

Advantage™ DCT Technology

One tissue making concept
for many possibilities

Valmet 

Conventional tissue with high quality in a cost-efficient way

The Advantage DCT technology concept combines tissue makers' needs with our extensive technical expertise and application know-how into one state-of-the-art tissue making line. It enables you to produce conventional tissues in cost- and energy-efficient ways by utilizing the Best Available Technology.

Main features



SUSTAINABILITY

The Advantage DCT technology provides low energy consumption with inventive technology and allows low freshwater consumption.



QUALITY

Offer a flexible product range for all conventional tissue from low to high basis weight. In combination with excellent basis weight and moisture profiles.

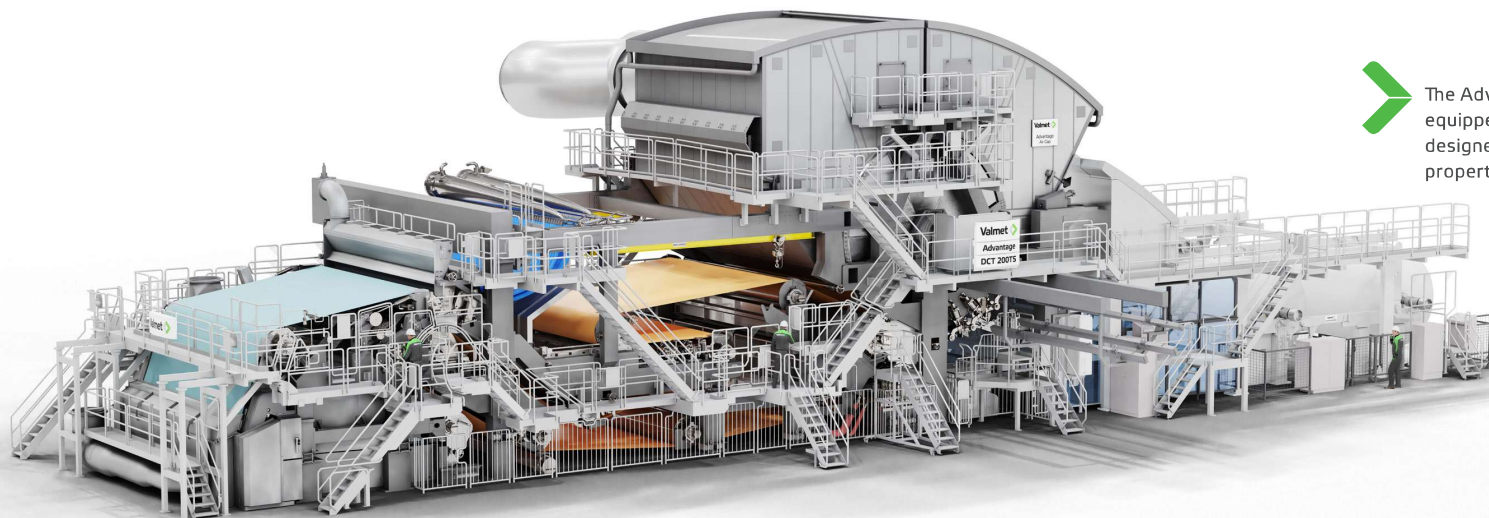


COST SAVINGS

With a cost efficient production a low total cost of each ton produced can be achieved. The Advantage DCT technology has a proven steep start up curves.



The Advantage DCT technology has become a world standard for production of conventional tissue paper.



The Advantage DCT forming section is equipped with an OptiFlo II TIS headbox designed to give superior base paper properties as well as energy savings

Optimal life cycle economy

The crucial features of Valmet tissue making lines providing optimal life cycle economy begins with a very efficient start-up by modularity. Moving on to efficient delivery and service support teams who are committed to keeping your lines in peak condition to maximize uptime. Our system reliability is confirmed by numerous examples where Valmet tissue making lines have a time efficiency of 96%.

New demands on quality

Higher purchasing power inevitably leads to consumers buying more and better products. From a tissue maker's viewpoint, satisfying the needs of new consumers while at the same time cutting production costs is a prime goal. With Valmet's innovative tissue making process, one can vary the parameters of bulk, softness, absorbency and strength in the same machine to provide the desired quality of tissue.

