
GOOD WIPES GO BACK TO WHERE THEY COME FROM
Advanced technologies for innovative, eco-friendly wipes
ANDRITZ

VARIOUS APPLICATIONS
Wide range of bio-based wipes from 100% sustainable fibers:
- Moist toilet tissue (MTT)
- Baby wipes
- Cleaning wipes
- Dispersible wipes
- Disinfection wipes
- Household wipes
- Dry wipes
- Napkins
- Premium tissue

A SHARED RESPONSIBILITY ACROSS THE INDUSTRY

Sustainability in wipes production is not the responsibility of machinery suppliers alone. It requires collaboration across the entire value chain, including raw material suppliers, roll goods producers, converters, retailers, and ultimately end users.

Industry-wide initiatives and partnerships play a crucial role in raising awareness and driving behavioral change. By working together, the industry can accelerate the development of sustainable production technologies and actively contribute to a greener environment and a more sustainable future.

Invest in the future and a greener environment

The global wipes market continues to grow steadily. This development is driven by a strong global economy, rising living standards, and ongoing product innovation. At the same time, increasing awareness of environmental challenges, particularly plastic pollution, has become a central topic across the industry.

MARKET SITUATION AND OUR MOTIVATION

Growing environmental concerns, combined with stricter regulations from governments and industry associations, are accelerating the transition toward fully bio-based and plastic-free wipes. In response, we are continuously advancing innovative production technologies that enable high-performance wipes made entirely from natural and renewable raw materials.

UNLOCK THE POWER OF NATURAL FIBERS

A key advantage lies in the use of fiber blends such as wood pulp, short-cut cellulosic fibers, viscose, cotton, hemp, bamboo, or linen. When processed without chemical additives, these materials make it possible to produce 100% sustainable fabrics, meeting both customer expectations and the global shift away from plastics and synthetic components.

A SINGLE SOURCE FOR YOUR PRODUCTION EQUIPMENT

As the only supplier offering complete production lines for bio-based wipes from a single source, we provide fully integrated, reliable, and flexible solutions.

Our system supply covers the entire process chain, from stock preparation, opening, and blending, web forming to bonding and drying. This end-to-end approach ensures perfectly harmonized components and optimal process performance, backed by comprehensive know-how and proven expertise.

High-value with neXline spunlace

ANDRITZ is an active player in most of the world's spunlace production. In order to meet the market demands, ANDRITZ offers you a wide range of complete spunlace lines combining performance, efficiency, and profitability especially designed for bio-based wipes.

The ANDRITZ neXline spunlace line is the premium line layout, combining very high capacity with low energy consumption, and able to produce all types of spunlace roll goods. For bio-based wipes, you can use cellulosic-based and natural raw materials such as viscose, lyocell, bamboo, hemp, or cotton. This creates a high-value wipe providing top performance.

Softness, drape, comfort, conformability, high strength, and the fact that they contain no chemicals are the major characteristics of spunlace nonwovens.

HIGH-EFFICIENCY PROCESS

As a result of our unique experience in the spunlace industry and processing of natural fibers, we offer cards from very delicate to powerful performance, optimized Jetlace hydroentanglement units, and high-efficiency dryers. All components challenge the usual productivity limits perfectly when processing these fibers.

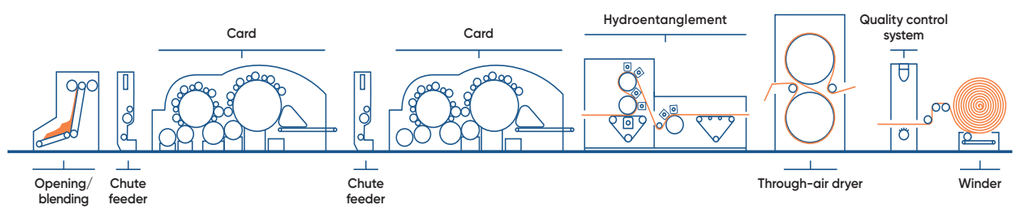
Moreover, we have developed our own technology for water filtration and dedicated to applications using natural fibers. This technology is a fully integrated part of the spunlace process.

Hydroentanglement is a sustainable bonding method that achieves perfect results without any need for chemicals, also for other processes like Wetlace™, carded-pulp or carded-airlaid lines.

UPGRADE YOUR SPUNLACE LINE TO UNLOCK NEW FLEXIBILITY

Rising demand for sustainable, high-performance wipes requires versatile production. With ANDRITZ upgrades, you can expand into bio-wipes, composites, and stronger materials—while minimizing downtime and space requirements.

Two smart upgrade options extend your capabilities: integrate a compact airlaid unit to create a carded-airlaid-carded line with minimal modifications, or add an unwinder to enhance strength and enable multi-layer composites. Our experts support you in selecting the right upgrade to future-proof your production.

