K-300 CF Gauge

KÜNDIG CONTROL SYSTEMS

The Gauge Manufacturer for Film Extrusion SWISS MADE

Online Thickness Gauge

K-300 CF Gauge

The K-300 CF Gauge is an online film thickness gauge for blown film lines.

The film production process can be tightly controlled thanks to the accurate measurement of film thickness and the rapid availability of measuring data. This results in an enhanced film quality that is maintained during the entire production process. Optimizing film thickness profiles contributes to material savings. In addition, material waste during product changes is reduced.

The K-300 sensor coatings

The K-300 CF Gauge allows the use of different thickness sensors, which can quickly be changed by the machine operator without tools. The following standard sensor coatings are available:

CRS	Chrome coated sensor for standard films. Excellent durability with abrasive films.
PVD-2	Plasma coated sensor for slightly sticky films. Good durability with light abrasive films.
PTFE	PTFE-coated sensor for sticky films. Short lifetime with abrasive films.

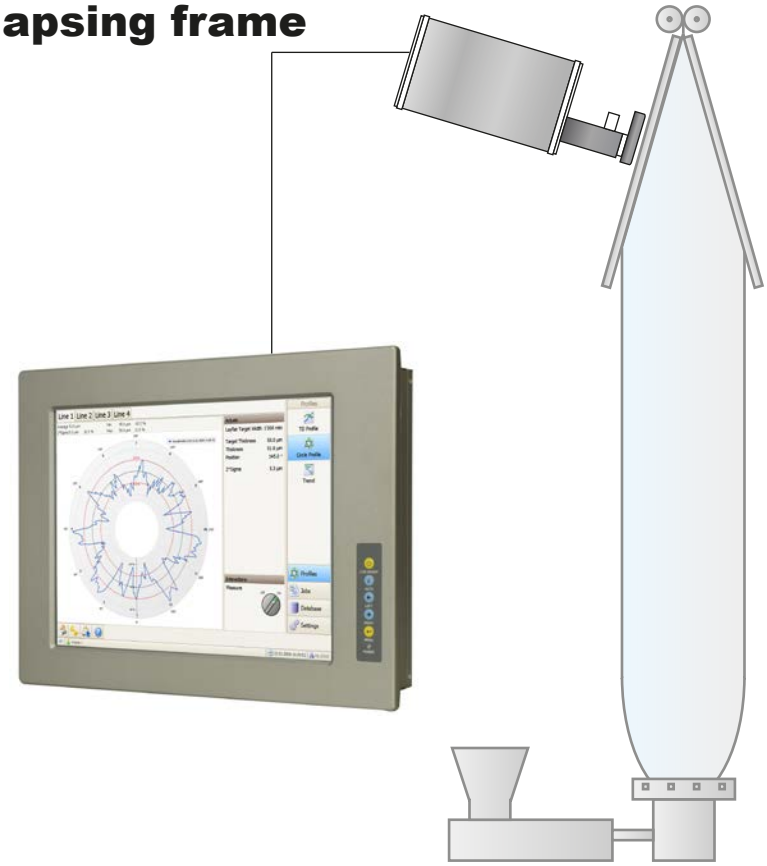
Further special coatings available upon request.

Mounting in the collapsing frame

The compact unit K-300 CF Gauge is particularly suitable for upgrading existing blown film lines with an online thickness profile measurement.

It can be used on any existing line with oscillating or continuously rotating die or haul-off.

The thickness measuring unit is to be mounted in the collapsing frame. A new thickness profile is ready after one rotation of the die or haul-off and can instantly be used for the die adjustment.



The compact device

All components are in one small case. The thickness sensor adjustment is done by an electrically driven spindle, that allows operation of the gauge without air-pressure.

The connectors for the digital inputs and outputs, the serial interface as well as the power supply are arranged on the back side.

100 - 230 VAC / 50/60 Hz or directly 24 VDC can be used for the power supply.

K-300 CF Gauge communicates by means of the PCD-LINK Protocol to the connected visualization system. Several interfaces are available: A RS-485 port (standard), a RS-422 port (optional) or a wireless radio communication (optional) for continuously rotating lines.

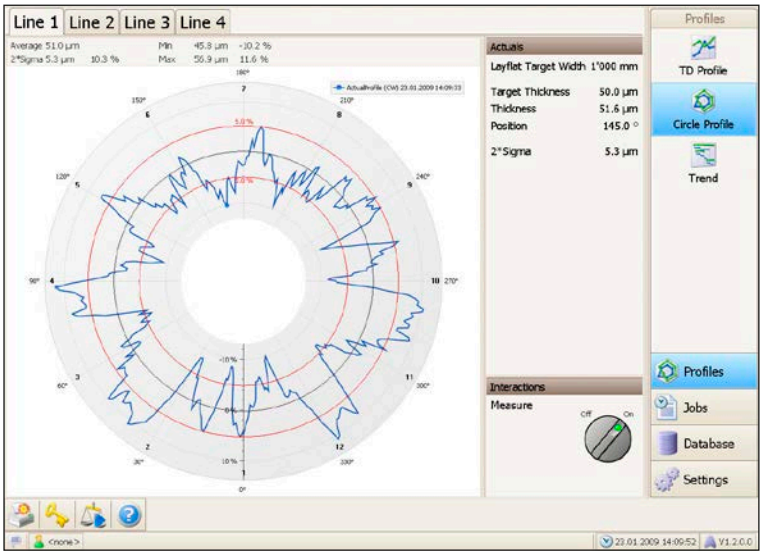
K-300 CF Gauge and Profilstar.NET

The Profilstar.NET is the perfact addition to the K-300 CF Gauge. The software - optimized for touchscreen panels - is easy to operate and displays all relevant information in clearly arranged screens.

