KÜNDIG CONTROL SYSTEMS

The Gauge Manufacturer for Film Extrusion SWISS MADE

Filmtest 3G

Offline Thickness Gauge for Process Optimization and Quality Control

Filmtest 3G

The Filmtest is an offline measuring system for extruded films, used for process optimization and quality control labs. The combination of several measuring functions in an offline system makes the Filmtest a valuable tool for a professional quality control.

Due to fast and easy handling it is practical to perform measurements at every roll change. Consistent measurement means you can provide your customer with more assurance that delivered production is within specification.

The operation of the system is easy enough that any operator can do it. The Filmtest helps to reduce the work in the laboratory. For example, in addition to the thickness measurement, the unit weight of the sample is also calculated eliminating the manual step of weighing the film.

The Working Principle

- A sample of the film is cut by means of a cutting plate, that guarantees that the exact width of the sample is 150mm
- The „Variospeed“ sample scanner uses optical sensors to track the film edges; automatically transporting the sample through the capacitive measuring device
- The length and the weight of the sample is measured
- The square meter weight is determined using length, width and weight, then the average thickness is calculated based on the density
- The thickness profile is measured with a high resolution capacitive sensor

Advantages

- The sample of the film does not need to be formed into a loop, it will be transported through the capacitive measuring device
- Film samples that are cut into several pieces can be measured one after the other, the software will put the measuring data together and will create the complete profile
- The square meter weight is determined using length, width and weight. Then the average thickness is calculated based on the density. This method allows a much more precise thickness profile measurement than other systems on the market
- All measuring values will be registered during the same measuring operation