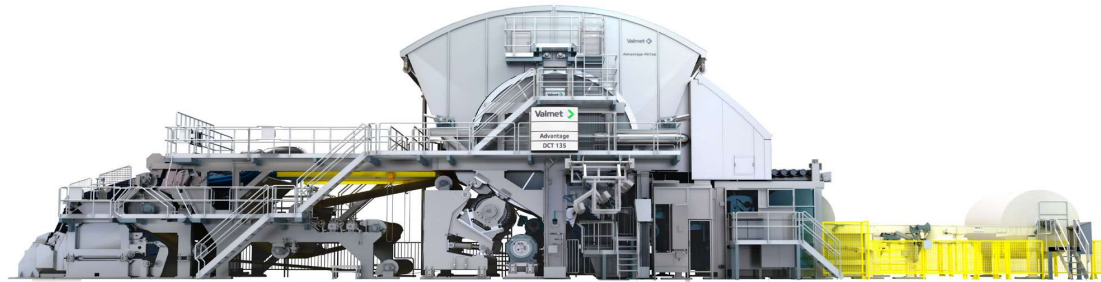
More importantly, high tissue quality can be maintained at lower fiber content by operating tissue machinery accordingly by utilizing the flexibility of the Advantage ViscoNip press, OptiFlow headbox, Advantage ReDry and Advantage AirCap Heli hood. These are key benefits as fiber accounts for more than 70% of production costs.

lower fiber content

time efficiency of 96%

➤ Several family members provide extensive production capacity

The Advantage DCT technology concept combines customer needs with our extensive technical experience and expertise into one world-class product. This concept together with several versions of this production line enables Valmet to offer cost- and energy efficient solutions covering a wide range of tissue types and production capacities.



Advantage DCT 100+

Paper sheet width: 2850 mm (112 inch)
Design speed: 1800 m/min
Yankee size: 16 feet
Headbox: OptiFlo II TIS 1830
Capacity: 106 tonnes/day*

Advantage DCT 100HS

Paper sheet width: 2850 mm (112 inch)
Design speed: 2000 m/min
Yankee size: 16 feet
Headbox: OptiFlo II TIS 2200
Capacity: 118 tonnes/day*

Advantage DCT 100 TS

Paper sheet width: 2850 mm (112 inch)
Design speed: 2200 m/min
Yankee size: 16/18 feet
Headbox: OptiFlo II TIS 2200
Capacity: 130 tonnes/day*

Advantage DCT 135+

Paper sheet width: 3800 mm (149.5 inch)
Design speed: 1800 m/min
Yankee size: 16 feet
Headbox: OptiFlo II TIS 1830
Capacity: 142 tonnes/day*

Advantage DCT 135 HS

Paper sheet width: 3800 mm (149.5 inch)
Design speed: 2000 m/min
Yankee size: 16 feet
Headbox: OptiFlo II TIS 2200
Capacity: 150 tonnes/day*

Advantage DCT 135 TS

Paper sheet width: 3800 mm (149.5 inch)
Design speed: 2200 m/min
Yankee size: 16/18 feet
Headbox: OptiFlo II TIS 2200
Capacity: 173 tonnes/day*

➤ Several family members provide extensive production capacity



Advantage DCT 200+

Paper sheet width: 5640 mm (222 inch)
Design speed: 1800 m/min
Yankee size: 18 feet
Headbox: OptiFlo II T1S 1830
Capacity: 210 tonnes/day*

Advantage DCT 200 HS

Paper sheet width: 5640 mm (222 inch)
Design speed: 2000 m/min
Yankee size: 18 feet
Headbox: OptiFlo II T1S 2200
Capacity: 222 tonnes/day*

Advantage DCT 200 TS

Paper sheet width: 5640 mm (222 inch)
Design speed: 2200 m/min
Yankee size: 18 feet
Headbox: OptiFlo II T1S 2200
Capacity: 257 tonnes/day*

Advantage DCT 300

Paper sheet width: 8020 mm (316 inch)
Design speed: 2200 m/min
Yankee size: 18 feet
Headbox: OptiFlo II T1S 2200
Capacity: 333 tonnes/day*



Forward to a carbon neutral future

Technology plays a key role in mitigating climate change and global warming in the transition to a carbon neutral economy. This is why Valmet has created an ambitious climate program – Forward to a carbon neutral future. Achieving zero carbon dioxide emissions is possible by eliminating or offsetting carbon dioxide emissions. The climate program includes ambitious CO2 emission reduction targets and concrete actions for the whole value chain, including the supply chain, our own operations, and customers' use of our technologies. These targets will be achieved without emission compensation. Sustainability plays a key role in the innovation process. With our research and technology development work, we aim to ensure an advanced and competitive offering of process technologies, automation and services for our current and future customers, enhance raw material efficiency, and promote the use of renewable raw materials.

