NONWOVEN

BE ON TOP OF THE SPUNLAID RACE

FOR YEARS TO COME

ANDRITZ

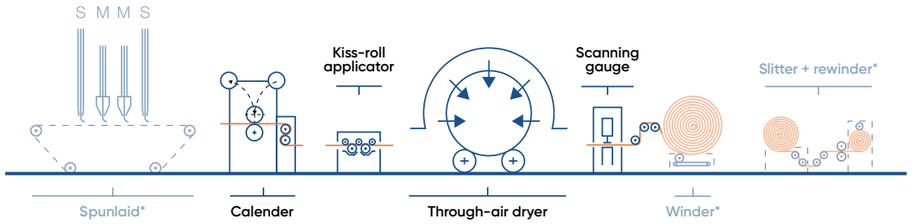
ENGINEERED SUCCESS

Line configurations

Spunlaid solutions tailored to your needs: Our portfolio for the spunlaid market ranges from calenders and spunjet equipment to finishing solutions, dryers, and needlelooms. You can produce the exact fabric characteristics you need with our superior technologies.

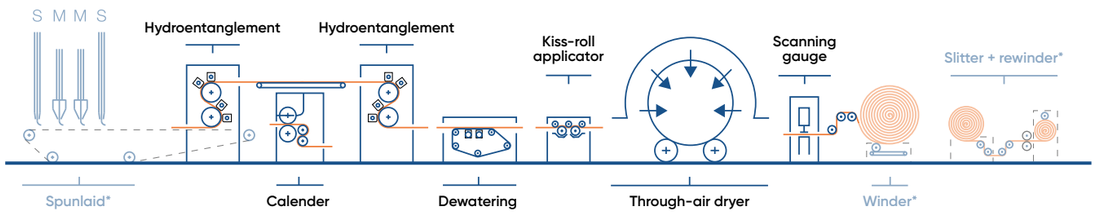
HYGIENE, MEDICAL

8 – 80 gsm



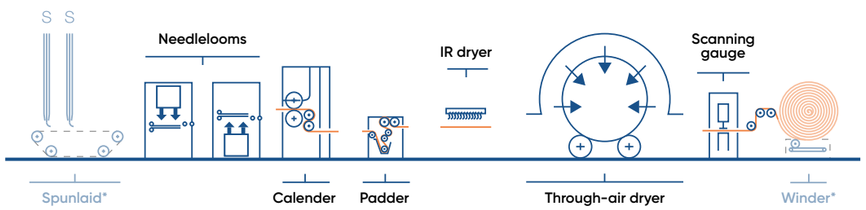
HYGIENE, MEDICAL, TECHNICAL

20 – 80 gsm

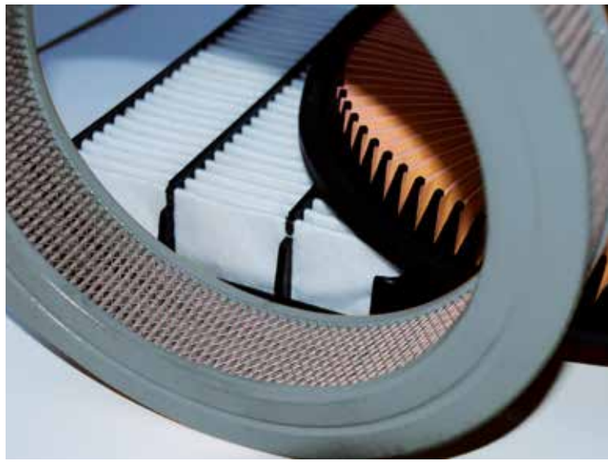


ROOFING, GEOTEXTILES

90 – 1,600 gsm



* Technology covered by cooperation partners



VARIOUS APPLICATIONS
You can use spunlaid fabrics for a large number of markets, such as:
- Hygiene
- Medical
- Roofing
- Geotextiles
- Building
- Artificial leather
- Air gas filtration ...

“Although the development of spunlaid technologies has been most visibly focused on the absorbent hygiene products and medical markets in the last decade or so, the use of this type of nonwoven in durable applications such as filtration, geotextiles or building, should not be underestimated.”

EDANA (European Disposables And Nonwovens Association)

Spunlaid line configurations →

CONTENTS

AUGMENTED REALITY CONTENT

To view videos, illustrations and picture galleries in a more direct and lively way, we added augmented reality to several contents! Download our **ANDRITZ AR APP** on our website or in the AppStore/PlayStore!

