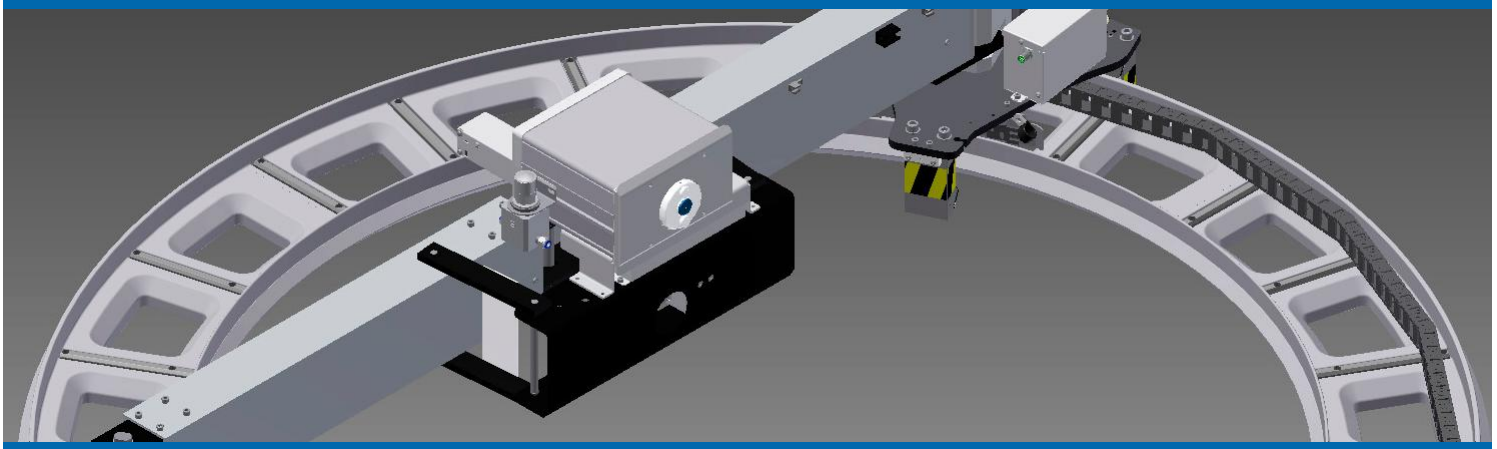
KÜNDIG CONTROL SYSTEMS
The Gauge Manufacturer for Film Extrusion SWISS MADE