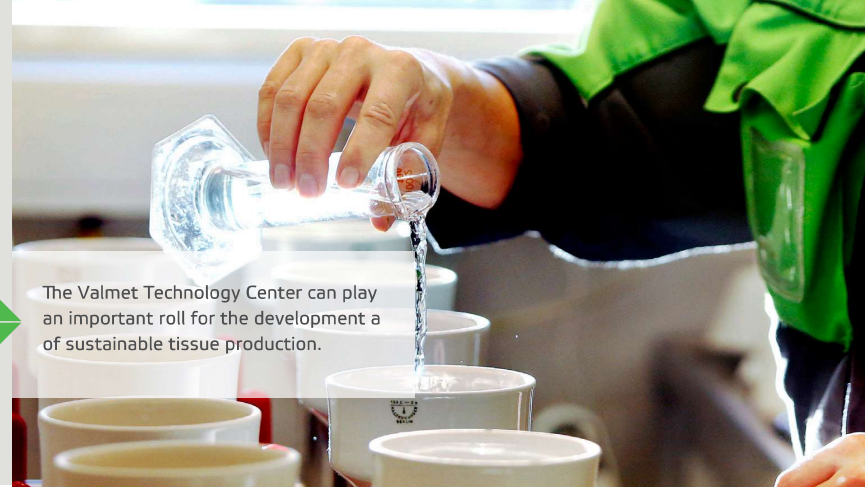
[Explore more](#)

A full-scale Technology Center for pilot

At Valmet Technology Center we can offer the opportunity to experiment and develop tissue products and processes without having to put your own production on hold. Should you want to minimize travelling we have the possibility to perform remote pilot trials where we can support you from a distance. In our facility in Karlstad, Sweden we have access to a full-sized, flexible pilot machines, a well-equipped and organized laboratory and a unique spectrum of expertise on tissue machines and manufacturing processes. Follow the activities in the trials through live streaming cameras broadcasted on a secured web page and take part of data without delay in common software tools. That's why there's no better environment in which to test your products and processes under strict confidentiality.

[Book your pilot trial today](#)

Achieving zero carbon dioxide emission



The Valmet Technology Center can play an important roll for the development a of sustainable tissue production.



Improve performance with data

Valmet Industrial Internet offering covers an extensive range of solutions and applications for tissue mills in order to optimize the full scope of the production. The data driven applications and services support you throughout all the phases of the tissue machine's lifecycle. As a start we normally explore the potential of utilizing data through a data discovery process. Then we can evaluate what applications within production capacity, quality, energy efficiency and reliability, are beneficial for your operation. Further, our expertise is easily available for you through the Valmet Performance Centers (VPC). Our specialists have a deep understanding of machinery, processes and automation and with connections and tools, we can offer the needed remote support and guidance without delay from our 8 centers around the worlds.

[Read more about our VII solutions](#)

Remote support without delay

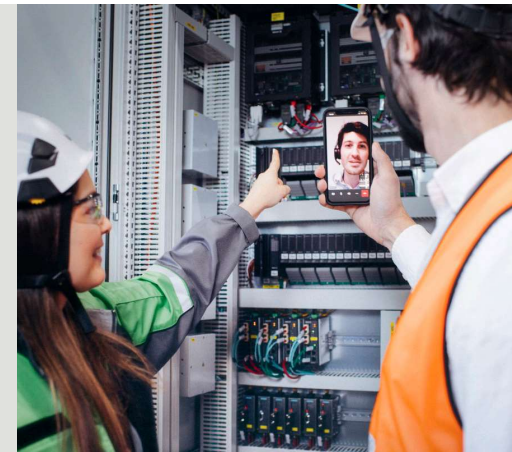
Tailored for stable and productive machine operation


Future automation solutions

As tissue manufacturers look for ways to improve process efficiency and business profitability, they are turning to intelligent automation solutions by Valmet. While automation accounts for just a fraction of the overall mill investment, optimized control ensures that an entire mill performs up to expectations and beyond. Valmet's tissue solutions are tailored for stable and productive machine operation.

Valmet's comprehensive tissue automation concept is designed in close cooperation with the process and machinery experts. Therefore, it addresses many challenges that tissuemakers have to face, such as dealing with the complex chemistry in tissue making, achieving better runnability and higher energy efficiency. Valmet's comprehensive but scalable automation solution is geared towards optimum productivity, energy efficiency, and product quality. Additional, experience has shown that by selecting a single source supplier a faster start-up curves are achieved.

[Explore more about our automation solutions](#)



 Valmet Performance Center and the various automation solutions Valmet can provide are instrumental to enhance your tissue production.

The latest technology for the best production conditions

To ensure you get the best out of your tissue making solution throughout its life cycle, Valmet provides a range of services to help keep machinery in peak condition.

