

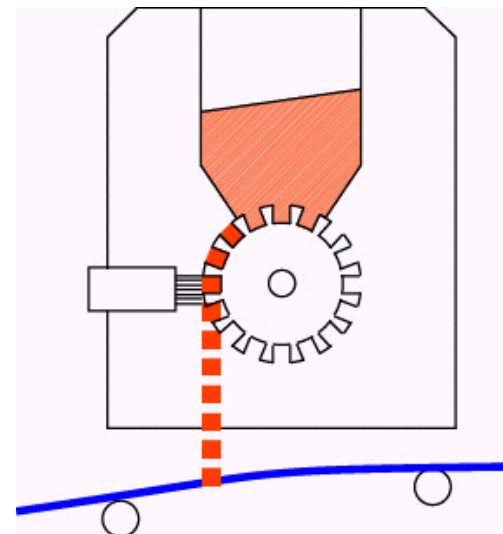


Combination of beltbonder and Klieverik powder scattering device

NON WOVEN

A Klieverik belt bonder in combination with a Klieverik powder scattering device is well suited for very soft, lightweight products with extra bulkiness and good drape.

Klieverik developed its own PSD™ Powder Scattering Device with state-of-the-art technology, up to 600 cm wide.



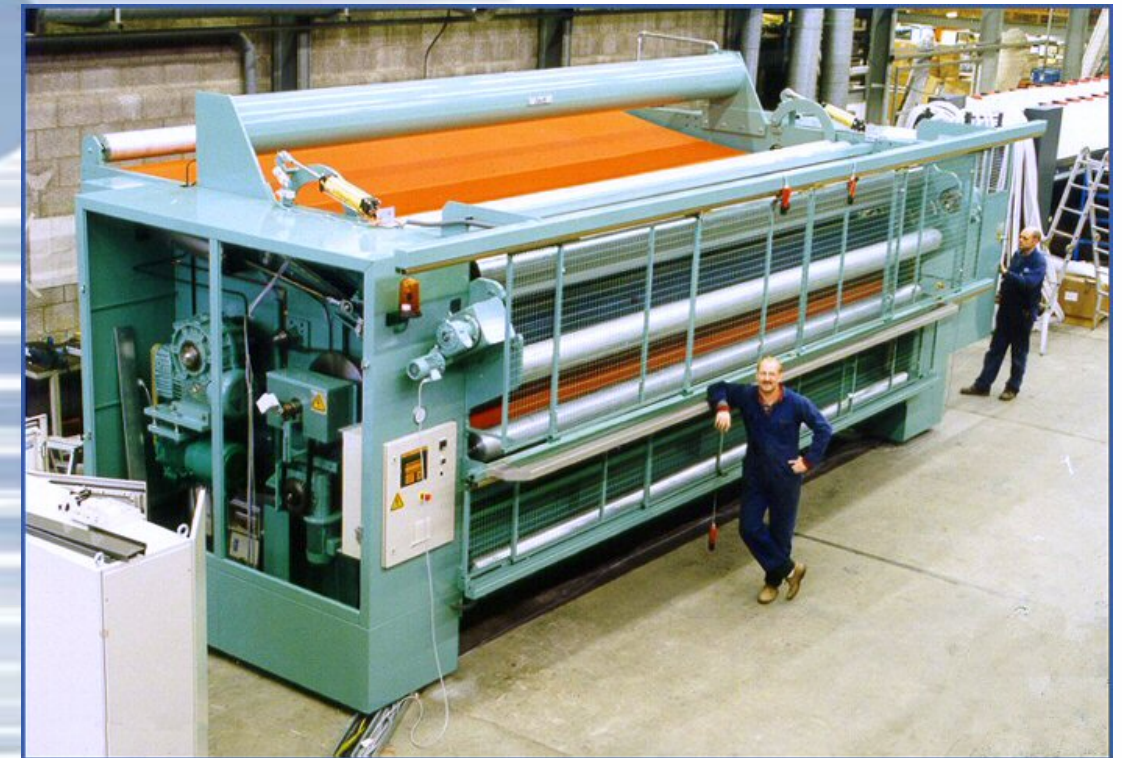
COATING and LAMINATING

The LFC™ in combination with the PSD™ creates a versatile production machine to manufacture a wide spectrum of coated and/or laminated products by the usage of thermoplastic powder, films, foils and webs.



Technicum Facility:

In order to provide optimum service for customers, Klieverik has its own On-site-pilot-plant for testing new techniques.