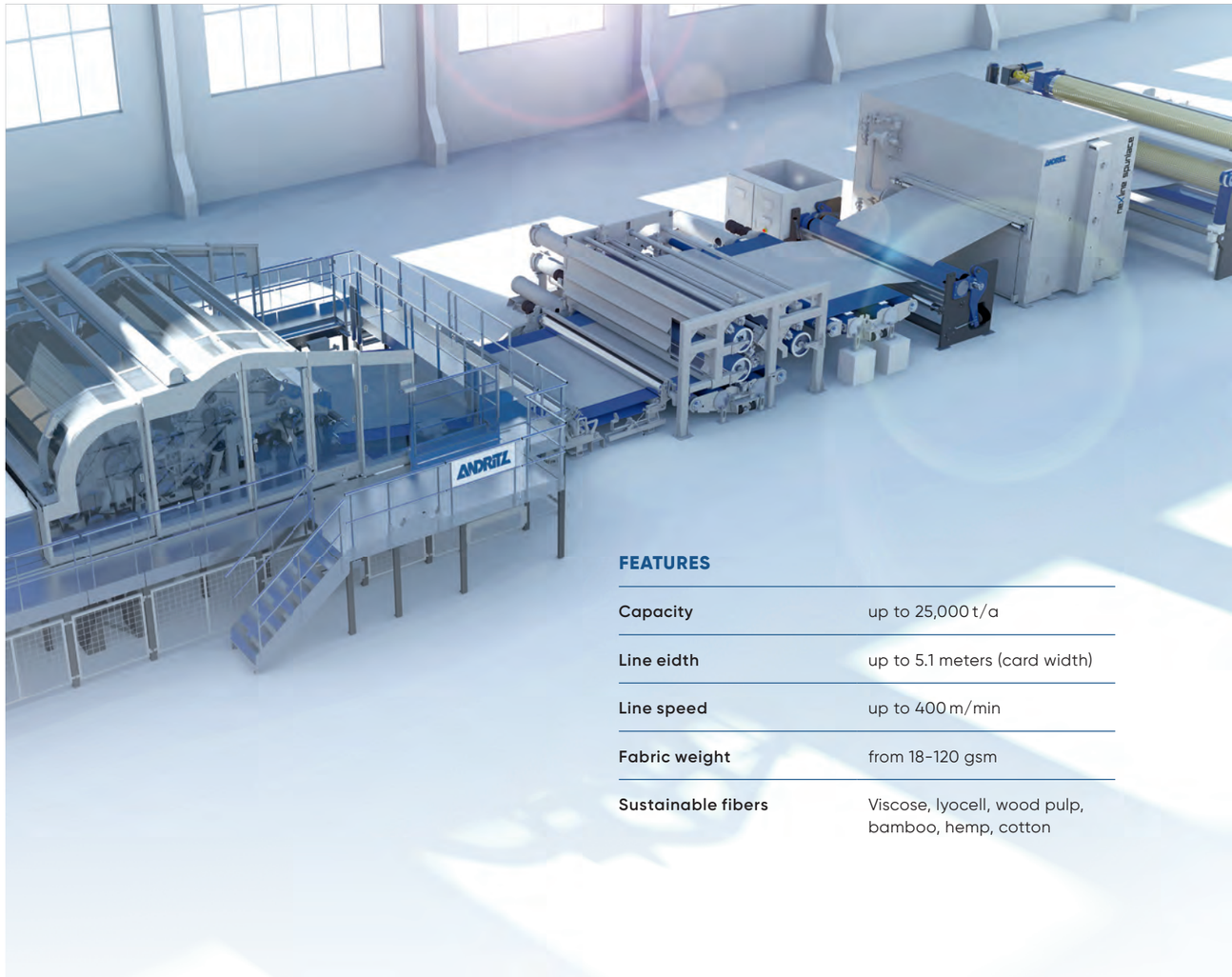


ANDRITZ neXline spunlace for the production of high-value natural wipes

LINE SOLUTIONS

BENEFITS

- Supports sustainable wipe production by enabling 100% bio-based or recycled fiber usage, replacing synthetic PP/PET.
- Stable, high quality web formation supported by advanced ANDRITZ process expertise.
- Versatile for multiple wipe segments, from personal care to household and medical.
- ANDRITZ offers a wide range of wipes technologies and high exterise in this field
- Upgrade options for more flexibility in wipes production



FEATURES

Capacity	up to 25,000 t/a
Line eidth	up to 5.1 meters (card width)
Line speed	up to 400 m/min
Fabric weight	from 18-120 gsm
Sustainable fibers	Viscose, lyocell, wood pulp, bamboo, hemp, cotton

Dispersibility with neXline wetlace

The rising threat of plastic pollution, sewage system blockages, and stricter regulations from the government and trade associations propelled us to search for the ideal production technology for fully dispersible, bio-based and plastic-free wet wipes. At ANDRITZ, we deliver the answer.

State-of-the-art moist toilet tissue wipes (MTT) are made from fully biodegradable fibers, have adequate strength while in use, and then disperse quickly in municipal sewage systems. The response to these requirements is the ANDRITZ Wetlace™ process.

WOOD PULP – THE IDEAL RAW MATERIAL FOR SUSTAINABLE WIPES

We have great expertise in processing pulp as a raw material. With decades of comprehensive R&D and a large installed base of pulp production lines, we can safely say that pulp is part of the DNA of ANDRITZ.