SCAN THE MARKED PAGES AND EXPERIENCE THE ENHANCED CONTENT.

From bonding to finishing

ANDRITZ neXline finish: You benefit from the highest capability, reproducibility, reliability, and efficiency. Find the best solution, perfectly suited to your needs, for thermobonding and finishing processes like embossing, compacting, lamination, or perforation. Besides calendering technologies, you'll find solutions for your complete finishing process with neXline finish. This encompasses calender, spunjet technology, finishing solutions, and dryer – turnkey solutions from just one source.

LET OUR EXPERIENCE DRIVE YOUR INNOVATION

A remarkable impact on nonwovens technologies: Whether hygiene or medical, automotive or building, household or technical – nonwovens applications are manifold. Their outstanding properties require excellent engineering in an increasingly changing and growing market. You can rely on a competent partner: with a passion for nonwovens technologies and with spot-on solutions perfectly suited to your specific needs.

PRECISELY WHAT YOU NEED

If you need a complete system solution, a single unit, a rebuild, an automation system, or comprehensive life-cycle services: We can meet your demands and deliver precise technologies, from bonding to finishing, for your product.

EXPERIENCE COMBINED WITH EXPERTISE

Let your products benefit from over 60 years of experience and comprehensive project management. With more than 600 nonwovens calenders in operation worldwide and installations in all high-end nonwovens lines, you are ensured top performance from ANDRITZ.

Benefit from reliable, flexible and proven technologies based on more than 750 innovations with worldwide patents along with innovative processes and engineering depth. For all this, you enjoy a single point of contact from the project phase to the warranty period.

Peak your production performance

Targeted development and service: Continuous research and development targeting your needs in an increasingly demanding market. Ensure a fast, profitable, and sustained ROI with our highly skilled service engineers and benefit from more than 60 years' experience and expertise.

View our service contacts in our augmented reality App!

FOR FURTHER INFORMATION SEE PAGE 5

View video footage of this brochure in our augmented reality App!

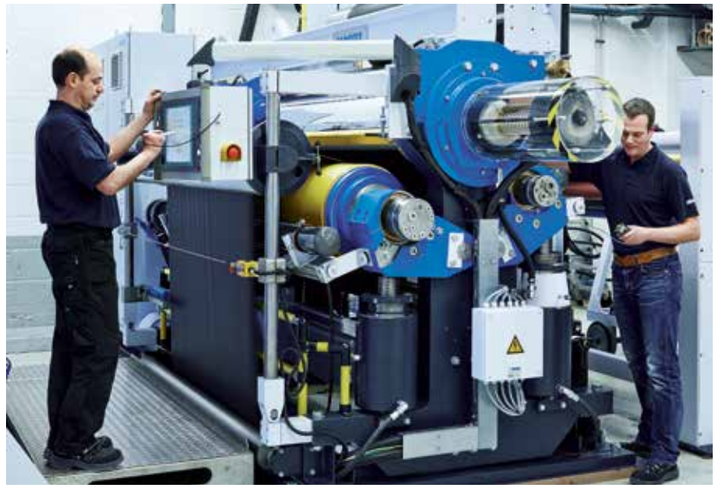
FOR FURTHER INFORMATION SEE PAGE 5

RESEARCH AND DEVELOPMENT

Ongoing R&D provides you with multiple solutions to leverage nonwovens finishing technologies. We seek the ideal solutions to achieve your goals because we are dedicated to high quality and innovative production technologies. You achieve maximum results thanks to our highly skilled staff and unique know-how drawn from our installed base and continuous R&D.

TECHNICAL CENTER

The state-of-the-art installations at our technical center in Krefeld and our expert process engineers guarantee you reliable technologies and process optimization. Another focus lies on evaluating new processes and defining parameters for product guarantees.



24/7 hotline

RESPONSIVE, RELIABLE SERVICE

You can rely on top performance and a sophisticated service level available nearby. Highly trained field and service engineers, worldwide service centers, and a 24/7 hotline guarantee you get the best, most reliable and fastest support. With ANDRITZ as your partner, the value of your process remains secure long after the warranty period has expired.

