Suction roll shells
Durability and optimal performance
Valmet suction roll shells provide efficient water removal, reliable web transfer and vibration-free runnability even in the most demanding process conditions.

**Long operational life through optimal design**

In paper machine operation, suction roll shells must resist aggressive white water chemicals and withstand heavy loads. Therefore, proper shell dimensioning and optimal material selection play a key role in guaranteeing a long, trouble-free operational life. Valmet uses low-carbon duplex stainless steel materials in most suction roll applications, providing both high corrosion fatigue strength and high corrosion resistance.

Optimal shell material and dimensions are selected based on detailed technical calculations, consideration of all loadings, the chemical environment and the effects of the shell drilling pattern. Regardless of the original roll supplier, Valmet provides the right solution with new suction roll shells for both new suction rolls and shell replacements.

### The Valmet suction roll shell advantage

- Decades of experience in suction roll design and manufacture
- Durability due to high quality materials and manufacturing
- Solutions for high process performance and sheet quality
- Reduced maintenance from wear resistant covers and smooth holes

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**Long-lasting for demanding process requirements**

The paper making process has been placing greater demands on suction roll shells over recent decades. This is where Valmet’s top-of-the-line suction roll shells shine, manufactured from the highest-quality stainless steel materials, designed to bring long life and take your mill to new heights of efficiency.

Over 4,000 shells delivered

- Diameter 0.5 m up to 2 m
- Length 1 m up to 12 m

Up to 1 million precision drilled holes

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**Diameter**

0.5 m up to 2 m

**Length**

1 m up to 12 m
Top quality shell blanks
Valmet uses state-of-the-art shell blanks to optimize the durability. The primary methods for producing shell blanks include:

- A traditional centrifugal casting method with shell blanks supplied by the Kubota Corporation, Japan.
- Plate manufacturing with shell blanks supplied by the Outokumpu Corporation in Sweden, a world-leading stainless steel company. The hot-rolling manufacturing method provides the steel shell with a fine microstructure and high mechanical strength properties.

Precision manufacturing
With decades of suction roll manufacturing experience, Valmet knows very well the special requirements of shell machining. We utilize standardized and audited manufacturing along with thorough inspection methods to reach the highest levels in quality.

Technological innovation boosts performance
Valmet’s suction roll shells are produced in a specialized manufacturing unit in close cooperation with the paper machine production facility. With a focus on R&D, Valmet continually develops new product innovations that can be tested on pilot paper machines to ensure optimized process performance.

Recent product innovations include forming suction rolls with a special groove pattern, patented by Valmet, which enable more uniform water flow from sheet to shell holes thus reducing the need for maintenance and improving sheet quality. And for couch suction rolls, optimized shell drilling patterns can improve sheet dryness by several percentage points.

Valmet also provides a versatile range of performance boosting suction roll covers. These include advanced polyurethane covers with superior wear and dewatering properties, hard coatings, and a wide selection of rubber covers. Whatever the suction roll, Valmet has you covered.
Valmet’s professionals around the world work close to our customers and are committed to moving our customers’ performance forward – every day.

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