In addition, wood pulp is more cost-efficient than viscose or other natural fibers and perfect for dispersing in water due to the shorter fibers it contains.

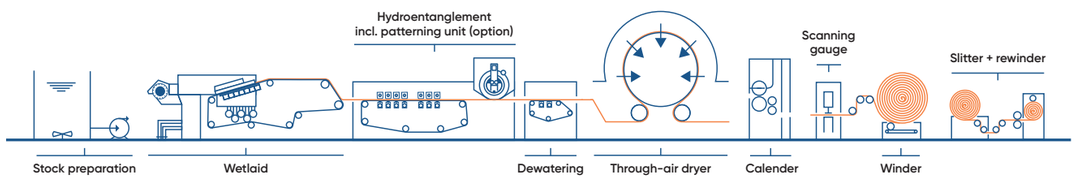
CHALLENGES OF DESIGNING TRUE FUSHABLE AND DISPERSABLE WIPES

These wipes must have excellent tensile strength because they are pulled through the different stages of production, wetted and packed during the conversion process, and the end-user expects to have a wipe that doesn't disintegrate before or during use.

Once flushed, however, this stability has to disappear entirely so that the product will virtually dissolve in the sewage water system. Finally, the fibers needs to be biodegradable, which means that they do not harm the environment.

BENEFITS

- **Developed by ANDRITZ: Backed by decades of nonwoven expertise**
- **Fully customized lines: Tailored to each producer's needs meeting the highest sustainability and performance targets**
- **Upgrades & rebuilds: Enhanced capacity and quality improvements**
- **End-to-end support: From consulting and engineering to commissioning and lifecycle service**
- **Compliance with EDANA/INDA flushability tests**



