

Innovative Quartet

The **SoftSpreader** for sensitive substrates and composite materials.

The **UltraClean Cleaning rollers**, for removal of dirt and debris.

The **Dual layer Sandwich Roller**, for perfect winding result.

The **“Cork Tape Replacement Roller”**, no more winding on tape.

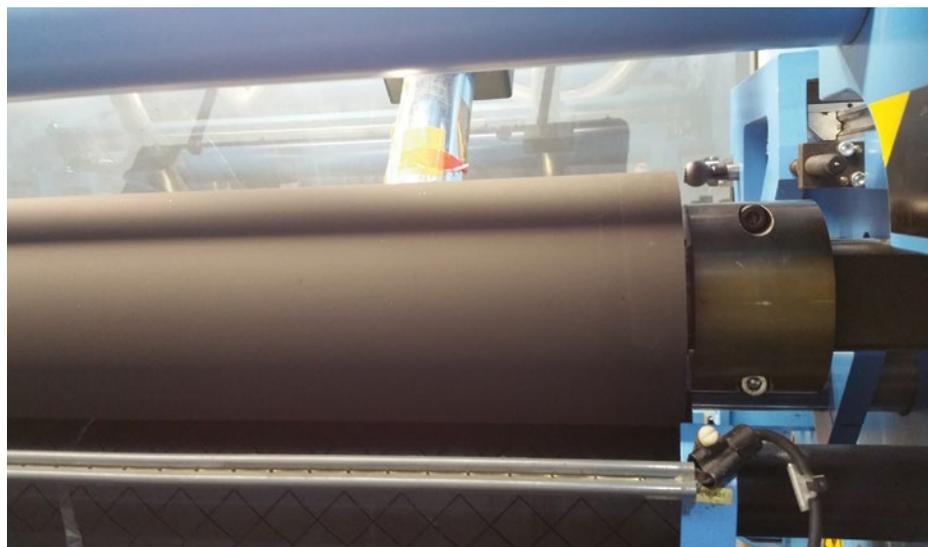
For more than 50 years, a family company, MITEX GmbH – based in Erkrath near Düsseldorf – has been developing and producing roller coatings for use around the world. The company operates production facilities in Germany, Italy, Poland, Spain, USA, China and South Africa as well as in the Middle East and is considered a pioneer in the field of roller coatings. Currently, the design team from MITEX are attracting attention due to their 4x innovative creations, which improve the quality of the finished products and increase efficiency of production plants internationally.

Web Spreading with no harm to the finished product

The **MITEX SoftSpreader** is a covering that is ideally suited for sensitive substrates and composite materials. The commercially available standard for a wrinkle-free web guide is an undercut and deeply grooved coating whose operating principle is based on the mechanical deformation of the rubber slats due to the web tension. The forces that operate here can build up local tensions in extruded foils, which can lead to laminating-related problems, unstable web track and other faults in the processing – on winders or during the finishing, for example.

The **SoftSpreader** offers the following advantages among others:

- No undercuts or spiral grooves
- No local overstretching of the foil
- No folding over of web edges and other folds
- Operation possible with significantly reduced web tension
- Permits high machine speeds with thin mono foils and complex composite materials



Soft Sandwich Roller

- Effective spreading, even at a small wrap angle. A light, antistatic design is possible Umschlingung

Especially developed for sensitive foils, films, papers and coated substrates, the **SoftSpreader** provides a very good, careful spreading of the material without the necessity for corrugation. Hence “tape engineering” – especially during the production of medical and hygiene products – can be eliminated as an uncontrolled source of contamination. Another advantage is that no dirt and cutting residues which can lead to contamination of the finished product collect on the closed surface of the SoftSpreader.

Clean and free of static electricity

The **UltraClean** cleaning rollers from the MITEX portfolio are also especially suitable for optimising the process on sensitive surfaces. The rollers pick up dirt, dust and cutting residues from the material web when

they make contact with the surface. Static charging of the substrate is suppressed by **UltraClean** during the separation from the material web from the cleaning roller so that any subsequent soiling by electrostatic charges is prevented. The material web is not only cleaned, but also remains clean. The adhesion of **UltraClean** is graded according to process requirements. The easy-to-clean, renewable and regrindable rollers have a “non-marking” covering, are permanently adhesive, are used as direct or indirect cleaning rollers and can be retrofitted as a coating for existing web guide rollers. For the cleaning system consisting of contact and transfer roller, MITEX offers ready-to-assemble rollers that are lightweight and easily installed.



Sandwich Roller and SoftSpreader in conjunction provide an optimum slitting result

A further highlight in the portfolio are the **MITEX Sandwich, Lay-on or Contact Rollers**. Especially for thin foils and composite foils, the **Sandwich Roller** achieves a more even winding result and permits higher machine speeds, especially in combination with the **SoftSpreader**, even with a reduced web tension with otherwise unchanged winding parameters. Critical composites, e.g. with PE in adhesive laminations, no longer have a curling tendency due to the reduced web tension of the foils flowing together. The **MITEX Sandwich-Positioning or Lay-on Roller** is used in all systems for the manufacture and finishing of web materials. For more stable foil composites, e.g. with PET or generally more inherently stable materials, the roller experts use sandwich constructions with greater hardness. Generally, **Sandwich- Positioning or Lay-on Rollers** have the following characteristics and advantages:

- Balancing of diameter differences in winder rollers as the consequence of different colour coatings or windows
- Improved optics in the solvent-free lamination of areas with smaller diameters

- Optimised web tension control
- Even or harder rollers can be used with unchanged winding parameter settings
- Reduced star formation (see figure at bottom right)
- Minimised marking of sensitive surfaces
- Easy to clean Antistatic design
- Available with ATEX certificate



**Left: No Star formation due to Sandwich Roller
Right: Star formation if no Sandwich Roller is used**

Significantly higher production

speeds, in practice, the experts from MITEX have already impressively proven that investment in their sandwich rollers pays off. In a modern slitter system for critical PE foils with a thickness of < 30 µm, the production speed could be increased from < 125 to 250 m / min without changing other machine parameters. In a slitter for sensitive BOPP foils, the production speed was increased from 80 to 300 m/min – again without further changes to the machine parameters.

Even at high speed, the special properties of the MITEX Sandwich Roller minimise the formation of so-called "piston rings" (raised edges in the cutting area) when processing foils with a soft structure. Similar improvements can be observed during the processing of the thinnest foils as well as capacitor foils or during the cutting process of tear-off strips and pull threads.

Cork Tape Replacement Roller

Our development teams have listened to what you (the customer) have told us about your roller problems. One problem is shared across the winding and converting industry, that is **CORK TAPE !**, it takes time to apply, it bleeds adhesive from the backing, which is unhygienic in either food or medical applications and can also be expensive to purchase. ■

MITEX solution



The solid Cork Tape Replacement Roller! This will give a high CoF, its quicker and easier to install, no adhesive bleed through, and can save you money as its also re-grind able.



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