K-300 Rotomat KT

KÜNDIG CONTROL SYSTEMS

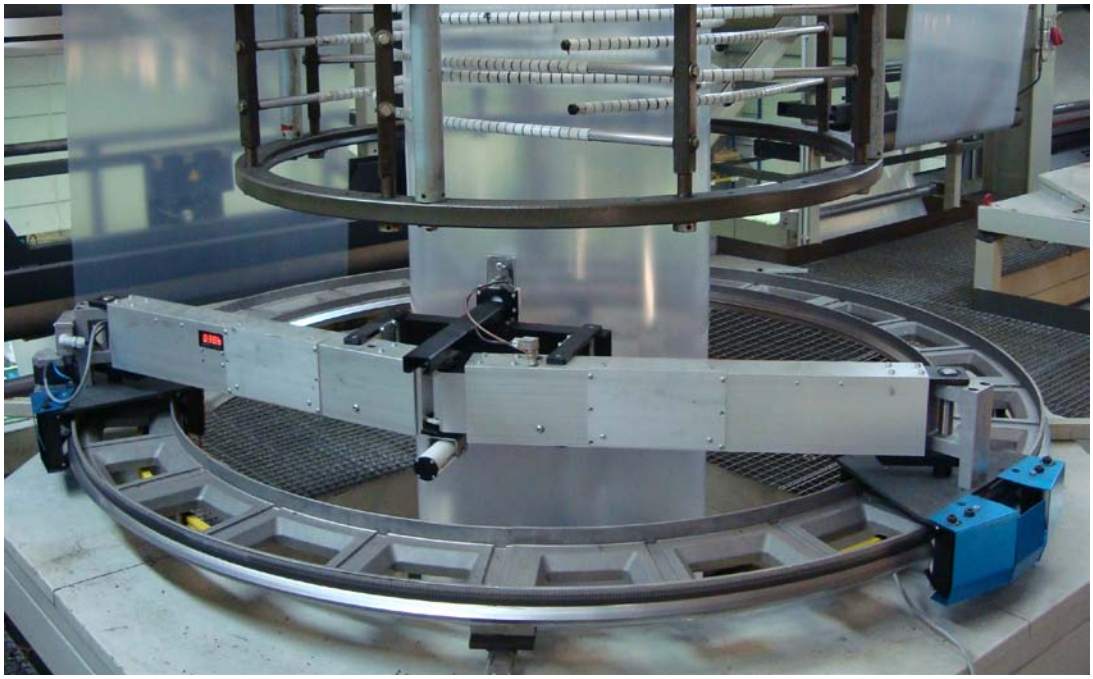
The Gauge Manufacturer for Film Extrusion SWISS MADE

Online Thickness Gauge

K-300 Rotomat KT

The K-300 Rotomat KT is an online film thickness gauge for blown film lines.

Rapid and accurate measurement of film thickness allows the film production process to be tightly controlled. 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.



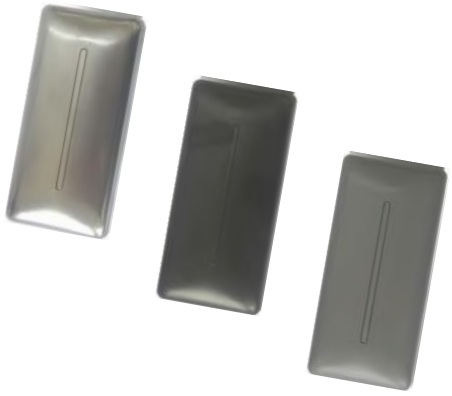
Several thickness sensors with different coatings can be used with the K-300 measuring electronic box. A quick disconnect allows to change the sensor in seconds.

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.



