

## **Advantage™ SoftReel B**

A state of the art in winding



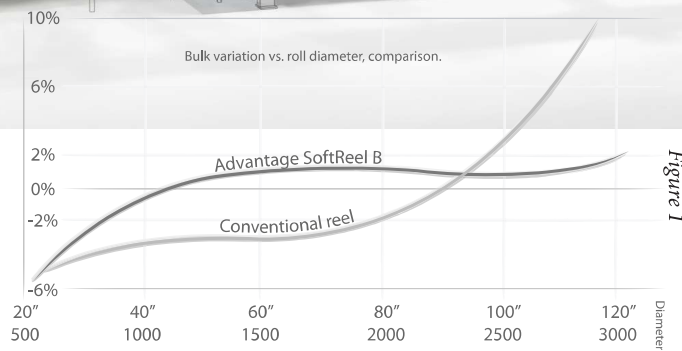
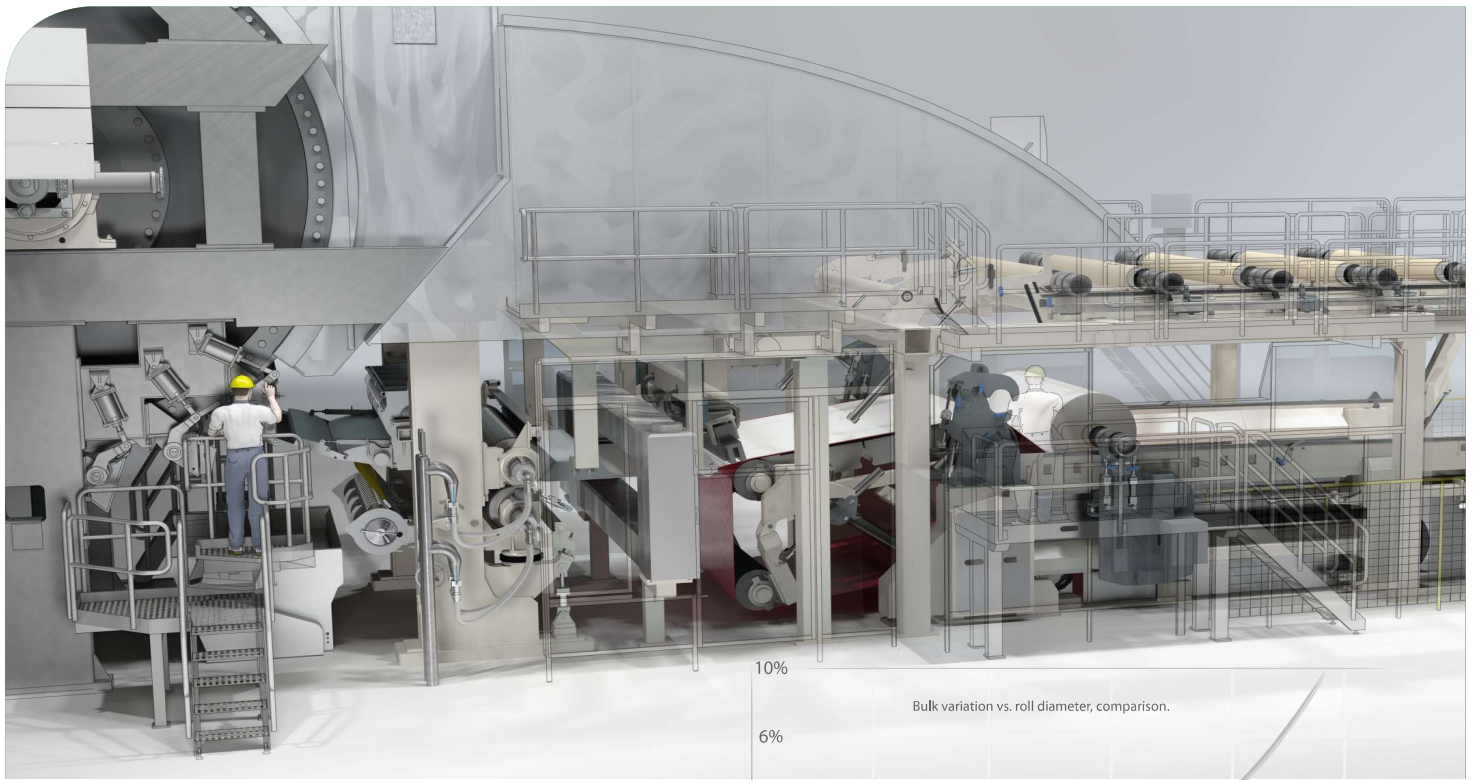


Figure 1

# Advantage™ SoftReel B Winding system

The Valmet Advantage™ SoftReel B is an innovative winding system that provides producers and converters of premium tissue and towel grades a competitive edge.

## The B makes the difference

The B in Advantage™ SoftReel B stands for Belt and it is the belt in this tissue winding technology that gives producers and converters the control over the winding process that allows producing large diameter parent rolls while keeping exceptionally uniform caliper throughout a whole roll. See Figure 1.