Thermo bonding of Non woven — wide Calender

Klieverik has developed and engineered it's calenders NFC™ and LFC™ with state of the art technology and with environmental concern in mind. Many well-known companies use Klieverik dwelling-time calenders for the thermo-processing of non woven. These companies produce a wide range of products such as acoustic material, carpet backing, recycled non woven, geo-textiles, interlinings, filters, under laymen, surgical dressings and tissues. But however wide the field of application, every single customer has chosen his Klieverik machine because of its possibility to combine a long dwelling time with a perfect control of pressure and temperature.



2 x LFC 141/2750 for laminating and for thermobonding

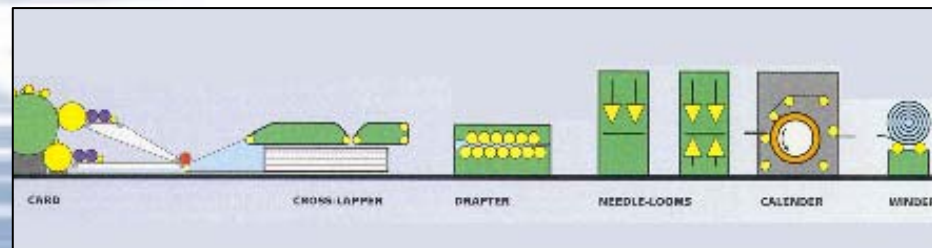
Throughout the years **Klieverik** has developed **3 special types of belt bonders**, which can be used for a wide range of materials and can process lightweight non woven from 10gr/m² up to 2000gr/m².

The belt bonder LFC™ and 2 x LFC™.

The belt bonder NFC™. with an automatic (within 3 min.) removable belt.

The double drum belt bonder LFC™ for simultaneous double-sided treatment.

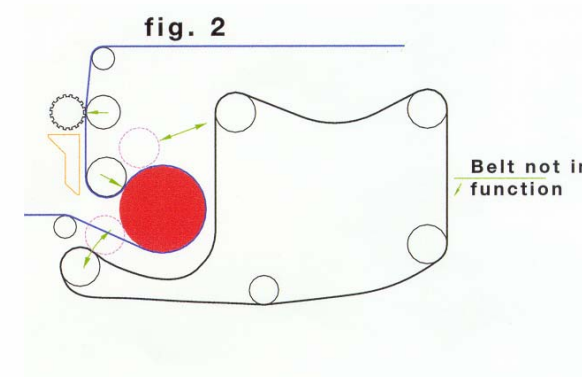
The principle of a **Klieverik** belt bonder is always a heated, special cylinder with releasing properties and pressure rollers, covered with a silicon belt. Thanks to this heated drum and by varying dwell time, temperature and pressure, this belt bonder can be used for special surface effects. The oil-circulation system secures an equal temperature under all circumstances.



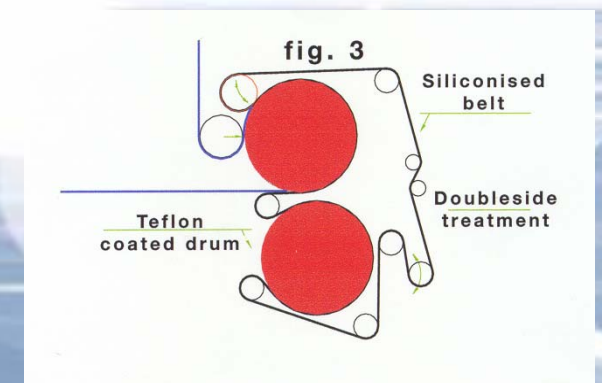
Calender positioned in a non woven production line

The main advantages of the Klieverik systems are:

- * Working width up to 6 metres
- * Speeds up to 100 m/min.
- * Drum-heating by means of thermo-oil with infinitely variable temperature up to 240°C and accuracy within ± 1°C.
- * Belt pressure up to 160 g/cm²
- * A construction with a special laminating roller can be incorporated to provide for pressures up to 12 kg/cm., guaranteeing a high pressure evenness and also for calibrating.
- * Special Silicone blankets resistant to high temperatures.
- * Special Teflonised long-life (300 micron) coating of heating drum.



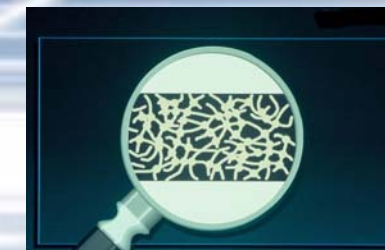
NFC™ with removable belt



LFC™ Double Drum Calender



Nonwoven Production Lines



Not thermo-bonded fibres



Thermo-bonded fibres