Paper industry in general and particularly the Tissue production process are energy demanding both in terms of thermal and electrical energy. Therefore, the possibility to reduce the energy consumption is one of the sources of inspiration to develop new products interesting for this field

Superior base paper properties

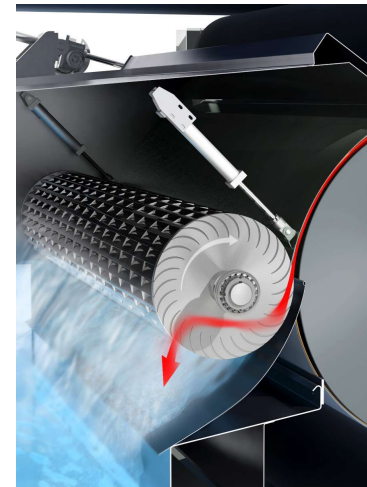
Valmet's headbox family, OptiFlo II TIS, is based on an optimized turbulence generator and improved nozzle geometry. Its design gives superior base paper properties. Improved paper formation can be used to reduce headbox flow by up to 20%. This gives an energy savings potential of 40-60 kWh/ton paper depending on machine speed for certain grades. OptiFlo II TIS is available in four versions designed for operating speeds from 1300 m/min to 2 200 m/min.

ReTurne

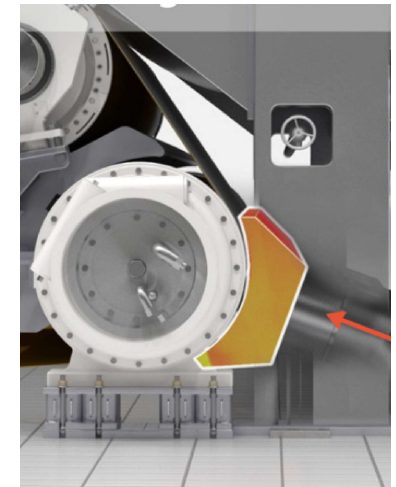
Valmet Advantage ReTurne is an energy recovery system by recover as much as possible of the kinetic energy of the drainage water coming from the headbox. Doing so by collecting the drainage water on one guide plate and guiding the water into a turbine. Turbine is connected to a generator that produces electricity which is fed back to the sectional drives and thereby lowers the consumption of electrical power for the drives of the tissue machine.

ReDry

Valmet Advantage ReDry is a product designed to improve energy efficiency by exploit the hood exhaust air, still rich in energy after the air to air heat exchanger which then is only partly recovered. This use improves the machine general energy efficiency, while reducing emissions into the atmosphere. The Advantage ReDry increases the web temperature to enable higher post press roll consistency.



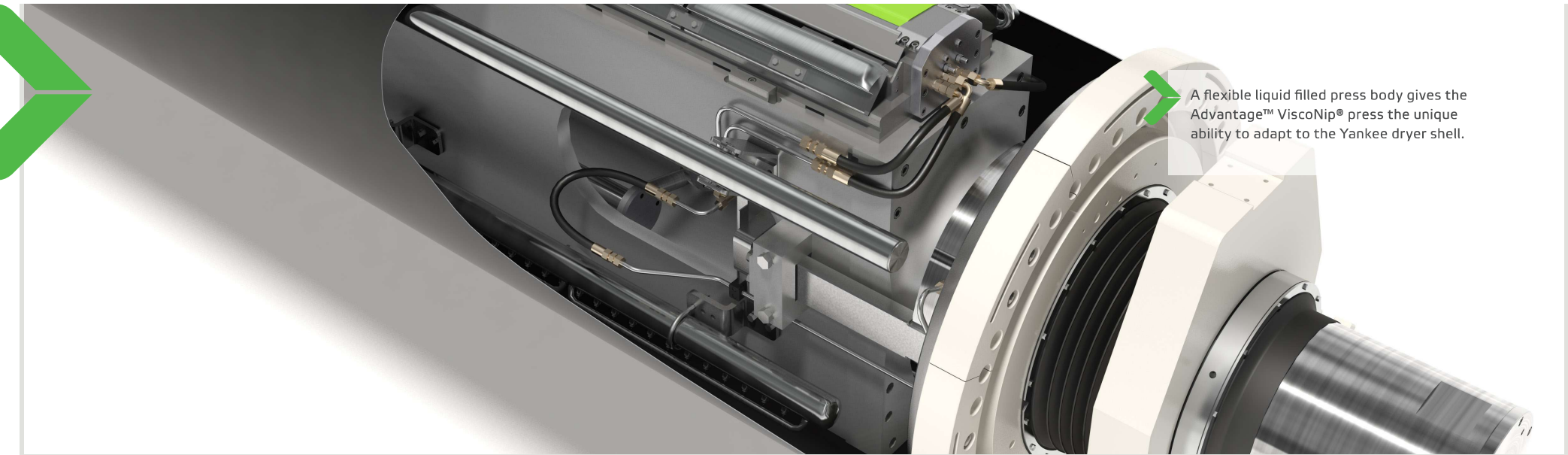
The Advantage ReTurne energy recovery system is an efficient energy equipment for the tissue making process.