## Replacing an old winding principle...

Using conventional technology for winding low-density paper such as premium tissue and towel grades does not produce the same good results as when winding high-density paper. When low-density paper is fed into a nip consisting of a reel drum and the parent roll, the length of contact, "A" of the parent roll being wound

becomes longer as the diameter of the roll increases, making the wound-in tension in the roll continuously lower. Consequently, these parent rolls are not of uniform caliper throughout, which limits the diameter and the speed at which they can be wound, but also unwound in converting lines. See Figure 2.

Replacing the reel drum with a belt changes the physical nature of

the nip. Instead of a round, hard-surfaced reel drum and parent roll, Advantage™ SoftReel B technology enables the tissue and towel grades to meet a flat, soft-surfaced belt in the nip. In other words, the length of contact "A" is always shorter than the arc "B" even as the diameter of the roll increases. When the tissue exits the nip the sheet is elongated and thus tension is generated inside the

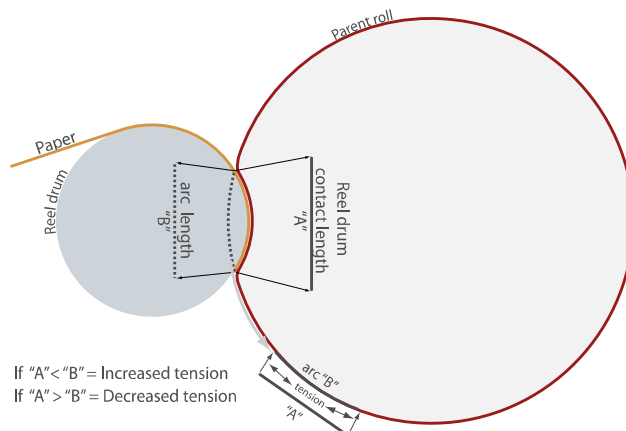
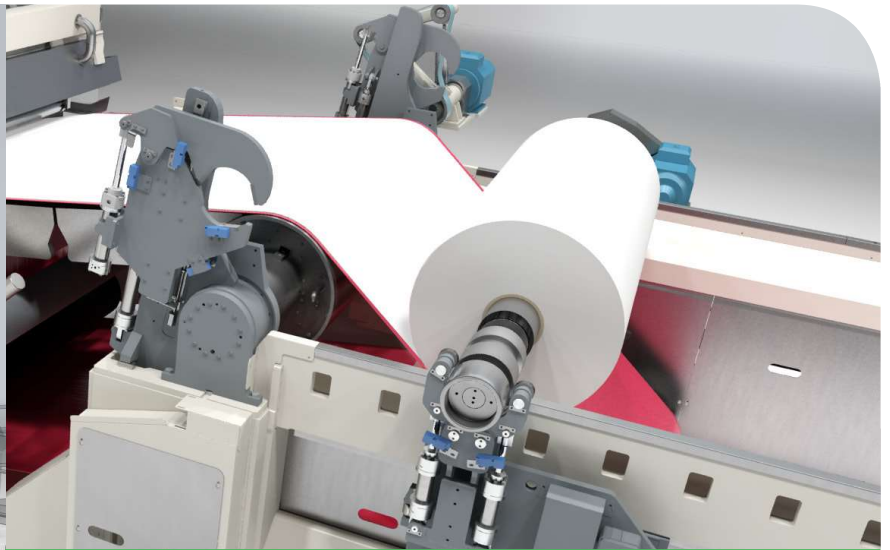


Figure 2



Advantage™ SoftReel B is equipped with linear primary arms and secondary carriages with CWA, a short belt run with a stretcher and guide mechanism

roll. The result is consistent control of the wound-in tension. And this is why Advantage™ SoftReel B is able to produce uniform large parent rolls. See Figure 3.

### Low nip pressure preserves caliper

The nip pressure against the belt in Advantage™ SoftReel B is significantly lower than the nip pressure in a conventional reel. This reduction preserves the caliper of the sheet during winding. Figure 4 compares the nip pressure for a conventional reel and the Advantage SoftReel B with a typical indentation setting.

### New way of measuring indentation

The control strategy of Advantage™ SoftReel B is completely different from that of a conventional reel. As the parent roll is wound against the belt, the control algorithm calculates the required indentation of the parent roll surface into the belt. This patented control strategy relies on an absolute distance measurement to measure indentation, as well as measuring the winding speed and the RPM of the parent roll. This provides the output for positioning the secondary carriages. Measuring the indentation provides direct feedback of the variables required for control.

### New or rebuild

Advantage™ SoftReel B is an alternative to the problems of conventional winding that tissue makers have traditionally accepted as part of the process. During the past decades numerous reels based on belt winding technology have been delivered. Thus while being a relatively new technology, Advantage™ SoftReel B is also a mature technology available as an option for all new and existing Valmet tissue machines as well as for installation on tissue lines from other suppliers as an upgrade or rebuild.

