



ROLLER TECHNOLOGY: OUR EXPERIENCE IS YOUR COMPETITIVE EDGE!

STABLE PROCESSES IN ROLL-TO-ROLL APPLICATIONS



SO YOU CAN CONCENTRATE ON OTHER ISSUES

WHEN RESEARCH GOES INTO SERIES PRODUCTION

Printed electronics primarily stand for high requirements which are placed on all parties involved in the engineering performance of this fast-developing application area. But printed electronics also stand for stable process monitoring, varying conditions and changing product requirements while at the same time enabling reproducibility. Precise film guiding free of wrinkling and/or static charge allows to achieve the set targets durability and process stability. The machine components used must be able to cope with extremely thin films, scratch-sensitive substrates and vacuum processes. You know what you need and we know all about web guiding. Let us work together so we can meet your needs.

Measurement Technology, Rollers

You carry out research and development work in the area of printed electronics, i.e. you understand the involved processes and know what the intended results are. You are also aware of the fact that mechanical engineering plays just as much a role in your application as the selection of substrates does. Our experts use the latest engineering technology to design a roller perfectly adapted to your application. We produce ready-to-install and low maintenance roller solutions made of fiber composites (CFRP), aluminum or stainless steel for your roll-to-roll-applications.

Web tension measurement is of special significance in this context as clearly defined and setpoint controlled web tensions are a prerequisite for high product quality. Our measuring rollers offer maximum accuracy (accuracy class of 0.1 – 0.2 % of measurement signal) with a safety margin of 150 % to nominal load (linear) while at the same time offering mechanical overload protection.

Coatings

Process temperatures up to 500 °C require high performance coatings which do not change in structure and consistency.

Adhesion mechanisms and substrates may not either be destroyed. In contrast to chromium-plated or galvanic layers, PROTEK 6517 offers a lastingly smooth and resistant surface on all metallic substrates.

PROTEK coatings with low surface energies are often used in vacuum coating processes. The deposition or adhesion of contaminants is strongly reduced which also means far less scratches. Minimized cleaning effort is a further advantage.

In the case of material guiding, e.g. edge guide control, PROTEK 8273 steers the web without relative movement between substrate and roller making scratches. PROTEK 6521 is used in heavy-duty embossing processes (calender) with extremely low roughness depth ($< R_z 0,5 \mu m$). Due to their very high degree of hardness, our new generation carbide coatings are virtually indestructible.

Ceramic Rollers with Digital Print Image

Electronic function media can be transferred onto endlessly running and flexible carrier substrates in flexo or rotogravure printing processes using ceramic coated and engraved rollers.

Not only are production costs for electron-

ics considerably reduced, the way to new functionalities for different applications is open (solar technology, RFID, etc.)

Winding Cores

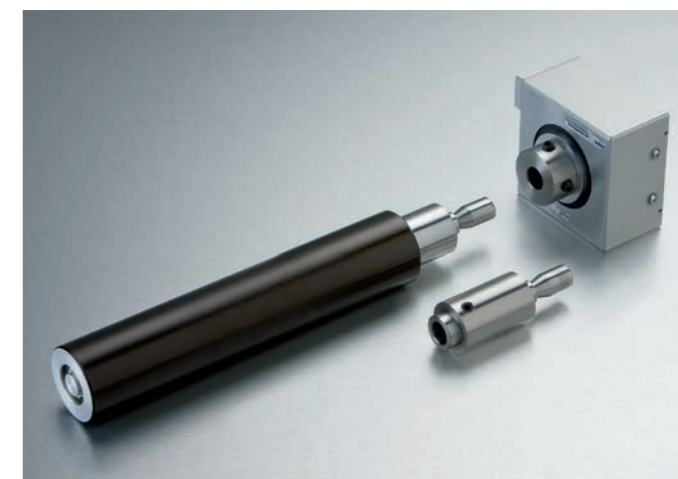
Winding highly sensitive materials requires clean and stable processes as well as smooth and low-tolerance tube cores to avoid wrinkling, contamination and increased waste.

High winding quality and process stability can be reached with WinCore® winding cores:

- multiple usage of aluminum winding cores according to customer specifications
- abrasion-resistant surface, available with antistatic properties, very smooth surface
- perfect concentricity
- can be used with clamping chucks and core shafts



Measurement data logging and processing in real time using PC-based software tools



Tailor-made, ready-to-install and flexible guide roller system solutions for all size production lines



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