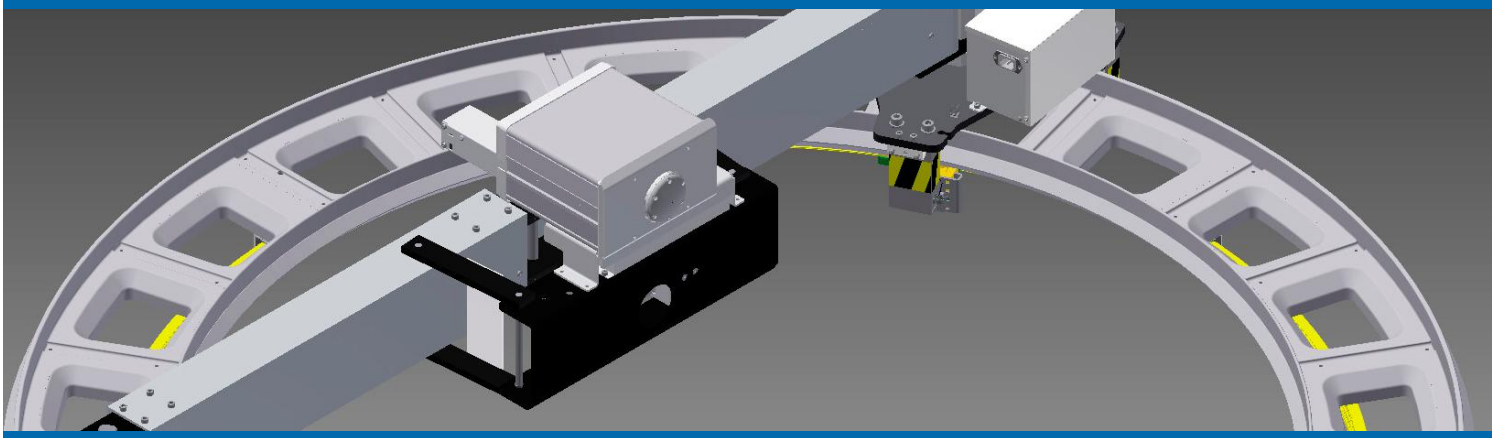
KÜNDIG CONTROL SYSTEMS
The Gauge Manufacturer for Film Extrusion SWISS MADE