Up to 16 thickness gauges and width measuring / control units can be connected to 1 visualization system Profilstar.NET.

Circle Profile

This indicates the circular profile superimposed on that particular line's die bolt legend, providing timely and easy to read information for die centering.



TD Profile

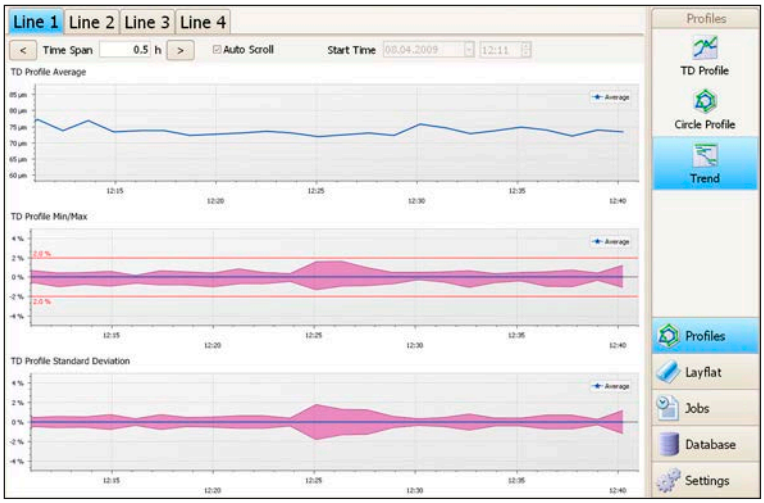
The upper graph shows the last measured profile, with 2 adjustable tolerance limits indicated by the red lines in the graph.

The lower profile is the compare profile, which can be stored with a push of a button at anytime.

Trend

Average thickness, +/- profile deviation and standard deviation trends are clearly arranged on the same screen.

The time span is adjustable, additionally allowing the user the ability to scroll back to review historical order data.



Additional features

- Material, recipe and order managment
- Screen for width measuring and control unit FE-7
- Administration of future orders

K-300 CF Gauge Technical data

Electrical interface values

Power supply	110 - 230 VAC / 50-60 Hz or 24 VDC
Power consumption	max. 100 VA
Switch-on peak current at 110 - 230 VAC	0.6 A
Switch-on peak current at 24 VDC	1.6 A

Ambient temperature

Measuring electronics	max. 55 °C
Measuring head	max. 120 °C
Transport and storage	-40 °C to 70 °C

Thickness measurement

Measuring principle	Capacitive thickness measurement Suitable for all electrically non-conducting material
Measuring frequency	400 to 450 kHz
Measuring range	5 to 300 µm > 300 µm on request
Measuring interval	30 ms
Resolution	0.1 µm
Accuracy after calibration	5 to 10 µm ⇨ 0.1µm > 10 µm ⇨ 1%
Linearity within range of calibration thickness (± 10%)	better than 2%

Ambient conditions

Ambient temperature	23 °C ± 2 °C
Measured film	LDPE-film, at 50 °C approx.

Calculation of amortization

Material output _____kg/h	X	Operation time _____h/day	X	Operation time _____days/year	X	Material price _____€/kg	=	Material throughput _____€/year			
				Material throughput _____€/year	X	Oprimization _____%/100	=	Material savings _____€/year			
				Investment _____€	:	Material savings _____€/year	=	Amortization time _____years			

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:	_____	
IBC:	❑ Yes	❑ No
Gusseted films:	❑ Yes	❑ No
Die:	❑ Fixed	❑ Reversing ❑ Rotating
Haul-off:	❑ Fixed	❑ Reversing ❑ Rotating
Width of roll at haul-off:	_____ mm	
Rotation time:	Min. _____ min	Max. _____ min
Power supply:	_____ VAC _____ Hz (single phase)	
Existing measuring and control units:	❑ Thickness gauge ❑ Width measurement ❑ Meter weight control	❑ Profile control system ❑ Width control ❑ Line speed control
Brand of existing line:	_____	

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Product overview

K-300 Rotomat KT
Online thickness gauge with rotating scanner

KNC-400 Rotomat KT
Online thickness gauge for sticky
and sensitive films

KNC-600 Linear Scanner
Online thickness gauge for cast film

K-NDC Rotomat KT
Nuclear online thickness gauge
for barrier films

K-300 CF Gauge
Online thickness gauge
for quality supervision

S-50
Online thickness gauge
for quality supervision

S-100
Capacitive online thickness gauge
for barrier films

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

FILMTEST
Offline measurement for quality control

PROFILSTAR.NET
Visualization for quality supervision and control

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