ANDRITZ neXline wetlace for the production of dispersible wipes

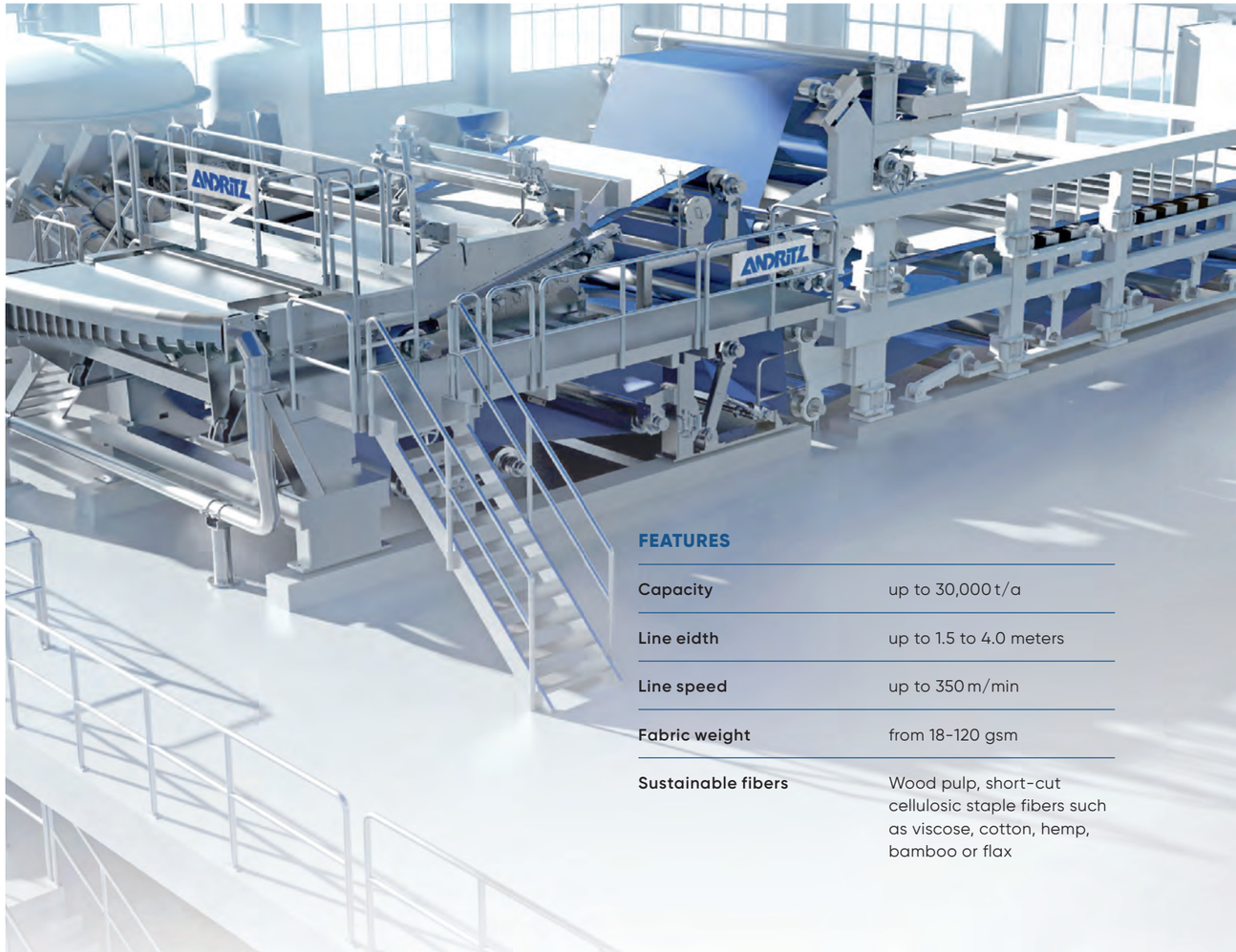
LINE SOLUTIONS

Flushability test at ANDRITZ technical center in Krefeld, Germany

THE SECRET BEHIND

The main impact comes from the fiber blend of wood pulp and man-made cellulosic fibers, web forming on the inclined wire, and mechanical bonding by the hydroentanglement unit.

Wetlaid forming is perfect in terms of achieving excellent web uniformity and product quality. Hydroentanglement ideally complements the wetlaid technology by entangling the fibers without any chemical binders or thermoplastic fibers.



FEATURES

Capacity	up to 30,000 t/a
Line eidth	up to 1.5 to 4.0 meters
Line speed	up to 350 m/min
Fabric weight	from 18-120 gsm
Sustainable fibers	Wood pulp, short-cut cellulosic staple fibers such as viscose, cotton, hemp, bamboo or flax

Powerful absorbtion with neXline wetlace hybrid

With the ANDRITZ Wetlace™ hybrid line in carded-pulp configuration, manufacturers benefit from a flexible, future ready technology platform that supports the shift to eco friendly wipes. The process delivers outstanding material quality for personal care and industrial applications - gentle, effective, and designed to protect what matters most: you and the environment.

THE CARDED-PULP (CP) PROCESS

We deliver fully engineered CP lines, combining wetlaid and drylaid technologies with hydroentanglement to create unique, high-performance nonwovens.

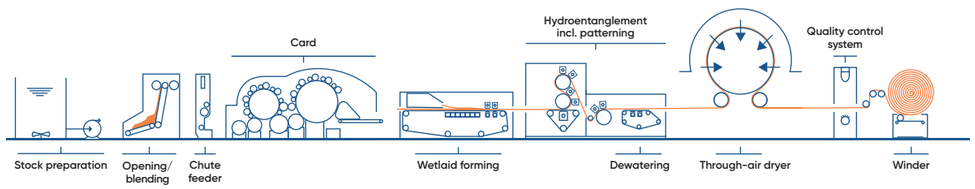
The scope includes state-of-the-art stock preparation, opening and blending, carding with chute feed, wetlaid forming, hydroentanglement (with optional patterning), filtration, dewatering, through-air drying, and end-of-line equipment, perfectly integrated to produce high-quality, two-layer bio-based wipes.

This set-up enables efficient processing of natural fibers such as wood pulp and viscose, resulting in stable production, consistent quality, and plastic-free wipes tailored to current and future sustainability demands.

A HEADBOX ESPECIALLY DESIGNED FOR THE CARDED-PULP PROCESS

To achieve the highest quality in sustainable carded-pulp wipe production, ANDRITZ has developed a tailor-made headbox designed precisely for the demands of the carded-pulp configuration. Its compact construction, combined with exceptional distribution and flow control, ensures consistently accurate web formation and spot on performance throughout the Wetlace™ hybrid process.

The result: reliable, efficient production of next generation eco-friendly wipes with outstanding material quality.

