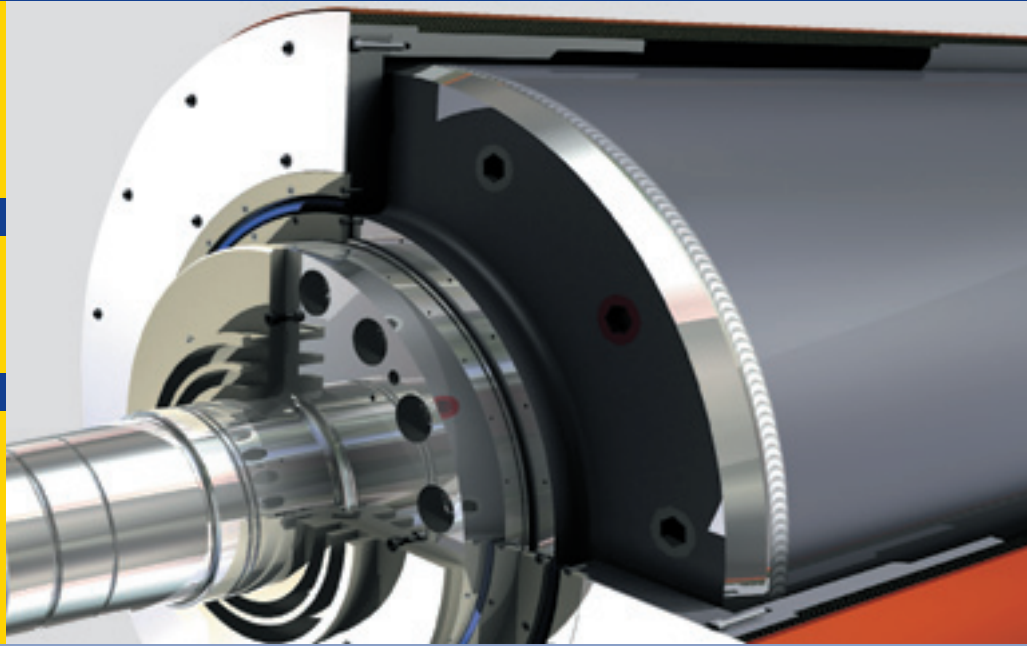


Name	Roll type
EvoTec	
EvoFlow	Suction roll
EvoPress	Press roll
EvoSize	Spreader roll
EvoRun	Paper roll
CarboTec	
CarboForm	Shaken breast roll
CarboRun PG	Paper roll
CarboRun CS	Center-supported roll



Entire roll systems optimized and adapted

EvoTec and CarboTec – the new roll generations

Optimization is an ongoing task in paper mills today. The interplay of rolls, roll covers and related components directly influences paper machine performance. Roll systems require more attention and upkeep than any other part of the machine.

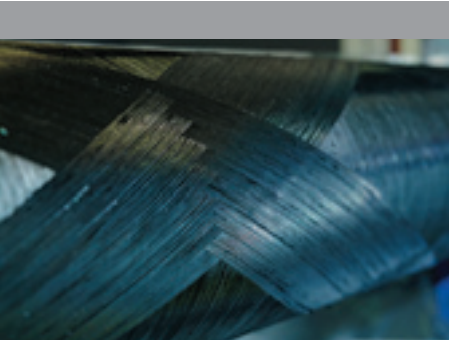
The new-generation EvoTec and CarboTec roll systems incorporate Voith's entire papermaking and roll technology know-how. While the EvoTec product line includes all cast iron, steel and stainless steel rolls, the CarboTec rolls are made of carbon fiber composite materials.

EvoTec and CarboTec roll systems are outstanding due to their innovative details, advanced design – which is customized to specific requirements, and unsurpassed quality. They are built for reliability, safety and long life. All these rolls are manufactured to the highest precision, and meet the most stringent quality standards.



The CarboTec team in Wimpassing, Austria

Carbon fiber composite



Roll production in St. Pölten, Austria

EvoFlow

The new EvoFlow suction roll is based on a well-proven design that has been systematically optimized for maximum dewatering performance and minimal power consumption. Among the other advantages of these rolls, they produce the lowest possible lubricating water consumption and longer maintenance intervals.

