

Rebel™

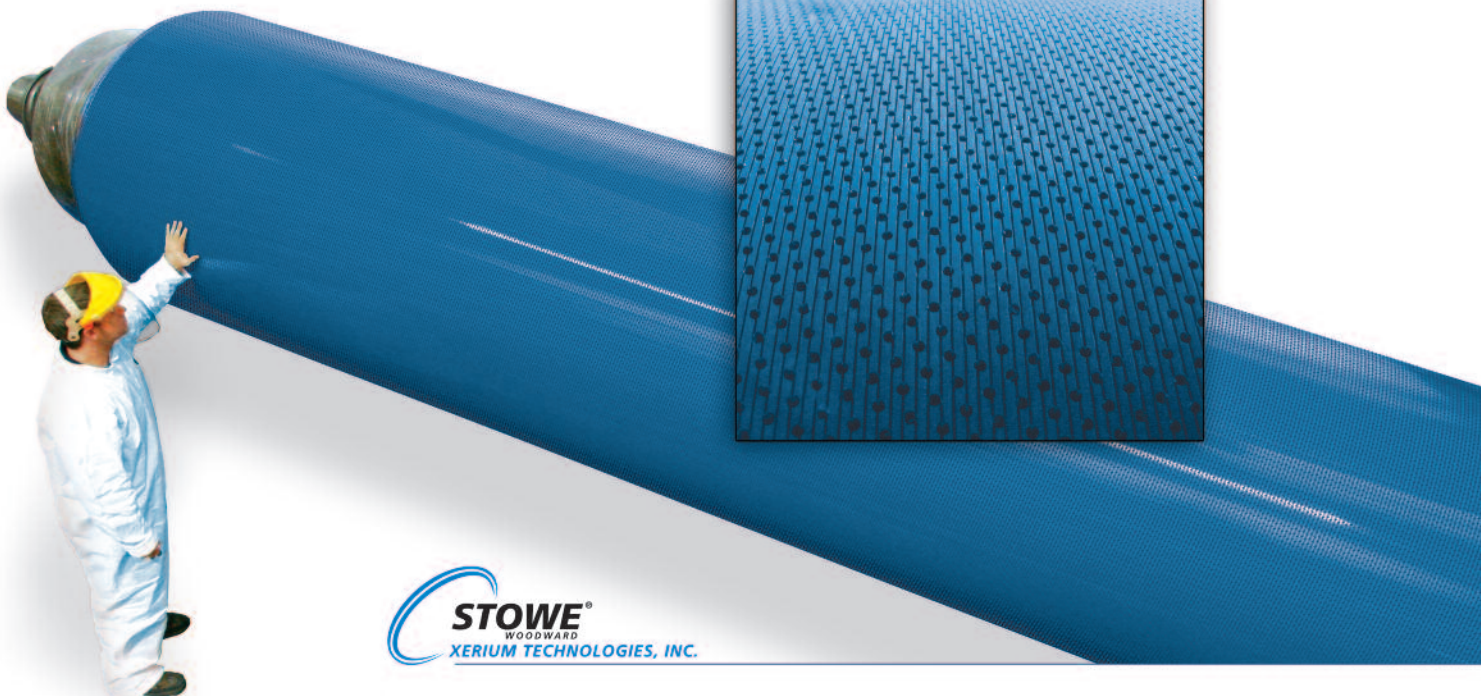
Rebel polyurethane is the next generation tissue pressure roll cover designed to maximize tissue machine performance.

Rebel is available in a wide hardness range and all venting combinations of suction, blind drilled and grooved. Rebel pressure roll covers provide superior nip conditions for tissue quality and machine efficiency. The excellent hardness stability of Rebel polyurethane assures a uniform Yankee/Pressure Roll nip over the life of the cover that is not typically achievable with rubber covers. Since the first installation in 2007, Rebel has opened the door to the future of Yankee pressure roll extreme performance covers.

Rebel covers provide the extreme abrasion resistance required for extended regrind intervals and reduction in overall maintenance costs. In addition, Rebel covers are designed to deliver the best tissue quality and machine productivity through the following properties:

- Stable dynamic properties provide consistent pressure roll nip intensities for faster start-ups, and minimize process variability caused by summer to winter operating temperature changes.
- Consistent roll cover hardness throughout the cover life delivers sustained superior nip conditions and tissue quality with less cross machine variability, increased drainage control and less variation of the nip peak pressures.
- Superior tensile and tear strength greatly improve the damage tolerance compared to standard covers operating today, opening the safe operating window when the Yankee profile is difficult to match.