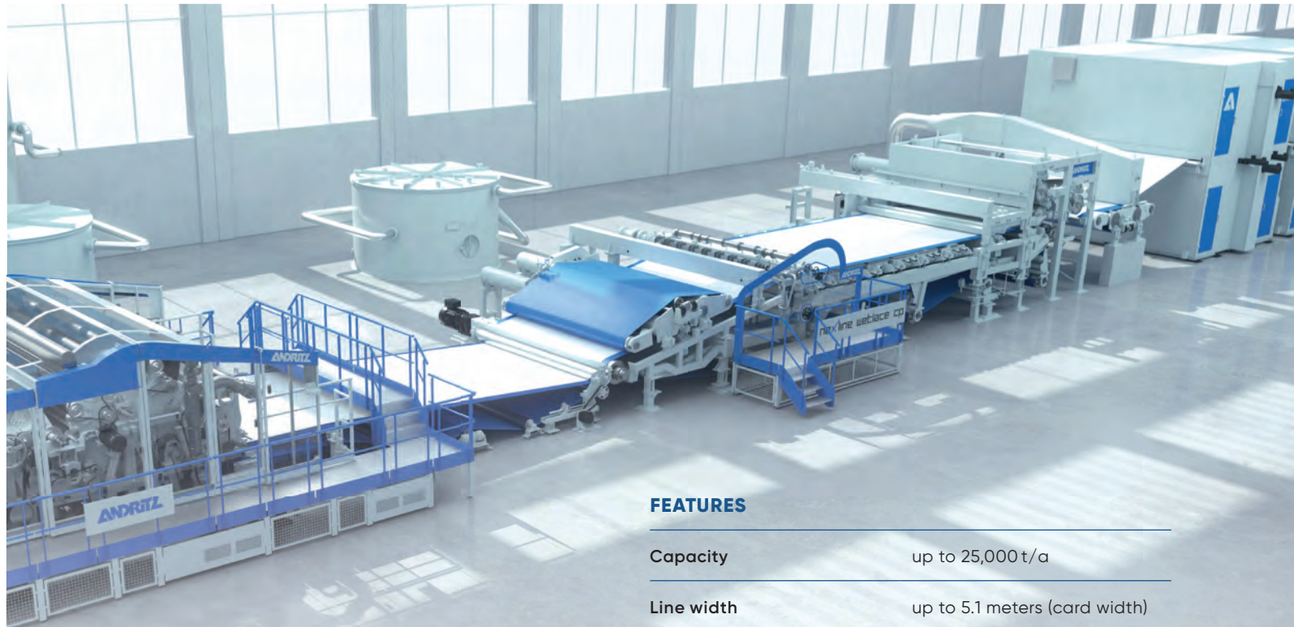


ANDRITZ neXline wetlace hybrid for carded-pulp wipes

LINE SOLUTIONS

BENEFITS

- One-stop solution by ANDRITZ – fully integrated technologies from a single source
- Advanced TT card & unique carded-pulp process for superior web formation
- High-capacity production with excellent dewatering and efficient drying
- Energy-saving systems and optimized performance through digitalization
- Expertise in filtration and fiber processing
- High absorbency driven by optimized pulp content
- 100% plastic-free and biodegradable material solutions
- Outstanding wet strength and durability for reliable performance
- Smooth processing of natural fibers such as wood pulp and viscose
- Cost-efficient production without compromising quality or sustainability



FEATURES

Capacity	up to 25,000 t/a
Line width	up to 5.1 meters (card width)
Line speed	up to 350 m/min
Fabric weight	from 18-120 gsm
Sustainable fibers	Wood pulp and other cellulosic (staple) fiber

Highest flexibility with neXline wetlace hybrid pro

This line unites the proven strengths of Wetlace™ and spunlace technologies to create the most versatile, future focused solution for sustainable wipe manufacturing. It enables producers to combine multiple web structures, such as pulp layers with various nonwoven types or short fibers with long fibers, offering unmatched flexibility and performance.

MAXIMUM FLEXIBILITY

The ANDRITZ neXline wetlace hybrid pro offers outstanding versatility. It can be operated as a full spunlace line for classical or natural fiber wipes, as a Wetlace™ line for flushable products, or as a hybrid configuration combining multiple nonwoven layers. This flexibility enables producers to meet today's requirements while staying prepared for future market needs.

THE NEXFORMER – CORE OF WETLAID TECHNOLOGY

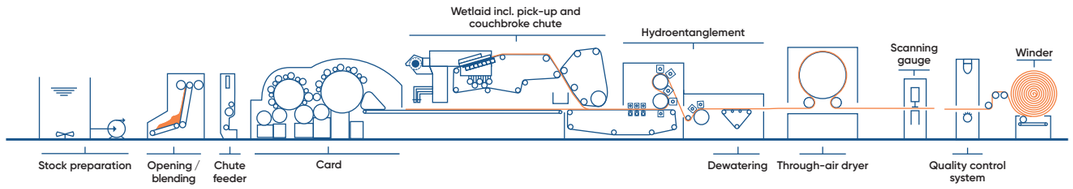
The neXformer is the central forming unit in all Wetlace™ solutions. It creates a uniform web on an inclined wire by evenly distributing a controlled blend of natural fibers, such as wood pulp and cellulosic fibers.

This ensures excellent fiber dispersion, stable water flow, and consistent web formation, resulting in high uniformity and product quality. The inclined wire design is especially suited for sustainable, dispersible, and biodegradable nonwovens.

THE TT CARD – FLAGSHIP PERFORMANCE IN DRYLAID TECHNOLOGY

The ANDRITZ TT card sets a benchmark in drylaid fiber processing. Designed for wipe production, it delivers high-speed output (up to 300 m/min), excellent web uniformity, and a low MD:CD ratio.

Its user-friendly design allows easy maintenance and service access. Engineered for spunlace processes, the TT card ensures efficient, high-quality production and perfectly complements the Wetlace™ hybrid pro system.