KCF-700 Rotomat KT

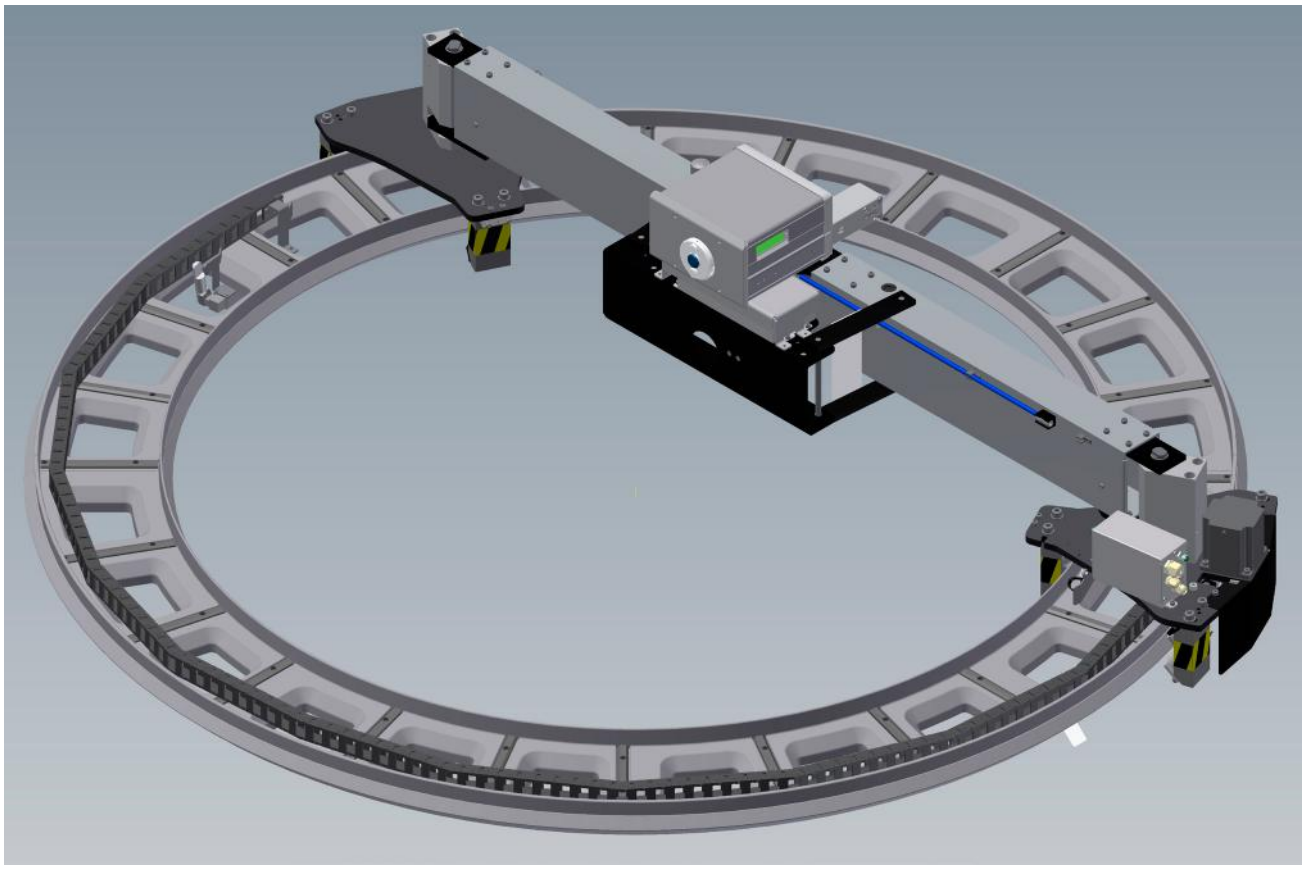


Non contact Thickness Gauge for Blown Film Lines

KCF-700 Rotomat KT

The KCF-700 is based on the capacitive measurement principle. An air cushion is produced between the thickness sensor and the film. The distance between the thickness sensor and the film is constantly measured and controlled in order to guarantee a precise thickness measurement.

The KCF-700 is the optimal solution to measure highly sensitive and sticky films (p.e: EVA).



KCF-700 Rotomat KT

The installation of the KCF-700 can easily be done by factory technicians and immediately put into service. The measuring device is nearly maintenance free and provides a high reliability and performance.

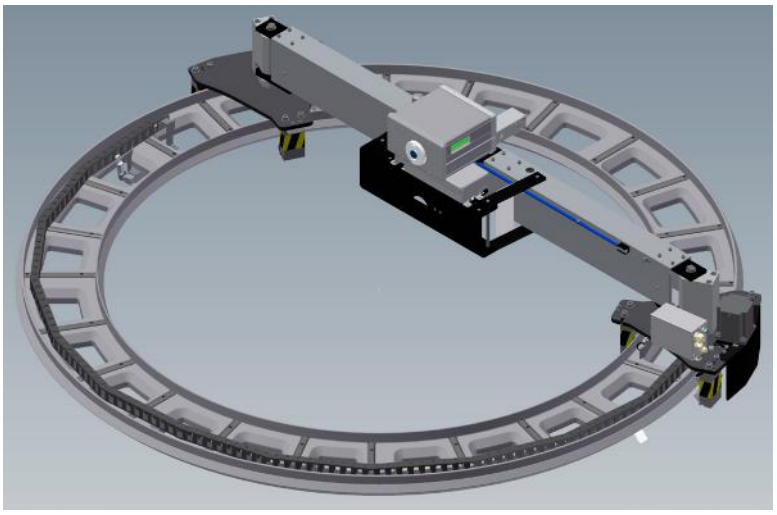
Its mechanical design, as well as the analog / serial connection to visualize and control are compatible with other thickness measuring systems. Thus, an existing K-100 / K-300 can be upgraded to a KCF-700 anytime.