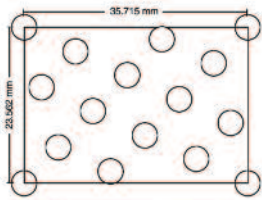
REBEL™
by Stowe Woodward



STOWE
WOODWARD
XERIUM TECHNOLOGIES, INC.

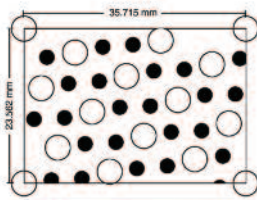


Cover Venting Comparison Example



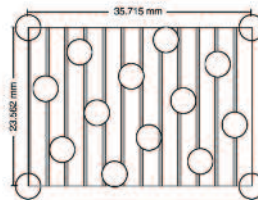
Open area	
Core	
Total:	20.4 %
Cover	
Suction drilling:	17.5 %
Blind drilling:	0.0 %
Grooving (theor.):	0.0 %
Grooving (pract.):	0.0 %
Total:	17.5 %

Suction



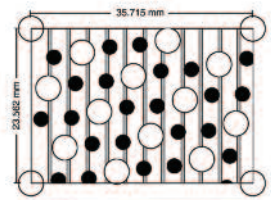
Open area	
Core	
Total:	20.4 %
Cover	
Suction drilling:	15.7 %
Blind drilling:	11.7 %
Grooving (theor.):	0.0 %
Grooving (pract.):	0.0 %
Total:	27.5 %

Suction & Blind Drilled



Open area	
Core	
Total:	20.4 %
Cover	
Suction drilling:	17.5 %
Blind drilling:	0.0 %
Grooving (theor.):	20.0 %
Grooving (pract.):	16.5 %
Total:	34.0 %

Suction & Grooved



Open area	
Core	
Total:	20.4 %
Cover	
Suction drilling:	15.7 %
Blind drilling:	11.7 %
Grooving (theor.):	20.0 %
Grooving (pract.):	14.5 %
Total:	42.0 %

Suction, Blind Drilled & Grooved

Pressure Roll Venting

Due to Rebel's superior physical properties, grooving is now possible in suction and blind drilled roll cover applications. Combined with the engineered surface of the Weavexx Huyspeed felt design, Stowe Weavexx engineers a system with the highest potential to meet the paper machine operating objectives for sheet quality, machine efficiency and energy conservation.

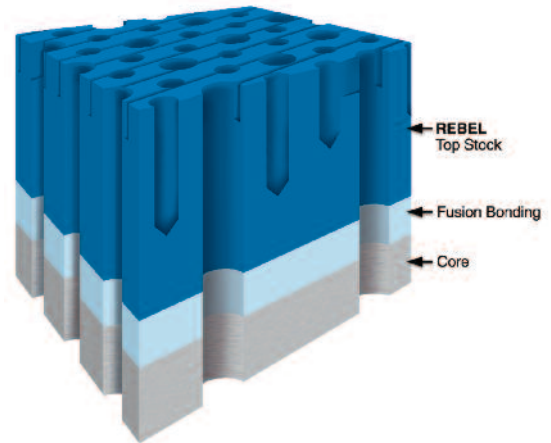
System Design

Stowe Weavexx is leading the industry in delivering a complete system engineering approach to designing fabrics, felts, roll covers and venting, all working together to deliver outstanding product quality, machine efficiency, and energy conservation.

The Yankee dryer to pressure roll nip significantly impacts both sheet quality and machine efficiency. Stowe Weavexx engineers the roll cover and felt to work as a system, optimizing properties of both products to work together.

The result is a design that delivers superior tissue quality with a faster start-up, reduced felt break-in time, reduced energy costs, and increased post pressure roll consistency or machine speed.

Pressure Roll Venting



- Potentially increase post pressure roll consistency through additional roll cover void volume
- Blind drilled holes and/or grooves remove more water from the saturated felt
- Suction, blind drilled and grooved rolls may improve pressure uniformity

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