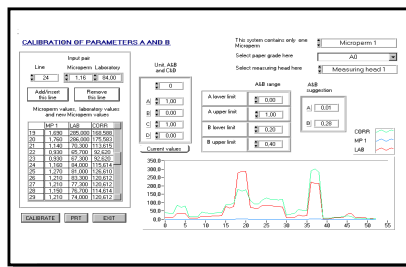
- A must for very porous material, wide range
- Includes calibrating program
- Historical information
- Jumbo Reel reports



### Wider measuring range

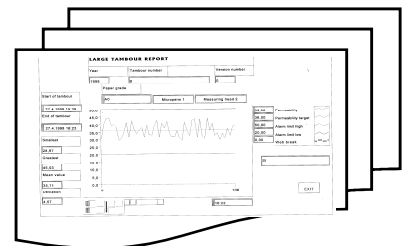
Laboratory	Min	Max
Gurley	0,01	2100
Bendtsen	1000 000	6
SI um/Pas	15 000	0,07
Shopper	830 000	4
Coresta	83 000	0,4
L/m <sup>2</sup> /s	15 000	0,07

Also Others



### Calibration concept

Easy to calibration. The user can pre-calibrate the Microperm for each paper grade, no need calibration in grade changes. The calibration concept links the on - line measurement with the laboratory.



### Reporting

- Trends: day, month, year
- Jumbo reel reports



# MICROPERM® 600 Smart

## Features & Technical details

### The features include:

- ✓ Greater accuracy in measuring, by eliminating disturbances.
- ✓ Parameters in calculating software are selected individually for each installation.
- ✓ Now also able to measure filter papers, non-woven materials and very dense papers.
- ✓ Accessing historic data and reporting is very easy.
- ✓ Optional: Supports 2 individual measuring heads in one system.
- ✓ Able to measure with very low pressure difference.
- ✓ Calibrating program now included.
- ✓ Fits a wide range of individual requirements.

### Control your entire production with feedback for:

- Refining
- Wet end chemistry
- Furnish
- Vacuum of couch roll
- Grade change

### Improve your efficiency with:

- Faster grade changes
- Less web breaks
- Less customer complaints
- Optimized wet end chemical usage
- Savings in refining energy

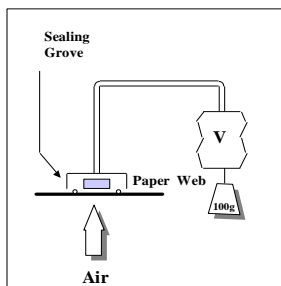
### Unique Head Design

#### Four Standard Measuring heads

- Airtight sealed measuring area
- Dual vacuum system
- Lightweight
- Non - marking ceramic construction
- Self - cleaning
- Fast and accurate vacuum control



### Operating Principle



The Microperm measures the time required for a known volume of air ( V ) at a slight vacuum ( - 1kPa ) to pass through the measurement head and the paper web.

Air permeance and air resistance values are then calculated in the desired measurement units.

### Special measuring heads

For different applications it is possible to design heads that fulfil specific needs.

## MICROPERM® 600 Smart TECHNICAL SPECIFICATIONS

Manufactured by Avatron Ltd. Vantaa, Finland

### Specifications

Basis weight range: 10 - 350 g/m<sup>2</sup>  
Machine speed: No limitation  
Power supply: 50VA, 230VAC, 50Hz  
or  
70 VA, 110VAC, 60Hz

### Connections / Output

Air supply: Pressure 0,2-1MPa  
Consumption: 200 l/min during purging  
5 l/min during measuring  
Output: 4-20 mA to DCS

### PC and Printer

Computer: Pentium level,  
Display: standard svga.  
Printer: Laser.