

ACA Permi™

Smart solutions for the web industries

ONLINE AIR PERMEABILITY ANALYZER



ACA SYSTEMS OY – We secure your competitive edge

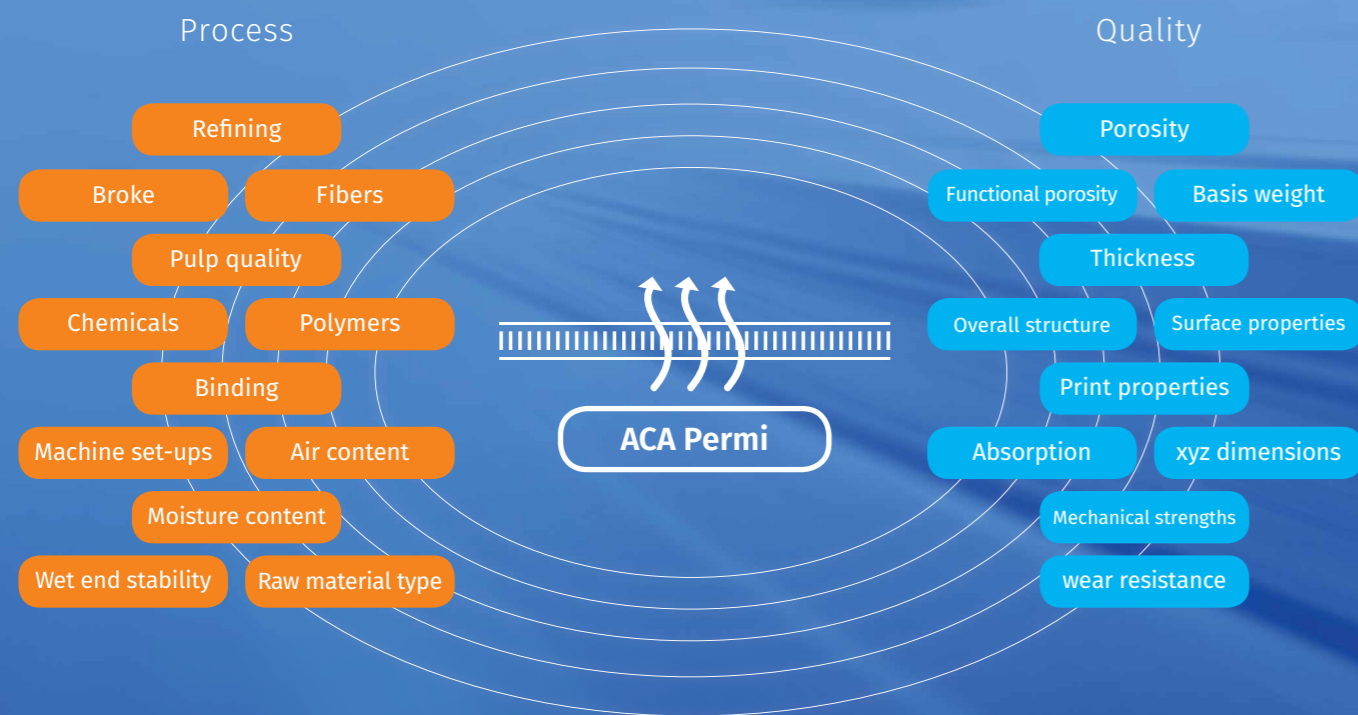
40 is the number of countries we have delivered our systems

30 years we have been in the business

20 % is the growth rate of our company

www.aca.fi

ACA Permi is the best tool to balance your process stability and product quality. On-line air permeability measurement provided by PERMI monitors your process and quality factors and keeps you on the safe side.