Rotomat KT - The 3rd Generation

The Rotomat KT has been further optimized. The main focus was on a higher user friendliness as well as an improved flexibility.

Rotomat KT REV

The Rotomat KT REV comes with a standardized sensor carrier, which allows a quick sensor change between contact type, non contact type and nuclear probe. That ensures a great flexibility of the measuring device which becomes more and more important nowadays with changing demands and applications.



The non-contact thickness measurement

Advantages of a clingfree thickness measuring system:

- Online measurement of sticky film
- Sensitive films can be measured scratch-free
- No tear and wear of the sensor
- No contamination of the sensor

Requirements for a reliable film measurement:

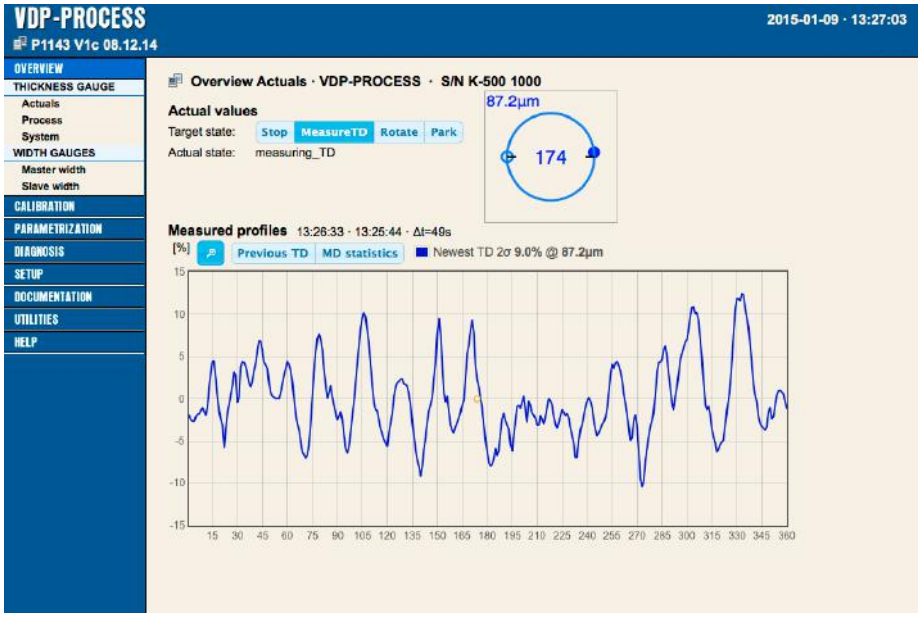
- The film must be cylindrical
- The film must be vertical at the installation place of the sensor
- Changes in bubble position should be no more than 0.4 inches (10mm) at max. 5 Hz

Requirements for a reliable film measurement:

The KCF-700 is available not only in combination with the Rotomat KT, we also offer several retrofit packages. Most of the existing Kundig measuring systems (For example K-100 or KNC-200) can easily be upgraded with a KCF-700 sensor.

VDP Process - The virtual data processor

The Rotomat KT in the third generation comes with a virtual data processor as a standard. The so called VDP Process runs in the background of a Windows PC, similar like a driver of a printer. This Win32 application, which runs on Windows XP or later, forms the interface between the control system of the line and the thickness gauge, as well as up to 2 optional width measuring units FE-8.