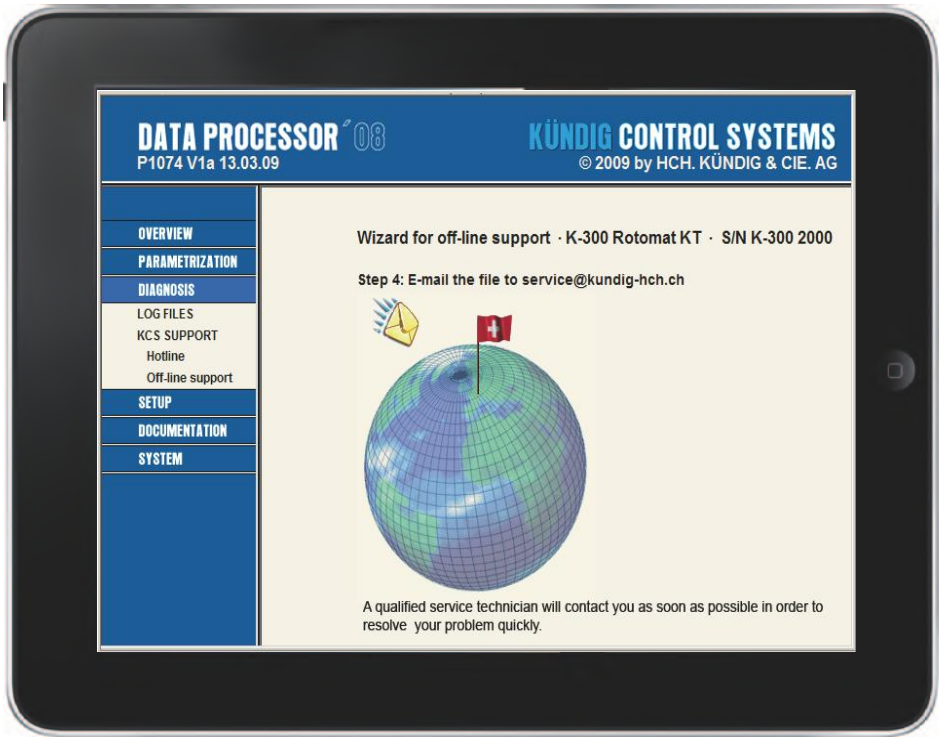
Further special coatings available upon request.

Rotomat KT - The all-new thickness gauge

Unique from regular scanners, the Rotomat KT rotates continuously in one direction. By eliminating the time required to change directions every 360 degrees, a quick rotation time of 36 seconds is possible on our standard size scanners.

By never changing direction, wear and tear of the mechanical drive components is reduced thereby extending the service life. In addition, the continuous movement requires less power.

The data processor features a LCD panel and a numerical keyboard as easy accessible user interface. A simple setup menu allows to check and adjust process parameters.



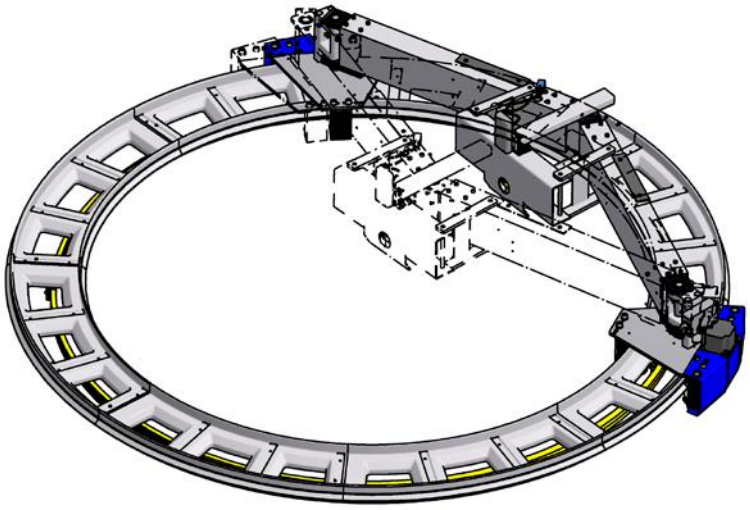
The data processor comes with a user friendly web interface, which allows output of process data and thickness profiles, as well as system configuration and troubleshooting. Remote access to the data processor through the internet is also available.

If a PC is connected to the data processor‘s Ethernet port, any internet browser can be used to check process data, to visualize the thickness profiles, adjust the process parameters view error diagnostic data. Furthermore, there is direct access to the technical documents of the respective system.