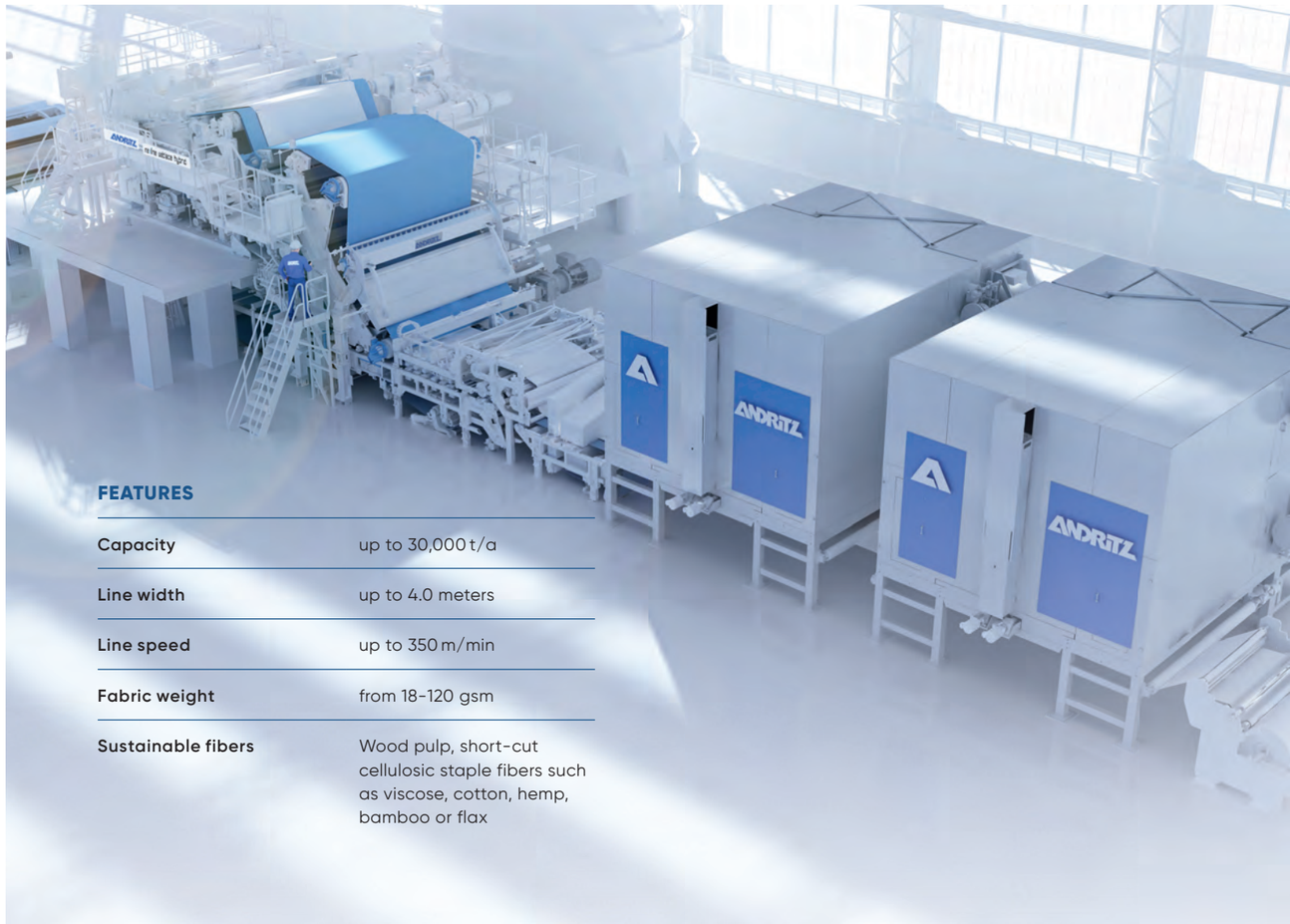


ANDRITZ neXline wetlace hybrid pro for full flexibility in bio-based wipes

LINE SOLUTIONS

BENEFITS

- Maximum flexibility across Wetlace™, spunlace, and hybrid configurations
- State-of-the-art technology built on industry-proven processes
- Outstanding web uniformity across all product types
- Each line fully tailored to customer requirements
- Compliance with EDANA/INDA flushability tests
- Expert support from ANDRITZ specialists



FEATURES

Capacity	up to 30,000 t/a
Line width	up to 4.0 meters
Line speed	up to 350 m/min
Fabric weight	from 18–120 gsm
Sustainable fibers	Wood pulp, short-cut cellulosic staple fibers such as viscose, cotton, hemp, bamboo or flax

Softness and purity with neXline airlace lines

The ANDRITZ neXline airlace lines combine two powerful nonwoven processes: airlaid and hydroentanglement. ANDRITZ's airlace systems leverage decades of expertise in airlaid web forming, defibration, drying technology, and recycling to create highly uniform webs from pulp and other natural fibers.

THE ANDRITZ AIRLACE™ PROCESS

Once the airlaid web is formed, hydroentanglement mechanically bonds the fibers using pure water – no chemical binders required. This creates an exceptionally soft, textile like surface and enhances strength while keeping the material fully biodegradable. The same binder free bonding principle is verified in existing airlace content, where hydroentanglement produces soft, absorbent, biodegradable wipes.

FEATURES: neXline airlace

Capacity	up to 25,000 t/a
Line width	up to 4.8 meters
Line speed	up to 350 m/min
Fabric weight	from 18-120 gsm
Sustainable fibers	Wood pulp and other cellulosic (staple) fiber

BENEFITS

- 100% bio-based fiber compatibility, including viscose, lyocell, and pulp.
- Plastic-free composite structure, supporting sustainability and regulatory compliance
- Exceptional softness thanks to outer carded layers
- High-absorbency and bulkiness from the airlaid pulp core.
- High strength and durability due to the carded-airlaid-carded three layer composite
- Versatile end uses: premium baby wipes, cosmetic wipes, hygiene wipes, household wipes, and personal care applications.
- Proven ANDRITZ Airlace™ expertise, including pulp processing, hydroentanglement, drying, and production waste recycling.