SPARE PARTS

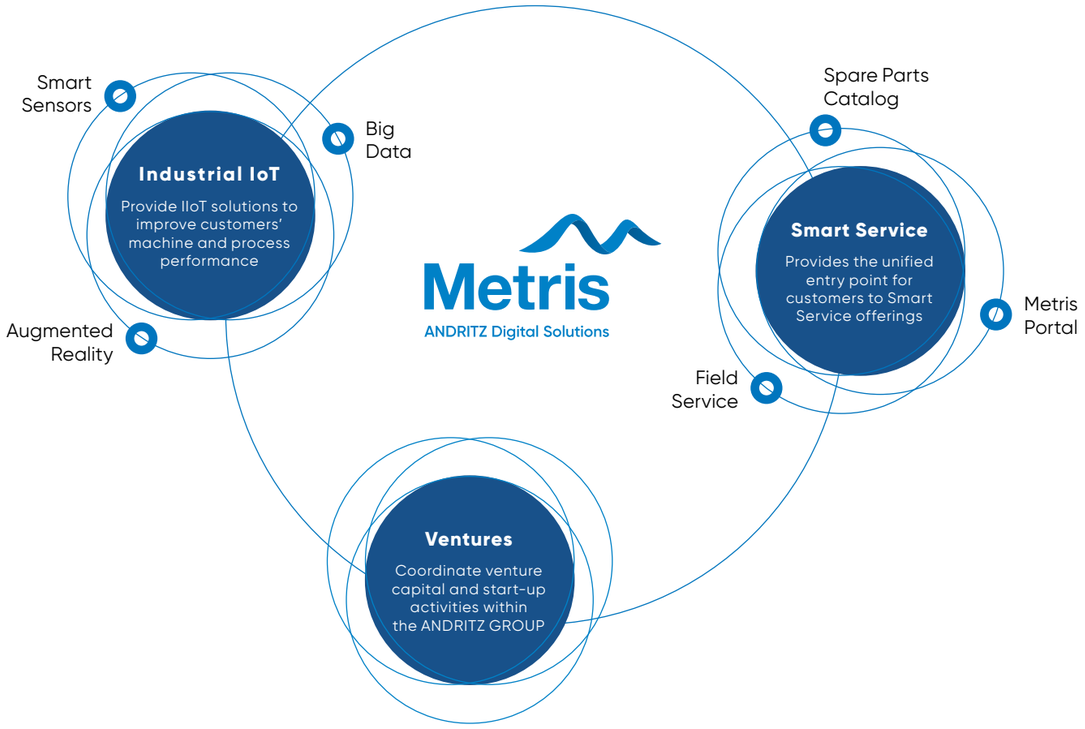
To ensure the longevity and performance of your equipment, we recommend using only original spare parts from ANDRITZ. A sales team for spare parts is at your disposal at ANDRITZ to help you make your choice.

EASY DOCUMENTATION

Take advantage of our operator-friendly machine documentation. It's available on an interactive tablet computer located exactly where you need it most. Find information quickly by using the full text search option. Our multimedia operating manual with pictures and videos helps you understand complex processes. An integrated spare parts catalog simplifies inquiries and the ordering process for any parts required.

Metris: ANDRITZ Digital Solutions

Digitalization is changing the nonwoven world: With digitalization, Industrial Internet of Things (IIoT) and Smart Service, expectations for greater line efficiency and increased profitability are rising. This can be gained by networking of machines and applying such technologies as Smart Sensors, Big Data Analytics, and visualization using Augmented Reality. Metris OPP (Optimization of Process Performance) as one of the core products of the Metris portfolio can provide the whole range according to individual needs.