Oscillating high-pressure spray pipes, with self-cleaning nozzles are available to avoid plugged suction holes, and the innovative SeaLencer sealing strips system minimizes friction and noise development. All EvoFlow suc-

tion rolls are customized to specific requirements.

EvoPress

Reliable press roll systems are trouble-free and low-maintenance. A failure free operating is mandatory even at highest loads. Therefore EvoPress press rolls are individually laid out according to the latest design methods. Gentle web drainage is ensured even at the highest line forces. For this reason, the roll and cover must be perfectly coordinated. The first-class materials and high-precision manufacturing ensure minimal vibrations and high operating reliability.

EvoSize

Perfect roll concentricity, negligible deformations and high-performance roll cover systems are the main features of EvoSize applicator rolls. No other type of roll reacts so sensitively to temperature effects as applicator rolls do.

Heat generated in the nip by fulling must be safely removed to prevent thermal deformation and cover separation. Voith EvoSize applicator rolls have an effective and dependable cooling system with coolant feed and outlet both on the tender side of the machine. The advantage of this sys-

tem is a uniform water ring of defined size that ensures an absolute homogeneous temperature profile.

EvoRun

The demands on paper rolls range from web support to fabric guiding and driving. EvoRun paper rolls feature high-precision manufacturing and precise dynamic balancing. For balancing in the third plane, patented mountings are used that safely position the balancing weight without weakening the roll pipe. Particular attention is paid to the radial deviation S2 at double the rotary frequency, which directly affects vibrational behavior. Particularly in the semi-critical speed range, a low S2 deviation is imperative for optimally smooth running.

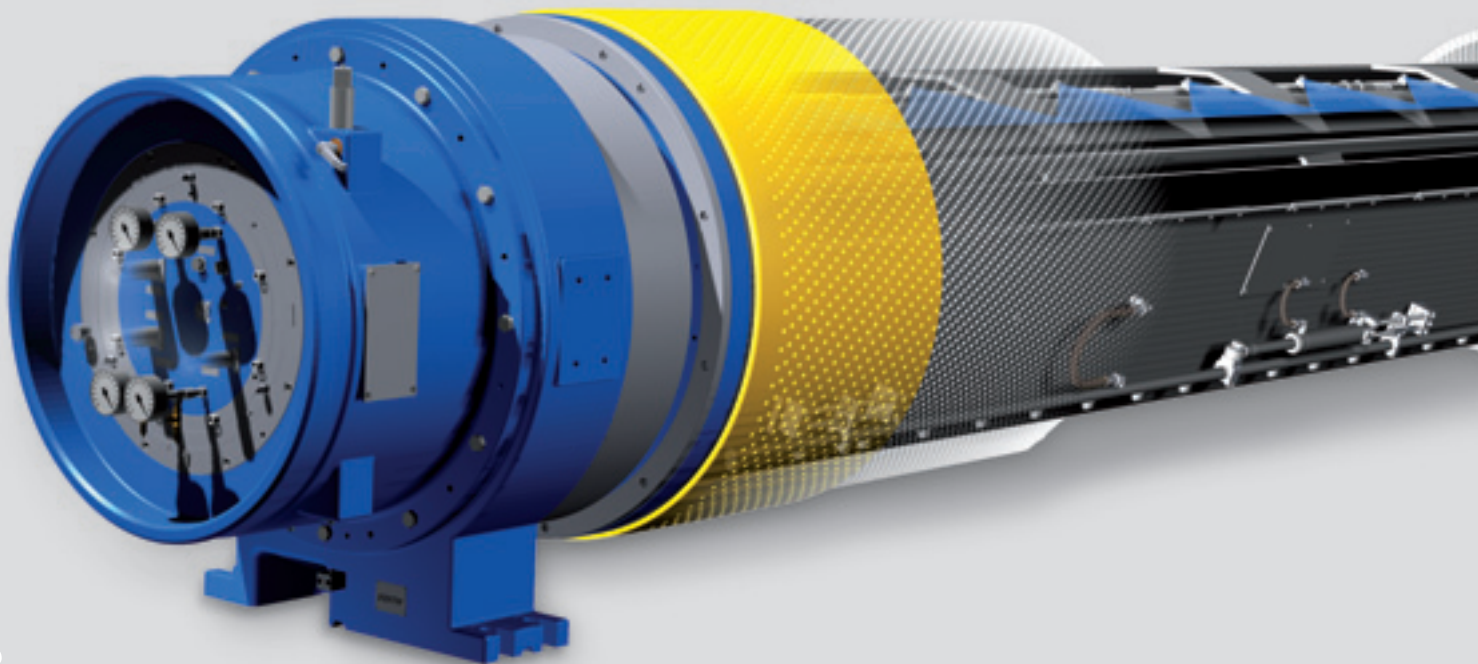
EvoTec roll systems are developed, designed and built by experienced specialists at Voith Paper Rolls St. Pölten, Austria. All our trend-setting roll systems are manufactured using the latest high-precision machine tools.