K-500 Rotomat KT

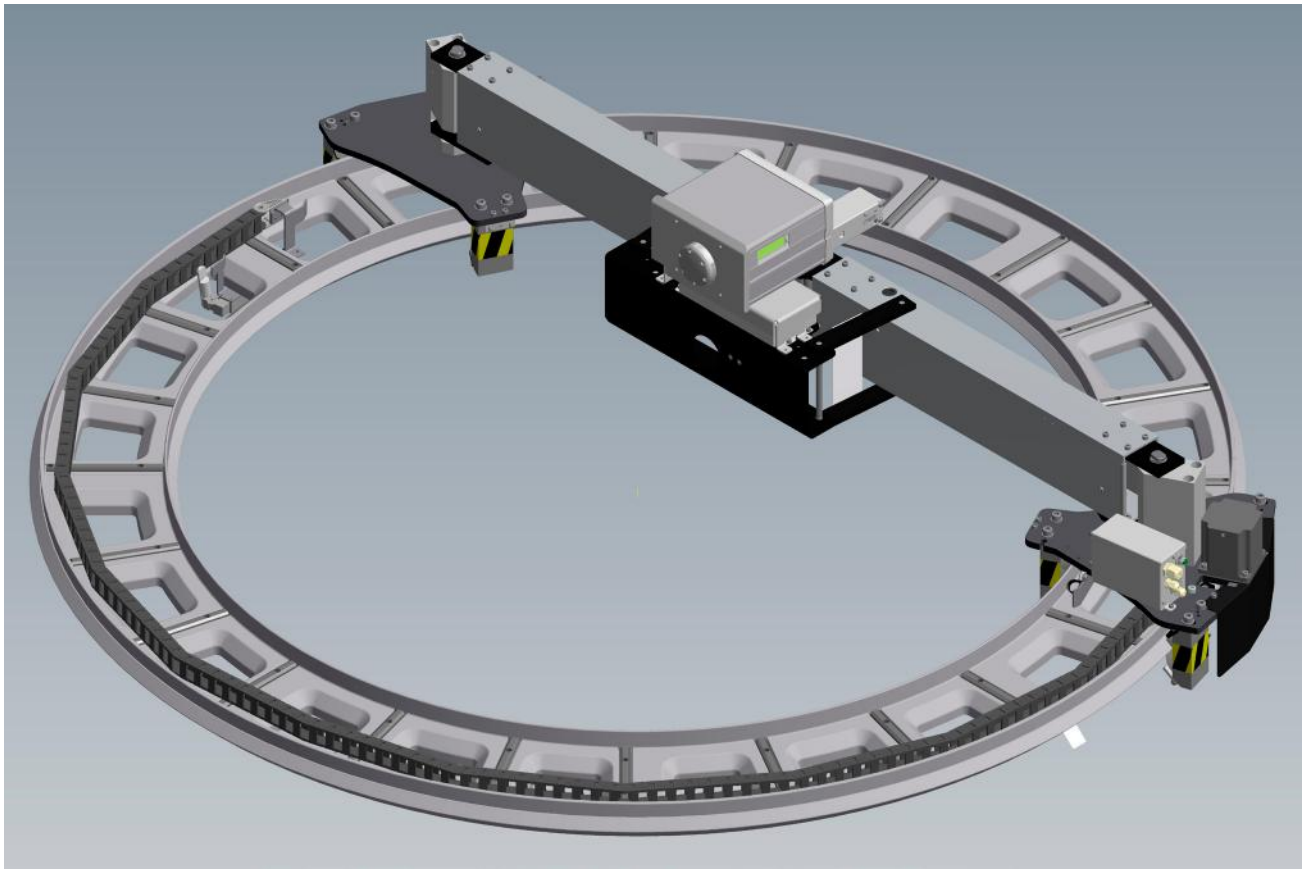


Online Thickness Gauge for Blown Film Lines

K-500 Rotomat KT

The K-500 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.



K-500 Rotomat KT REV

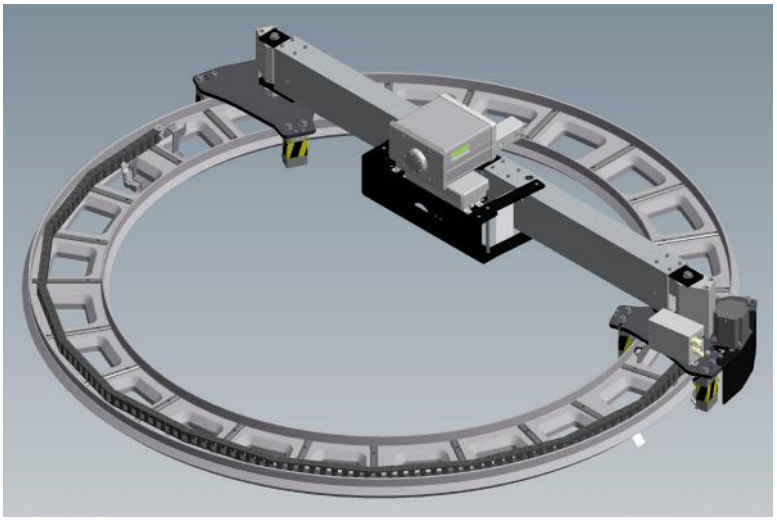
The capacitive thickness sensor of the K-500 is protected by a cover made from cintered ceramic with a very smooth surface. That allows an extremely low wear measurement of the thickness, even though the K-500 is constantly in contact with the film.

Rotomat KT - The third generation

The Rotomat KT has been further optimized. The main focus was on a higher user friendliness as well as an improved flexibility. In order to cover as many applications as possible, the K-500 Rotomat KT in it's third generation is available in two versions:

Rotomat KT REV

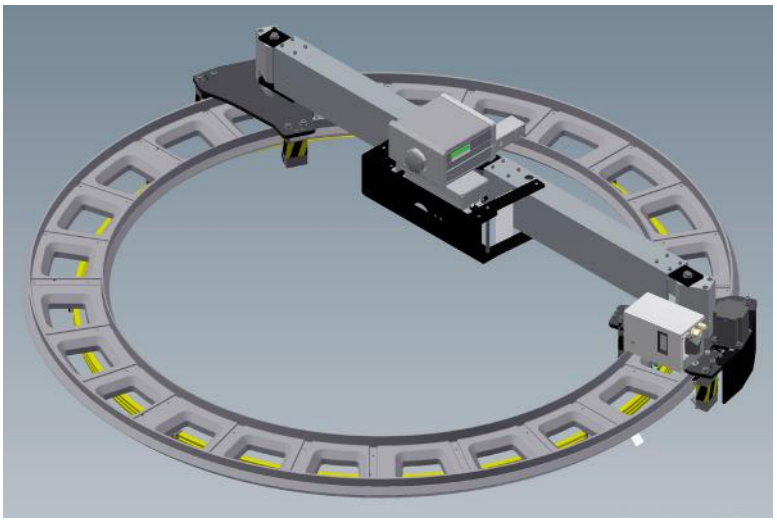
The oscillating scanner has been standardized for several Kundig sensors. That allows a quick change from the K-500 sensor to a non contact capacitive sensor or even to a nuclear probe, so the thickness gauge is very flexible for different blown film line applications.