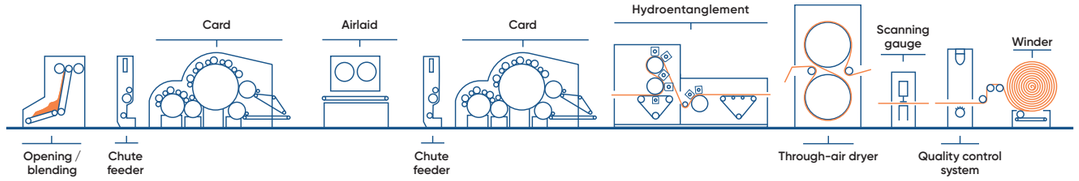
THE CARDED-AIRLAID-CARDED (CAC) PROCESS

The ANDRITZ neXline airlace hybrid represents the next generation of sustainable wipe production. Designed for bio-based, plastic-free materials, it combines carding, airlaid, and hydroentanglement in one efficient line, using only natural fibers and water jet bonding to produce soft, strong, and compostable wipes.

The line features a three-layer structure: two carded outer layers (e.g. viscose or lyocell) provide softness and strength, while the airlaid pulp core ensures high absorbency and bulk. ANDRITZ expertise in airlaid forming guarantees a stable and homogeneous pulp layer, ideal for premium hygiene and personal care applications. All layers are bonded by hydroentanglement without chemical binders, ensuring durability, softness, and full biodegradability.

FEATURES: neXline airlace hybrid (CAC)

Capacity	up to 25,000 t/a
Line width	up to 4.8 meters
Line speed	up to 350 m/min
Fabric weight	from 18-120 gsm
Sustainable fibers	Wood pulp and other cellulosic (staple) fiber

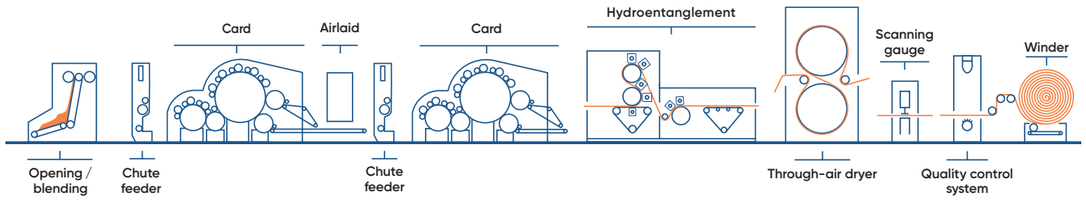


ANDRITZ neXline airlace hybrid line including airlaid forming unit, carding and hydroentanglement

UPGRADE YOUR CONVENTIONAL SPUNLACE LINE AND ADD A COMPACT AIRLAID FORMING UNIT

With ANDRITZ upgrade solutions, producers can enhance the capabilities of your existing spunlace line while keeping downtime and space requirements to a minimum. Our solution empowers you to expand your portfolio into bio-wipes, premium composites, and higher strength materials – all without compromising productivity.

The airlaid forming unit is specifically engineered to integrate smoothly into both direct and crosslapped spunlace lines. It offers a compact footprint, smooth and fast upgrade process. The additional airlaid layer opens up new possibilities in production and thanks to the fiber encapsulation low linting of the fibers. This makes it ideal for the converting process.



Your upgrade option: ANDRITZ neXline airlace hybrid line including compact airlaid forming unit

Resource management

Water and fiber treatment are critical tasks that must be resolved. The right water recycling and recirculating solutions are essential if you want to reduce your energy costs.

WATER MANAGEMENT

ANDRITZ water filtration systems help you comply with the regulations on water recycling while minimizing the amount of waste water produced. The entire water recirculation solution targets less fresh water consumption using only a limited amount of chemicals.