CarboTec

CarboTec rolls are made of carbon fiber composite comprising two completely different materials: the fiber and the matrix.

The carbon, glass and aramid fibers provide the necessary strength and stiffness, while the resin matrix binding the fibers mainly determines the thermal properties and chemical resistance of the composite as a whole.

EvoFlow



Fiber-plastic composites enable customized roll design thanks to their specific characteristics. Since the characteristics of fiber-plastic composites are anisotropic due to fiber reinforcement, the resultant mechanical properties can be influenced by selecting or orientating the fiber reinforcement accordingly. For example different stiffnesses in the peripheral and axial directions are possible and the thermal expansion characteristics of the roll body can be influenced.

CarboForm

Shaken breast rolls must be lightweight and resistant to deformation. The low weight of CarboForm rolls enables a higher shake frequency, which makes for better sheet forma-

tion, and the high specific stiffness or strength of CarboForm roll material is optimally utilized.

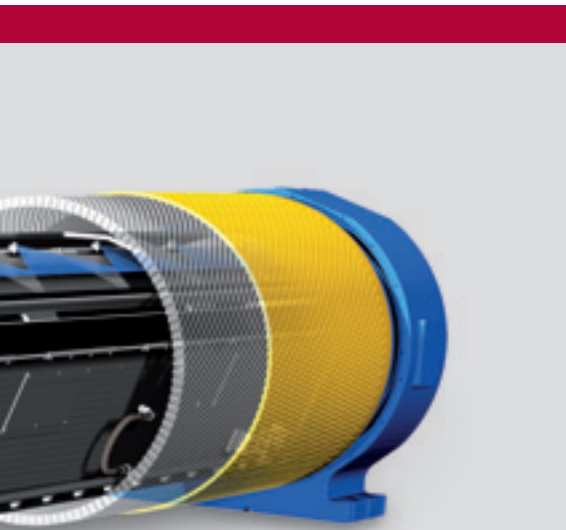
CarboRun PG

CarboRun PG paper rolls are primarily dimensioned according to the natural frequency of the rolls. Their low weight and high specific stiffness enable higher operating speeds than steel rolls. CarboRun PG rolls are used in paper machines, coaters, winders and calenders.

CarboRun CS

CarboRun CS rolls are used in the wire section for wire guidance or spreading. The ideal flexing curve of these center-supported rolls is thanks to an outer tube of carbon composite material. The advantage of these rolls is their combination of low weight and a precisely predetermined bending.

Voith established a new production facility in Wimpassing, Austria, for the entire CarboTec roll family. Depending on application, roll covers or coatings optimally suiting the specific requirements and roll design can be fitted here. The possibilities opened up by carbon fiber composite materials will also be exploited in further development projects.



Customer Comment



Thomas Wischeropp
Klinge Paperwerke,
Weener mill

“Due to the operating situation on our PM 2, which has a single-felted first press nip, nip water drainage was inadequate. This caused sheet crushing and frequent web breaks. Since we needed a new suction press roll sleeve, Voith Paper Rolls worked out with us an optimized drilling pattern both for the roll core and cover. The new surface design now enables reliable drainage, eliminates crushing and has greatly reduced web break frequency, resulting in 2% higher production output. Particularly at the higher end of our product basis-weight range (corrugated board/testliner at 90-180 g/m²) this optimization takes full effect. In other words, the project goals were reached in full”.

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