An easy to use web interface allows configuration of the setup and parameters, display of process data as well as trouble shooting.

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.

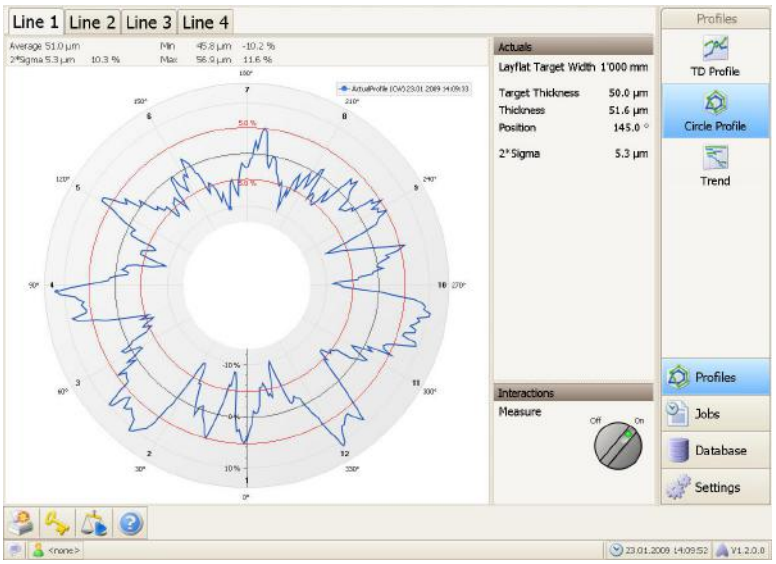
Size [mm]	Layflat range * min. - max.[mm]	Bubble diameter min. - max. [mm]	Surrounding diameter [mm]
1200	255 - 1800	80 - 1200	2200
1730	505 - 2600	240 - 1730	2800
2130	865 - 3200	470 - 2130	3200
2600	1150 - 3900	650 - 2600	3700

* 4 % shrink and 40 mm wobbling considered

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 online thickness gauges and / or layflat control systems, can be connected to one PROFILSTAR.NET unit.



PCD-LINK via UDP/IP Ethernet

The proven PCD-LINK protocol via UDP/IP can also be used to communicate to the new VDP-Process. So it is still compatible with existing host computers but at the same time offers a new and very cost efficient version.

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) compatible to the VDP-Process.

PCD-Link via RS-422

A Data Processor box is available as an option, especially to maintain compatibility to control systems using an RS-422 port to communicate with the thickness gauge. The PCD-Link Protocol ensures that no software modifications at all are needed.

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Technical data KCF-700 Rotomat KT

Electrical interface values

Power supply	110 - 240 VAC, 50/60 Hz or 24VDC
Power consumption	max. 100 VA

Thickness measurement

Measuring principle	Capacitive thickness sensor Suitable for any electrically non conductive materials
Measuring frequency	1 MHz
Measuring range	10 to 300 µm Thickner than 300 µm upon request
Measuring interval	50 ms
Resolution	0.1 µm
Accuracy after calibration	10 to 30 µm ⇨ +/- 0.5µm thicker than 30 µm ⇨ +/- 2%
Linearity within range of calibration thickness (± 10%)	better than 2%

Ambient conditions

Ambient temperature	23 °C ± 2 °C
Reference film	LDPE-Folie approx. 50 °C

ROI calculation

Material output _____kg/h	X	Operation time _____h/Day	X	Operation days _____Days/Year	X	Material price _____€/kg	=	Material throughput _____€/Jahr			
				Material throughput _____€/Year	X	Optimisation _____%/100	=	Material savings _____€/Year			
				Investment _____€	:	Material savings _____€/Year	=	ROI _____Years			

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 ❑ Width measurement ❑ Meter weight control	❑ Profile control system ❑ Width 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 Gauges 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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