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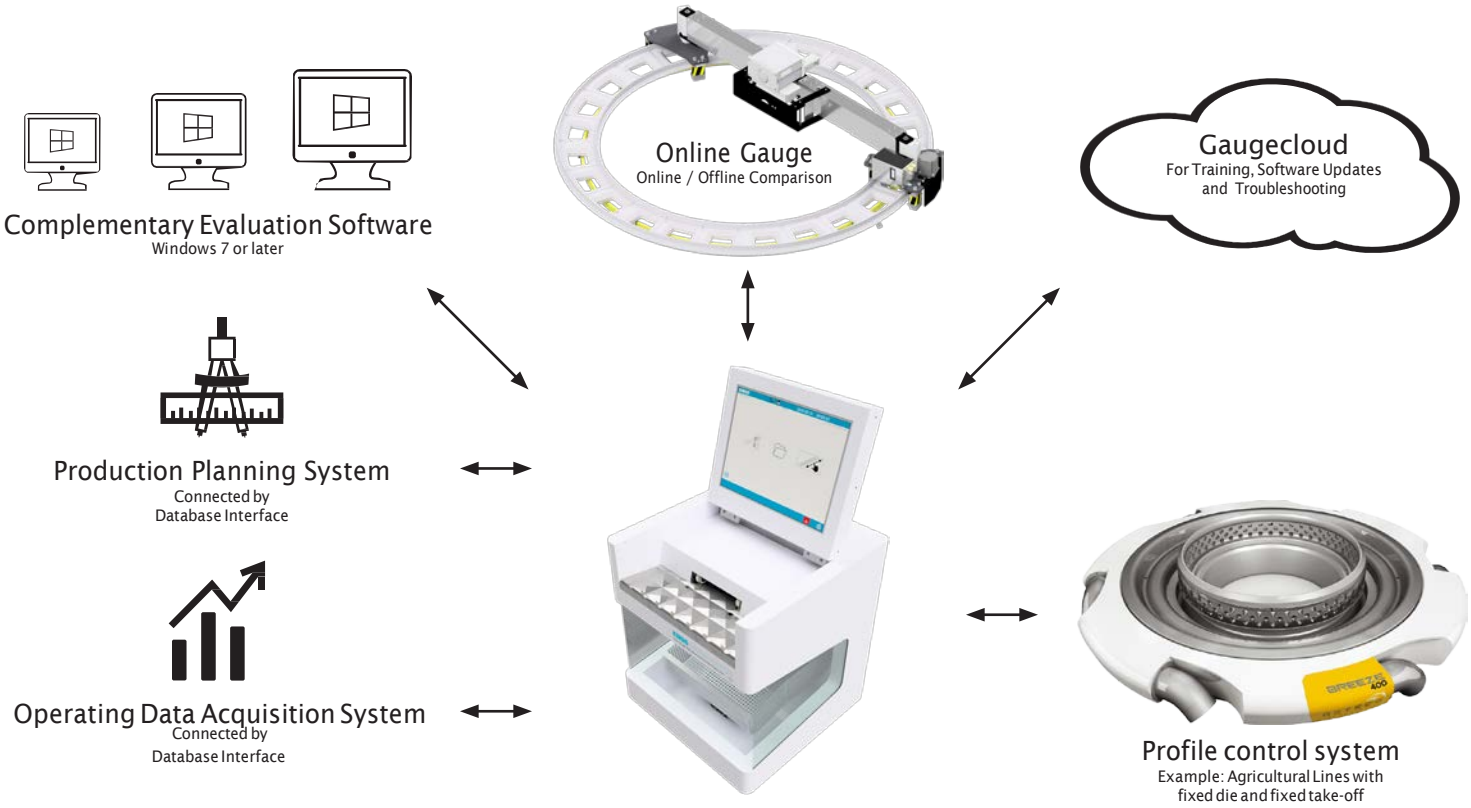
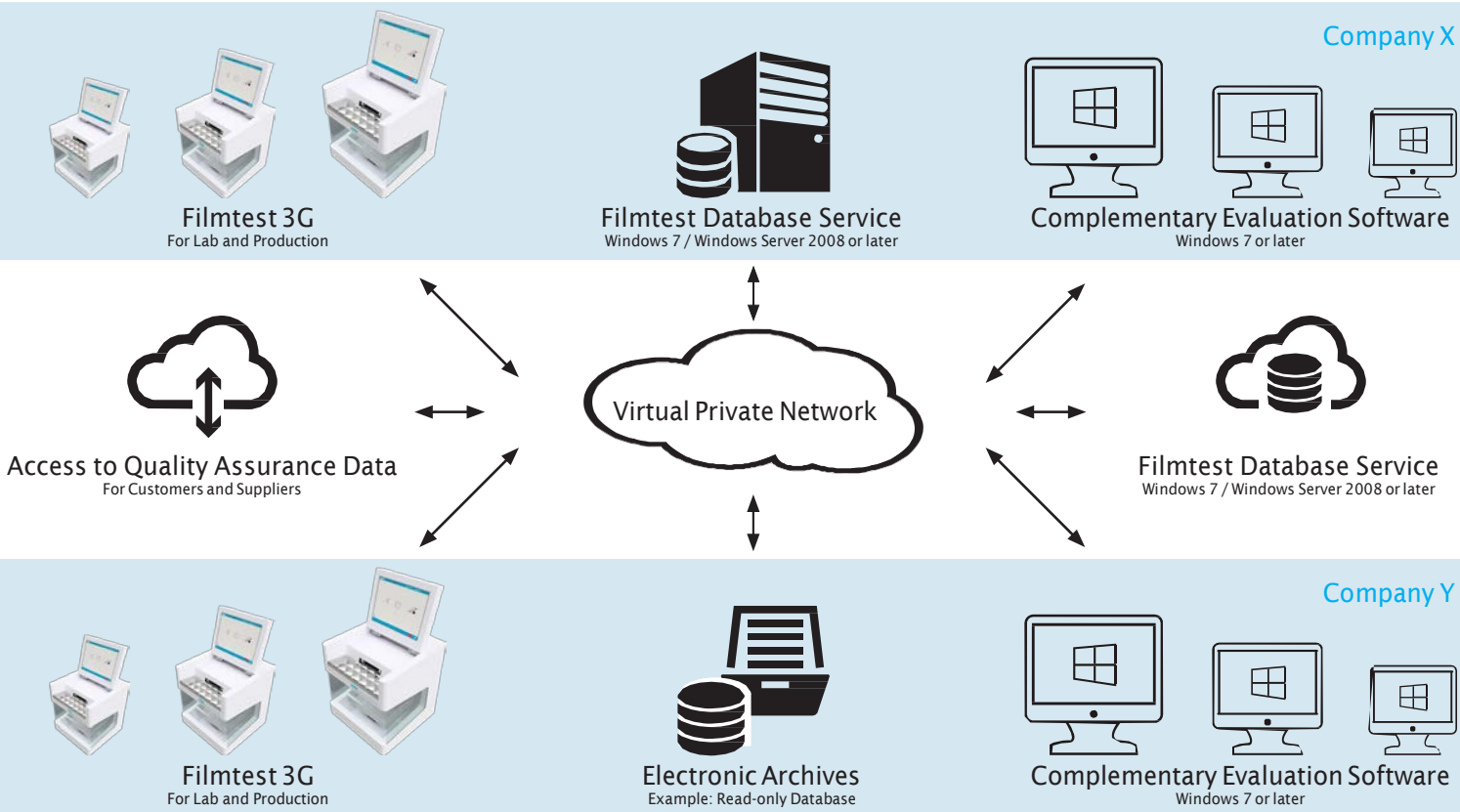
Integration and Network



