

# **BETA Machinery**

## **Textile and Non-Woven Production**

BETA production activity has two main sectors, textile machinery and non-woven machinery: all production has the BETA typical high quality standards.

All BETA machines have great pressure efficiency due to the international patented BETA Roll which has parallel ground surfaces: this Patent has two versions, for padders and for calenders, and allows BETA rolls to have zero deflection under max working loads and to assure a perfectly even working pressure distribution along the whole roll's span under all range of pressure load, from min to max values.

Textile machinery includes mainly padders and calender for finishing plants: padders for impregnation or dressing (two or three rolls, differentiated, or twin), dyeing padders in different layouts and calenders with several kinds of rolls' surfaces and rolls' number.

Non-woven machinery includes impregnation padders for chemicals application, thermobonding and cooling machines (standard heated rolls with low working pressure) and cold or hot calenders (BETA rolls with high working pressure).

<b><i>Machinery for Textile finishing</i></b>	<b><i>Machinery for Non-Wovens</i></b>
Padder 2-rolls	Impregnation padder (speed up to 200m/min)
Padder 3-rolls for high squeezing	Thermo-bonding machines
Padder 3-rolls differentiated for wet treatment	Cooling machines
Twin padder 3+3 for highly elastic fabrics	Cold or hot calenders
Dyeing padder 2-rolls (horizontal and vertical layout)	
Calender 2-rolls (steel / Nylon / cotton rolls)	
Calender 3-rolls (steel / Nylon / cotton rolls)	
Calender 3-rolls differentiated (steel / Nylon / cotton rolls)	

Other machines are produced, like accumulators, axial and tangential winders, folder devices, stretching plants, laser or load cell synchronization, and so on.

**Quality** = high quality materials and components; international Patents for BETA rolls; minimal lateral size of machines; great attention to safety; compliant to all European rules for machinery.

**News** = all machines are suited on customer's requirements and BETA technical department pays great attention to production needs; new devices and continuous improvements are developed in order to assure always the best performances with all kinds of fabrics.

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References = more than 2000 machines produced since 1959 and still working all over the world; due to their high quality, BETA machines are also very requested on the used and second-hand market.

Patents = the heart of BETA machines is the BETA Roll which is covered by an international Patent which assures zero deflection and equipressure. This BETA Roll consists of a simple mechanical system with very reduced maintenance and has two versions, one for padders and one, more complex, for calenders: in both cases the Patent allows to obtain a perfectly even pressure distribution with zero deflection at each working pressure value, from minimum to maximum. Further, in the calender version, BETA Patent includes new design features in order to assure also a perfectly even temperature distribution along the whole roll's span ( $\pm 1^{\circ}\text{C}$ ) in the rolls heated by diathermic oil flow.

No crown rolls are used in BETA machines; all BETA rolls are ground with parallel surfaces.

#### Advantages of BETA Padders with respect to competitors

- Patent of Padder BETA Roll for equipressure (zero deflection and perfectly even pressure distribution)
- Very high squeezing efficiency
- Machine versions for squeezing, dressing, dyeing and for all kinds of fabrics (shuttle, cotton, elastic, knitted, tubular fabrics, wool, silk, non-woven)
- High quality of materials and components
- Working pressure up to 100N/mm
- Speed up to 200m/min
- Rolls' width up to 6m
- Rubber coatings suited for all treatments
- Very thin machine lateral width
- Great accessibility for maintenance, rolls' disassembling, cleaning and for fabric drawing-in
- Reduced maintenance reflecting in low operating costs
- Excellent visibility and possibility to inspect the fabric along all its path
- Most recent devices and guards for maximum safety for operators: compliance to all European rules about safety of machinery
- Great compactness: machine is delivered fully assembled and already tested so it is ready to work; commissioning and personnel formation require only one or two days
- Easy connections with the production line about synchronization, stop/emergencies contacts, alarms and safety
- Many accessories to be installed to face each production needs for all kind of fabrics (light overturned dancing roller, laser and load cells synchronization, double widener rollers driven by inverter, widening/centering device, batcher winder device, folder device, PLC/OP system)

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### Advantages of BETA Calenders with respect to competitors

- Patent of Calender BETA Roll for equipressure (zero deflection and perfectly even pressure distribution) and equitemperature (constant temperature along the roll's span, max  $\pm 1^{\circ}\text{C}$ )
- Very high treatment efficiency
- BETA Rolls have parallel grinding surface and are made in hardened, chromium-plated and ground steel and possibility to cover with Nylon sleeves
- Rolls heating by diathermic oil (roll surface at  $200^{\circ}\text{C}$  max with oil at  $250^{\circ}\text{C}$ )
- Available on request cotton and paper-wool coatings, and engraved rolls
- Machine versions with several number and kinds of rolls (steel, Nylon, or other) suited for fabric finishing and for non-woven
- High quality of materials and components
- Working pressure up to 300N/mm
- Rolls' width up to 6m and diameters up to 900mm
- Low machine width (motor and accessories placed on the upper machine part)
- Great accessibility for maintenance, rolls' disassembling, cleaning and for fabric drawing-in
- Reduced maintenance reflecting in low operating costs
- Excellent visibility and possibility to inspect the fabric along all its path
- Most recent devices and guards for maximum safety for operators: compliance to all European rules about safety of machinery
- Great compactness: machine is delivered fully assembled and already tested so it is ready to work; commissioning and personnel formation require only one or two days
- Easy connections with the production line about eventual synchronization, stop/emergencies contacts, alarms and safety
- Many accessories to be installed to face each production needs for all kind of fabrics (heat exchanger for diathermic oil, electric or gas heater, rolls' air cooling, rolls' spacer devices, metal detector, seam detector, antistatic device, fabric humidifier, axial or tangential winder device with constant tension, folder device, PLC/OP system)

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