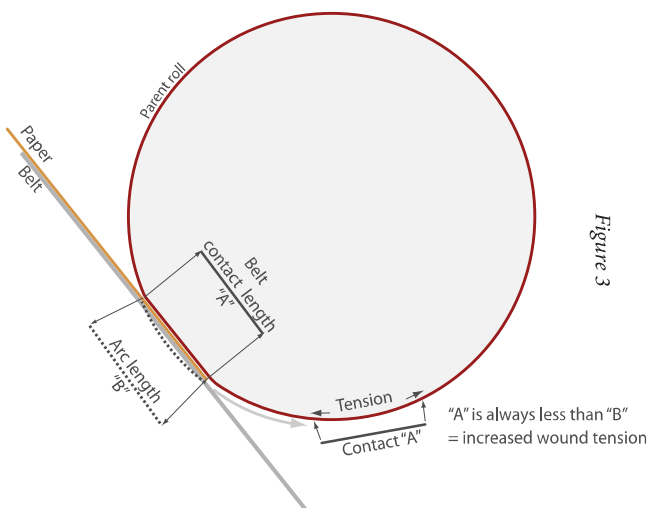


Figure 3

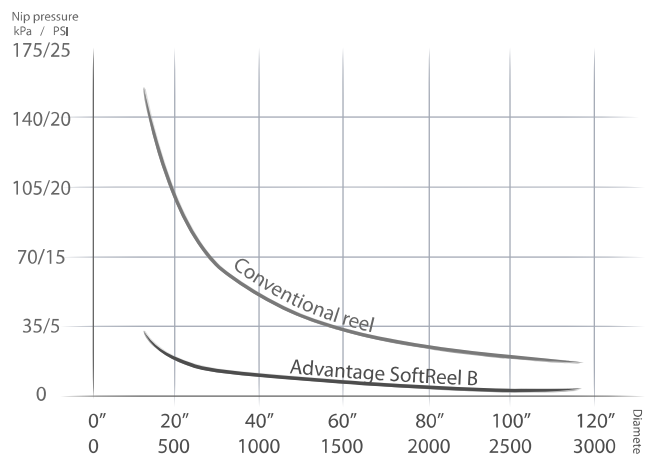
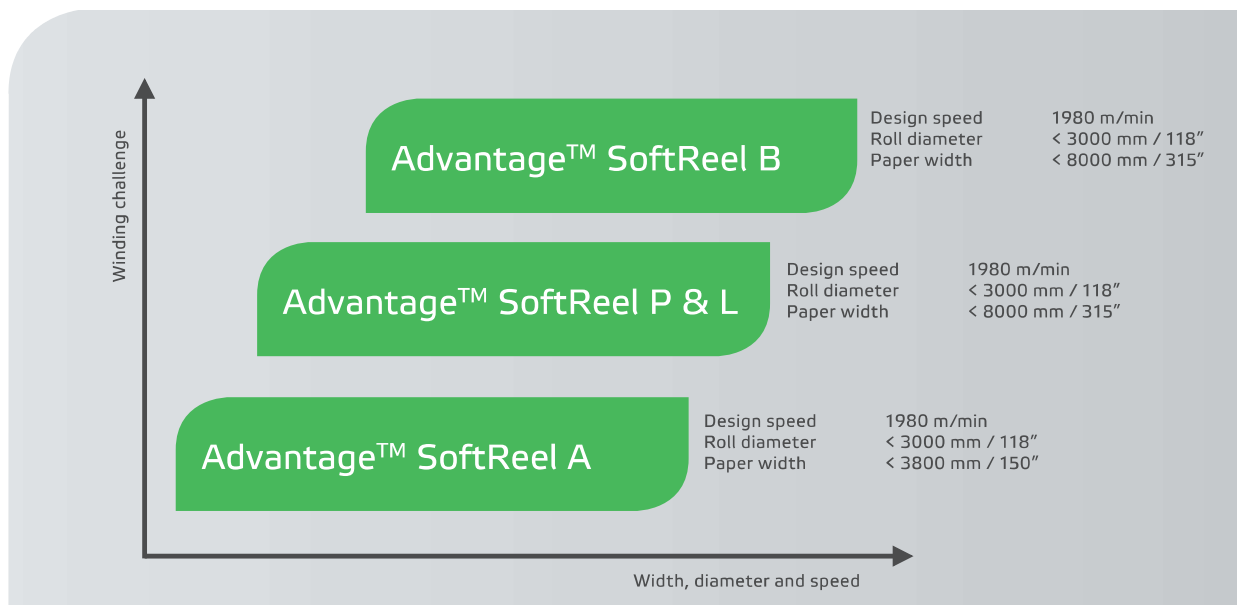


Figure 4

# Our range of Tissue Reels



## The global leader in tissue making

Over 150 years of experience within the pulp and paper industry has resulted in Valmet becoming the global leader in tissue making. We deliver the most production capacity with the largest installed base of tissue making machines worldwide. We strive to ensure that tissue quality, knowledge and process technology, as well as our wide scope of service, continue to drive mutual success.

Join us to become Best in Tissue!

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