ACA Permi – Application areas and references

Paper & Packaging |

Application areas	Packaging papers and board, Speciality papers, Printing & Writing papers
Process factors	Degree of refining, Broke level, Chemical dosages, Pulp quality, Machine set-ups, wet-end stability
Quality factors	Paper structure (basis weight, porosity, caliper), surface and print properties, strengths properties

Nonwovens |

Application areas	Disposable and durable nonwovens, Fibreglass
Process factors	Fiber type and size, bonding technology, machine set-ups, chemical dosage
Quality factors	Web structure and uniformity, Porosity, Functional porosity, strengths, special functionalities

Felts, fabrics and wires |

Application areas	Machine clothing & wires, other fabrics and textiles
Process factors	Raw material type, bonding technology, machine set-ups
Quality factors	Web structure and uniformity, Porosity, Functional porosity, strengths, special functionalities

Films & Engineered materials |

Application areas	Battery separator films (BSF), Breathable films, Micro and nanofiber webs, other engineered materials
Process factors	Polymer / fiber type, machine set-ups
Quality factors	Thickness, Functional porosity, for example lifetime of a Li-battery, performance of a nanofiber membrane, food packaging, etc, Mechanical strengths, thermal properties

ACA Permi delivers

Stable process |



With PERMI our customers have stabilized their processes and achieved for example:

- + 15 % production rate increase
- + 25 % speed increase
- + 50 % faster grade changes
- 25 % production costs

Reliable data |



No other on-line device can deliver such reliable data than ACA PERMI

- >0.95 R2 correlation between PERMI and lab permeability analyzers
- Very good correlation between PERMI and many process and quality factors (see application areas)

User Friendliness |



ACA PERMI is easy to install and use

- Wide measurement range with only one calibration
- Fixed point or scanning installation
- Automatic cleaning cycle
- Measurement data can be transferred to mill own quality system

Our global references

Stora Enso
UPM
SAPPI
Ahlstrom

Voith
Owens Corning
Glatfelter
DuPont

Mondi
Billerud
Hollingsworth & Vose
APP

“ Permi is our early-warning-system for any undesired changes in our process”

“ Permi is a great overall and cost effective measure of web structure”

Payback time is measured in weeks rather than months or years

Contact us for detailed information and application notes

SPECIFICATIONS |

Measurement principle	Permi LP (Vacuum) or Permi HP (Air Blow) method Single side (usually lower side) Fixed point or Scanning Continuous air flow through the web Measurement sample time 2 ms
Output type	2-wire, three outputs, 4 – 20 mA & Ethernet
Operating temperature	Measuring unit, 110 deg C max Control unit, 50 deg C max
Dimensions	Measuring unit 630 x 200 x 200 mm, 13 kg Control unit 600 x 400 x 200 mm, 20 kg
Measurement ranges	0,02–12 000 l/m ² /s Gurley, 0,02–6 000 sec Bendtsen, 1–50 000 ml/min Coresta , 1–40 000 Cu Any other method
External connections	Power Supply: 100–240 VAC, 50/60 Hz or 24 VDC 2A Air Supply: 6–10 bar, 200 l/min, clean and dry air Instruments Signals: 2 Analog outputs, 4–20 mA; 2 Binary Inputs, Break Input; Reel turn up; Ethernet to PC (Optional)
Software	ACA ProcessView
Special features	<ul style="list-style-type: none"> • Automatic self-cleaning cycle (adjustable time) • Optional cloud service for real time results and maintenance data over internet connection. • Possibility to send output data to all commercial data bus systems including OPC. • Possibility to tailor the user interface to meet customers' needs and standards. • Traceable parameters, all changes made to Permi parameters are stored into the system. • Local database can hold even months of measurement data which can be retrieved to user interface.
Maintenance	Filters to be replaced every 4–8 weeks
Calibration	Single calibration curve per measurement system
Scanner options	Width and scanning speed are chosen according to the application.

ACA Systems is the leading supplier of process and quality control analyzers for the web and chemical industries. Our solutions are well known all over the world in the paper, packaging, nonwovens, battery separator films and related industries.

Our product range consists of **PERMI** air permeability analyzers for both on-line and lab environment, **ACAV** ultra high shear rate viscometers, **DWR** dynamic water retention analyzer and the newest innovation **ROQ** roll hardness profiler.

We have worked 30 years closely together with our customers to develop new tools and solutions for the process and quality control. Our expert services include trouble-shooting and product development consulting, maintenance and calibration services.

“We secure your competitive edge”



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