Enterprise Solutions



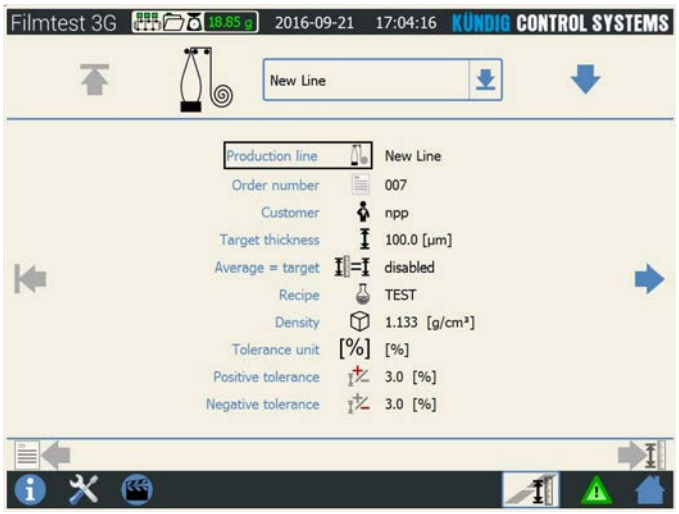
The Software

Before the Measurement

Introduce the nominal thickness, density, receipt and tolerance. When the film is measured again, all these settings will be automatically suggested.

The menu can be completed with up to six additional fields, that can be entered according to the production or operator's desire.

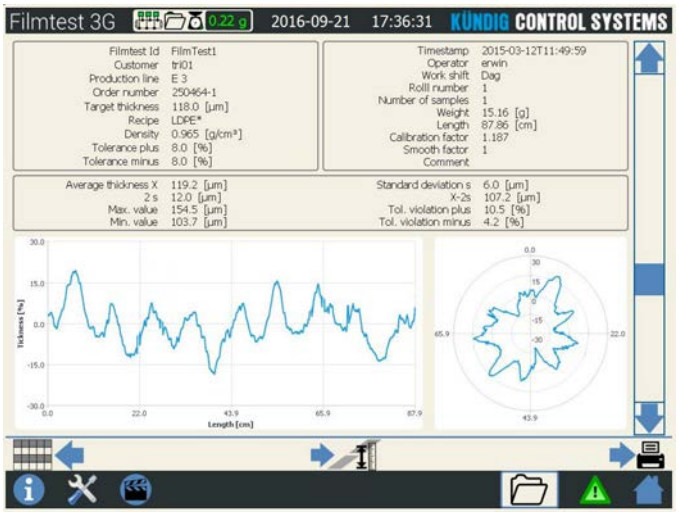
If the sample consists of several pieces, they can be measured one after the other, the software will create the complete thickness profile.