Standard sizes

Using the bending traverse technology a very wide range of bubble size can be covered with a small space requirement. It takes only four different installation sizes to measure anything between 255 and 3900 mm layflat.

Both arms of the bending traverse are moved by a recirculating ballscrew. That allows a much faster movement in radial direction compared to systems with telescopic or linear adjustments.



Size [mm]	Layflat range * min. - max.[mm]	Bubble diameter min. - max. [mm]	Surrounding diameter [mm]
1200	255 - 1800	80 - 1200	2200
1730	505 - 2600	240 - 1730	2800
2130	865 - 3200	470 - 2130	3200
2600	1150 - 3900	650 - 2600	3700

* 4 % shrink and 40 mm wobbling considered

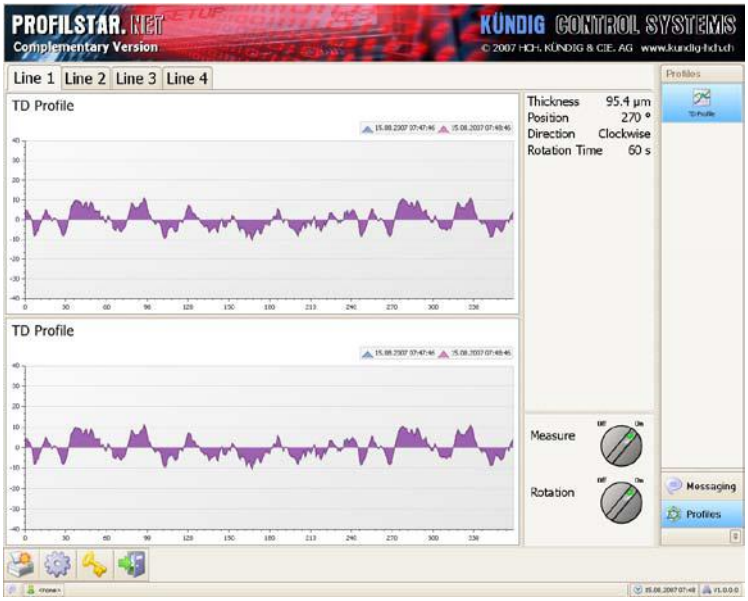
Special sizes for big bubbles

For those applications where greater than 4000mm layflat is produced, such as agricultural and geomembrane films, we offer custom made units.
For very large units, we recommend a fixed traverse to maintain mechanical stability. We can cover virtually any range and size. Standard components are utilized which allows us to offer custom solutions with the best cost/performance ratio.

Connections and interfaces

PROFILSTAR.NET

The PROFILSTAR.NET is a complete visualization system for process optimization and quality control. Up to 16 lines, equipped with Kündig thickness gauges and / or layflat control systems, can be connected to one PROFILSTAR.NET unit.



PCD-LINK via RS-422 or UDP/IP Ethernet

The proven PCD-LINK protocol, used for the communication between control system and any Kündig measuring device, is now available via RS-422 and also via UDP/IP Ethernet with the new data processor. So it is still compatible with existing host computers but at the same time offers a new and very cost efficient version.
Both ports can be used at the same time, for example one port for the control system and the other port to record the data.

KCS-API and KCS-Process

For a fast and easy integration of Kündig measuring devices into Windows based control systems, we now offer a KCS-API (Application Programming Interface) in the widely used programming language C. The KCS-API is delivered as a DLL (Dynamic Link Library) and a KCS Process (Windows application) that acts as a driver.

Analog output

Still available is a connection with an analog signal. In this case, the measured thickness value is transmitted as an analog signal, while the rotation signals are presented in a digital form.

Technical data K-300 Rotomat KT

Electrical interface values

Power supply	110 - 240 VAC, 50/60 Hz
Power consumption	max. 100 VA
Nominal current	0.3 A
Switch-on peak current	1.5 A

Ambient temperature

Data processor	max. 40 °C
Measuring electronics	max. 70 °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	Optimization _____%/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-7
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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