Valmet Advantage ReDry is designed to improve energy efficiency.



One of the most critical components on a tissue machine is the headbox



A flexible liquid filled press body gives the Advantage™ ViscoNip® press the unique ability to adapt to the Yankee dryer shell.

Higher press dryness means less energy

The Advantage ViscoNip press delivers a uniform cross-direction and high peak pressure to increase tissue sheet dryness and reduce energy consumption. Operators can vary the pressure and customize the pressure curve that best fulfills product quality or higher dryness specifications. By increasing dryness 7% the drying energy consumption can be cut by more than 25%. The bulk achieved with the Advantage ViscoNip press is higher compared with a suction press roll.

Fiber savings of up to 10% are possible if you choose to operate for higher bulk. The extremely flat CD dryness profile across the sheet not only improves the runability through the press but also through the rest of the machine. The final product quality is also enhanced by the flatter dryness profile.

[Learn more!](#)

25% energy savings can be achieved at high linear load



Yankee high performance

Our Yankee Dryer works as a press roll, dries the tissue sheets and provides the surface for the creping process. . With Yankee head insulation, you will save steam equivalent of up to 80kWh/ton. In addition, the Advantage AirCap Yankee hood offer even drying with a high capacity. As you would expect from Valmet, our Yankee Dryer meets the extremely high demands of quality, performance and safety. Such accuracy and precision are found with all Valmet components. This, combined with factory assembly and testing, minimizes machine vibration to prevent running noise and prolong the lifetime of machine parts.

We believe in providing the ability to choose, and therefore we offer both steel and cast-iron Yankee cylinders. And we are the only manufacturer that can do so.

Advance reeling technology

The Advantage SoftReel is fully automated and highly reliable even at really high speeds. It assures uniform paper quality throughout the roll and provides greater efficiency as it allows larger rolls and less reject at roll changes. The automated process does not normally require any manual roll handling. Web breaks are rare and maintenance costs minimal.

Excellent dust control

Valmet's dust control concept for all Advantage technologies captures dust where it is created to minimize the risk of fire, provide a healthy work environment and reduce manual cleaning.

[Casted or Steel?
Compare the advantages](#)

➤ Complete mill solutions

When running a project, it's not uncommon to questioning the capability to cover all the needs that might arise. With Valmet, you simply have one selected partner to discuss product related issues with. And the aim is always to deliver the best end results.



Full scope project management

Valmet's standard offering includes coordination of engineering and procurement, manufacturing and pre-assembly, shipping and installation supervision as well as commissioning and start-up. In the extended scope, we also take care of the total project coordination for the complete tissue mill. Given the long experience our customers can feel confident in the way we take on each individual project regardless of size or complexity.



Learning services to enhance productivity

Keeping machines and equipment in good shape is crucial, but it's impossible to achieve this without competent and committed people. With our training programs, the skill level of your machine operators is maximized. Training simulators are useful tools for operators and other mill staff. These highly realistic simulators play vital roles in ensuring successful start-ups and efficient long-term operation of key process and machine modules.



Safety an everyday mindset

Safe working environment and products are essential and considered in every step of Valmet's technology development. All our products and technologies fulfill safety regulations according to requirements in the European directives as well as other specific regulations or requirements agreed with our customers. We provide solutions to establish a safe and healthy working environment that can avoid accidents, improve efficiency and reduce costs.



Sustainability

Valmet believes that technology plays a key role in mitigating climate change and global warming in the transition to a carbon neutral economy. Our climate program includes ambitious CO2 emission reduction targets and concrete actions for the whole value chain, including the supply chain, our own operations, and customers' use of our technologies. These targets will be achieved without emission compensation.

The global leader in tissue making

Valmet is constantly developing product offerings and can present a wide range from small and medium sized machines to large and fast machines as well as re-builds, service and automation.

With our industrial internet solutions, we provide support through the Valmet Performance Centers. The Tissue Technology Center is a unique resource for cultivating and realization of ideas, innovations and verifying new technology or machine configurations.

Over 150 years of experience within the pulp and paper industry has resulted in Valmet becoming the global leader in tissue making.

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