After the Measuring

The measured profile is instantaneously displayed as either relative or absolute thickness. The zoom function allows the operator to analyze even the smallest deviations.

In case that the film sample has a crease, the operator can use a filter to eliminate the crease and then recalculate the profile.



The Archive

All measurements will be automatically archived. A search function is provided to ensure operators can easily retrieve archived data.

The evaluation software, running on a Windows PC, allows detailed analysis of each measurement. The data can be also exported from the archives. The entire archive with its data is possible to be stored in another network drive.

Profile Genius

This software tool can especially assist in detecting reasons for thickness profile variations in the blown film extrusion process. Using this information enables the operator to focus in on the correct process areas to reduce the profile variation.

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Technichal Data Filmtest 3G

Electrical interface values

Power supply	110 - 240 VAC, 50/60 Hz
Power consumption	max. 100 VA

Measurement

Measuring principle	Capacitive thickness measurement Suitable for all electrically non-conducting material
Sample size	6“ (150 mm) wide
Measuring range	0.4 to 12 mil (10 to 300 µm)
Linearization error	< 0.5 %
Measuring interval	50 ms
Resolution	0.004 mil (0.1 µm)
Accuracy average thickness	0.2 to 0.4 mil (5 to 10 µm) ð 0.008 mil (0.2 µm)
	> 0.2 mil (10 µm) ð 1 %
Linearity	better than 2%

Ambientconditions

Ambient temperature	73.4 ˚F (23 ˚C)
Measured film	LDPE-Film at approx. 50 ˚C (122 ˚F)

gauge.ch

Questionnaire application technology

Company

Address

Zip Code | City | Country

Contact person | E-mail

Phone | Fax

We are interested in

- ☐ Online thickness gauge
- ☐ Online thickness gauge and automatic profile control
- ☐ Offline system for film thickness
- ☐ Width measurement
- ☐ Width measurement and control
- ☐ Meter weight control

Specifications of existing line

Film width:	Min._____mm	Max._____mm
Film thickness:	Min._____µm	Max._____µm
Throughput:	Min._____kg/h	Max._____kg/h
Line speed:	Min._____m/min	Max._____m/min
Extrusion:	☐ Monoextrusion __ Components	☐Coextrusion Layers __ Components per layer

Processed materials: _____

Width of roll at haul-off: mm

Power supply: _ VAC _ Hz (single phase)

Existing measuring and control units:	☐Thickness gauge	☐Profile control system
	☐Width measurement	☐Width control
	☐Meter weight control	☐Line speed control

Brand of existing line: _____

E-mail: kcs@kundig-hch.ch

Thickness Gauges for Blown Film Lines

K-500 Rotomat KT
Capacitive thickness gauge for a wide range of films

KCF-700 Rotomat KT
Non contact thickness gauge for sticky and sensitive films

K-NDC Rotomat KT
Nuclear thickness gauge for barrier films

S-100 Twin
Capacitive thickness gauge for barrier films

K-300 CF Gauge
Thickness gauge for quality supervision

S-50
Thickness gauge for quality supervision

Thickness Gauge for Cast Film and MDO Lines

KNC-600 Linear Scanner
Non contact thickness gauge for cast film and MDO lines

Width Measuring / Control System for Blown Film Lines

FE-8
Width measurement and control for lines with or without IBC

Quality Control

Profilstar.Net
Visualization for quality supervision and control

Filmtest 3G
Offline measurement for quality control

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