Rotomat KT ROT

The continuously rotating scanner comes with conductor rails for the power supply. The communication is done wirelessly by a ZigBee module, which is designed for industrial environments.

The Rotomat KT in the rotating version allows a faster control of the thickness profile, as it gets more thickness profile scans per hour.

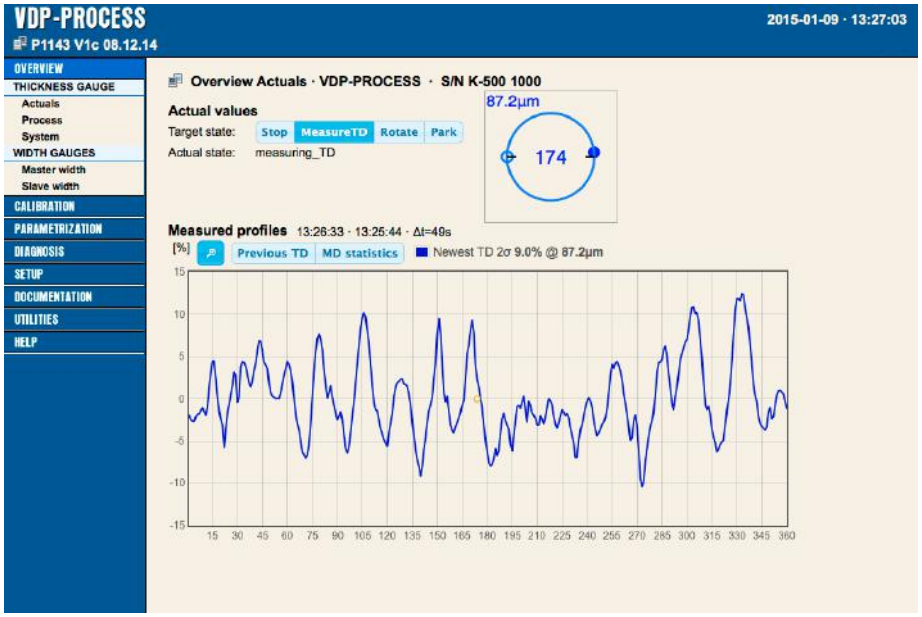


K-500 - Retrofits

The K-500 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 K-500 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.

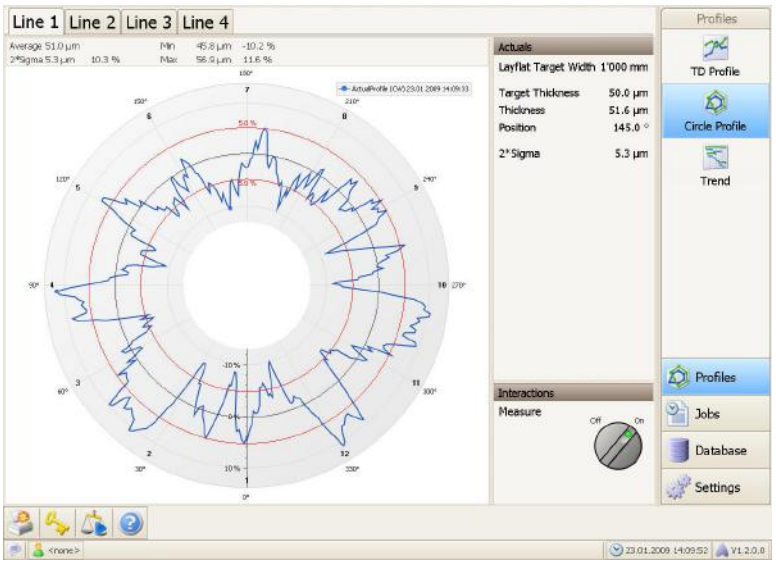
Size [mm]	Layflat range * min. - max.[mm]	Bubble diameter min. - max. [mm]	Surrounding diameter [mm]
1200	255 - 1800	80 - 1200	2200
1730	505 - 2600	240 - 1730	2800
2130	865 - 3200	470 - 2130	3200
2600	1150 - 3900	650 - 2600	3700

* 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.

KÜNDIG CONTROL SYSTEMS
The Gauge Manufacturer for Film Extrusion SWISS MADE

Technical data K-500 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
Fax: +41-55-250 36 01

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 Lines

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

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
Offline measurement for quality control

HCH. KÜNDIG & CIE. AG
Joweid Zentrum 11
CH-8630 Rüti ZH / Schweiz

Telefon +41 (0) 55 250 3616
Fax +41 (0) 55 250 3601

kcs@kundig-hch.ch
www.gauge.ch