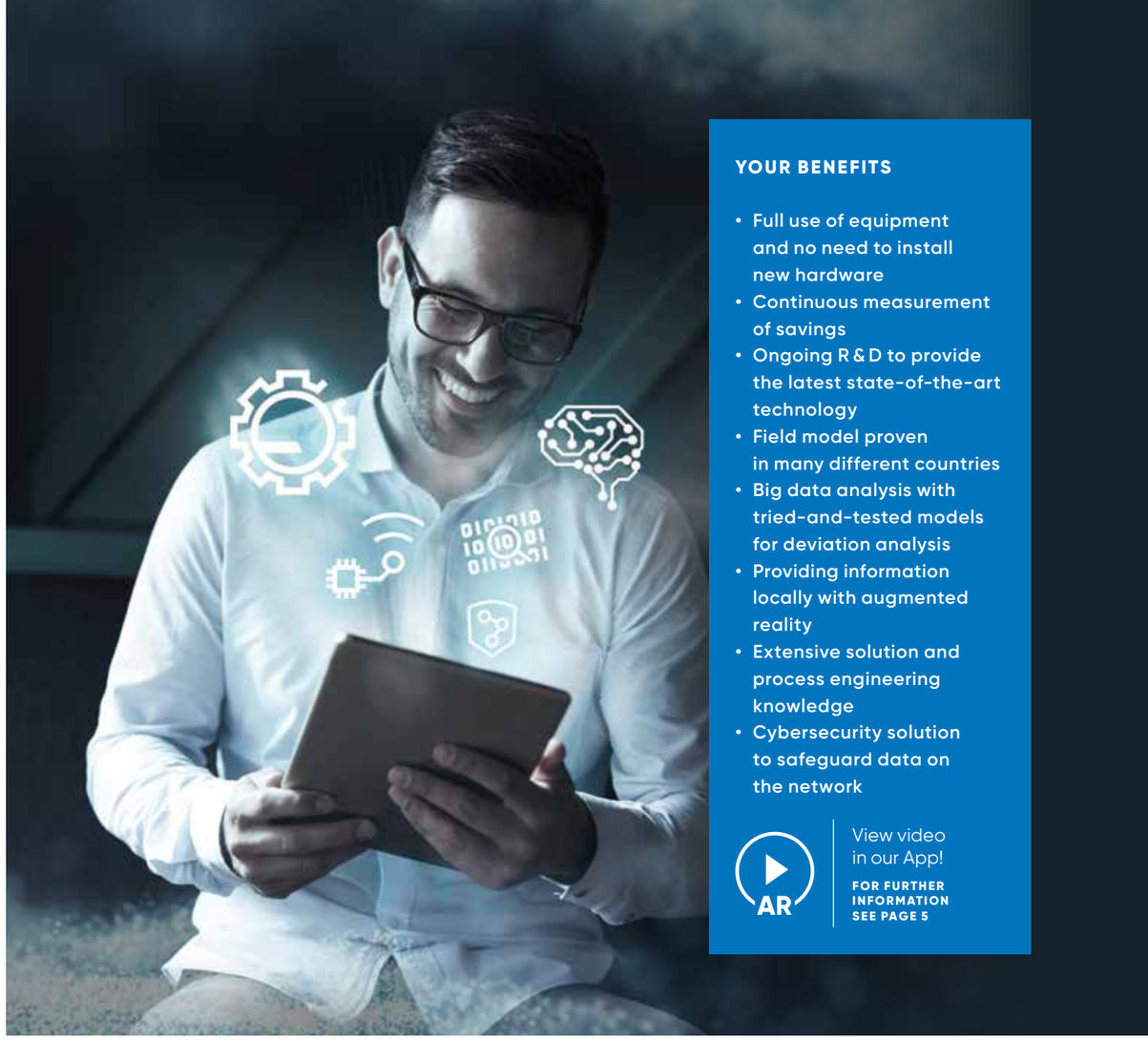


WHAT IS METRIS?

With the Metris brand's digital solutions, you are preparing for the growing digital challenges in the industrial environment. Metris products are the very latest state of the art – they can be customized to suit your individual requirements. They make you achieve the best possible productivity and efficiency for your nonwovens production.

WHAT DOES METRIS OPP DO?

The intelligent Metris OPP platform analyzes available line data, compares it with data already gathered, assesses the data, and provides you with valuable output. But Metris OPP is not just a platform – it offers ANDRITZ service contracts for both on-site and remote assistance services by specialists.



YOUR BENEFITS

- Full use of equipment and no need to install new hardware
- Continuous measurement of savings
- Ongoing R & D to provide the latest state-of-the-art technology
- Field model proven in many different countries
- Big data analysis with tried-and-tested models for deviation analysis
- Providing information locally with augmented reality
- Extensive solution and process engineering knowledge
- Cybersecurity solution to safeguard data on the network

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FOR FURTHER INFORMATION SEE PAGE 5

SMART SENSORS

ANDRITZ uses micro and wireless sensors for Metris solutions. You can use these sensors to collect even more detailed machine and plant data that are taken from pre-defined areas and are relevant in optimizing operations.

BIG DATA ANALYSES

To provide you with a rapid overview of the plant operating status, the data is analyzed automatically in real time. Necessary control measures can be initiated based on the knowledge of possible effects in order to avoid plant shutdowns, for example, or reduce the use of consumables.