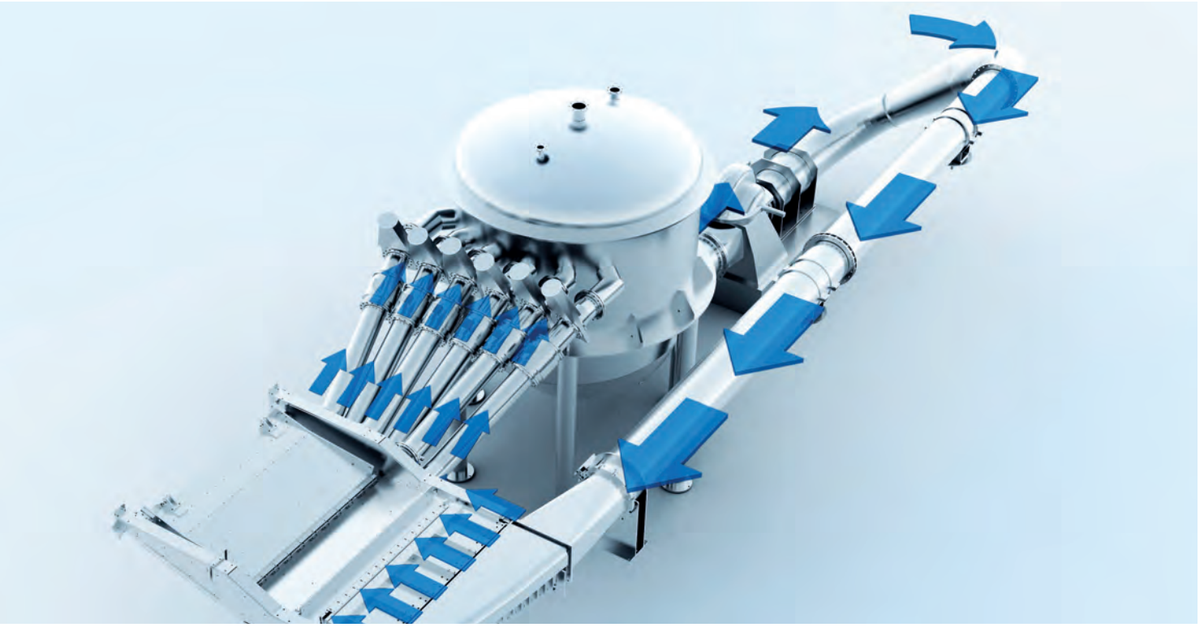
FIBER MANAGEMENT

Whether renewable, man-made, other natural fibers, tehy all can be used to produce sustainable wipes. You need professional fiber management with this great variety and large amount. Fibers can account for a substantial part of your production costs.

The ANDRITZ edge trim recycling solution makes a positive impact on your operating margins by recovering waste. Focussing on raw material savings and waste recovery adds up to a significant return on your investment.

ENERGY EFFICIENCY

Make remarkable reductions in the energy consumption of your production lines by combining dewatering and drying. Vacuum extraction together with dryer/exhaust heat circulation and recovery are key elements here. Processes requiring far less energy translate into cost efficiency.



Water cycle within the wetlaid process

Jute

Cotton linters

Pulp fibers

Coconut

Hemp

Viscose

Break new ground with ANDRITZ technical centers

Continuous research and development targeting your needs in an ever more demanding market. Create innovations and experience new products at our technical centers for wetlaid and spunlace processes. Our skilled process and product experts are happy to provide the necessary support.

FIRST TEST, THEN INVEST

Conduct trials in our technical centers before making an investment. We offer you the opportunity to test process and product parameters on our wetlaid and spunlace pilot lines or even create completely new products. This will help you to get the most out of your investment.

OPTIMIZE PROCESSES AND PRODUCTS

Being dedicated to high quality and innovative production technologies propels us to seek ideal solutions – perfectly suited to our customers' needs. We analyse your processes and products together with you and develop their potential for optimization.

EXPERIENCE NEW PRODUCTS

Test your new developments on our state-of-the-art wetlaid and spunlace lines. It is the perfect opportunity to experience new products that will enable you to access different markets.

BENEFIT FROM COMPREHENSIVE TRAINING

Seize the opportunity to join our product and process training sessions. Our experienced staff provide the best and unique know-how drawn from our installed base and continuous R&D. Learn how fibers become fabrics, develop your own products, and find out the latest news on the different processes.

Wetlaid pilot line at the technical center in Krefeld, Germany

GET THE MOST OUT OF YOUR INVESTMENT

At ANDRITZ Nonwoven & Textile we know that your business depends on satisfied customers and efficient processes. That's why we support you in every aspect of your nonwoven production. Take advantage of technology that lets you produce consistent quality for decades to come. Profit from the highly efficient use of energy and raw materials that our production provides. You can rely on our responsive service teams who will protect your investment and optimize your processes. Experience how innovative approaches and digital services give you more control than ever before. With ANDRITZ, the leading supplier for the nonwovens market, you get the most out of your investment.

GERMANY
ANDRITZ Küsters GmbH
Krefeld, Germany
p: +49 2151 34 0
kuesters@andritz.com

FRANCE
ANDRITZ FRANCE SAS
Montbonnot, France
p: +33 4 76 52 23 11
andritz-france@andritz.com

ANDRITZ FRANCE SAS
Elbeuf, France
p: +33 2 32 96 42 42
andritz-france@andritz.com

CHINA
ANDRITZ (China) Ltd.
Wuxi branch office
Wuxi, P.R. China
p: +86 510 8536 1269
nonwoven-china@andritz.com

INDIA
ANDRITZ Technologies Pvt. Ltd.
Chennai, India
p: +91 44 4293 9393
nonwovenservice.india@andritz.com

ITALY
ANDRITZ Diatec S.r.l.
Collecorvino, Italy
p: +39 085 82060-1
diatec@andritz.com

USA
ANDRITZ Inc.
Spartanburg, USA
p: +1 864 587 4848
nonwoven-americas@andritz.com

ANDRITZ.COM/BIOWIPES

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