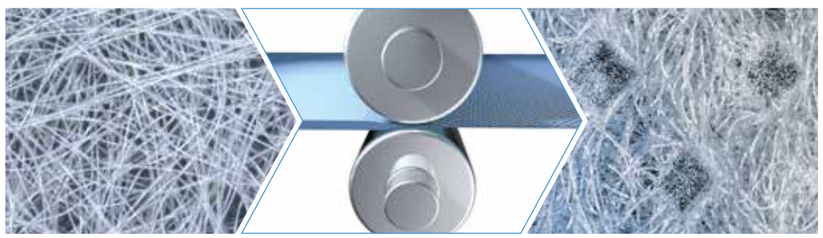
AUGMENTED REALITY

Augmented reality can make information visible at the machine or plant and display it very easily on mobile devices such as a tablet PC or smartglasses. Technology enables you to operate the machine and system more easily and more efficiently.

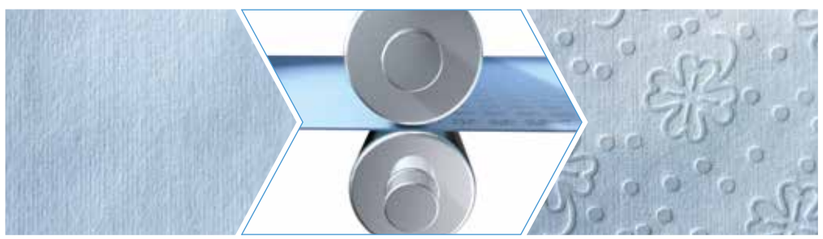
Wide spectrum of possibilities

The perfect solution to suit your needs: Whether your technology is spunlaid, drylaid, airlaid, or wetlaid, you'll find the perfect solution for specific needs and final product demands. Benefit from our unlimited portfolio and our broad know-how for thermobonding, embossing, perforation, compacting, and lamination.

THERMOBONDING
- Partial bonding
- Full bonding

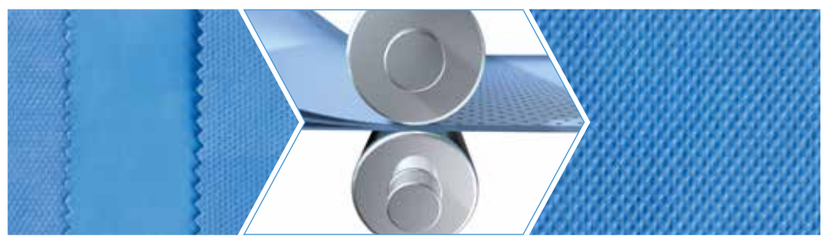


EMBOSSING AND PERFORATION
- Flat embossing
- Relief embossing
- Pattern repeat embossing



COMPACTION
- Compaction
- Calibration

LAMINATION
- Partial lamination
- Full lamination



Choose from a strong nonwoven calender portfolio

At a glance: Depending on your final product and its parameters, such as strength, softness, or air permeability, our nonwoven calender portfolio ranges from low and medium capacities (aXcess range) to high capacities (eXcelle range), precisely designed to meet your needs.

LOW – MEDIUM CAPACITIES
up to 12,000 t/a

Line speed:	up to 450 m/min
Roll width:	up to 3,800 mm
Technologies:	Spunlaid, drylaid, wetlaid
End uses:	**Medical, hygiene, roofing, geotextiles, filters, etc.**

Line speed:	up to 600 m/min
Roll width:	up to 3,800 mm
Technologies:	Spunlaid, drylaid, wetlaid
End uses:	**Medical, hygiene, roofing, geotextiles, filters, etc.**

HIGH CAPACITY
up to 24,000 t/a

Line speed:	up to 1,000 m/min
Roll width:	up to 5,800 mm
Technologies:	Spunlaid, drylaid, wetlaid
End uses:	**Hygiene, medical, filters, etc.**

HIGHEST CAPACITY
up to 30,000 t/a

Line speed:	up to 1,300 m/min
Roll width:	up to 6,000 mm
Technologies:	Spunlaid
End uses:	**Hygiene, medical, etc.**

neXcal compact 450

neXcal compact 600

neXcal


neXcal twin pro

neXcal twin aXcess 450

neXcal twin aXcess 600


neXcal twin

Calender neXcal compact

Your key to the nonwovens market: This all-round nonwovens calender opens the door to the nonwovens market and meets your low and medium-capacity production demands in a capacity range of up to 12,000 t/a. Enter the nonwovens market successfully with a variety of final applications.

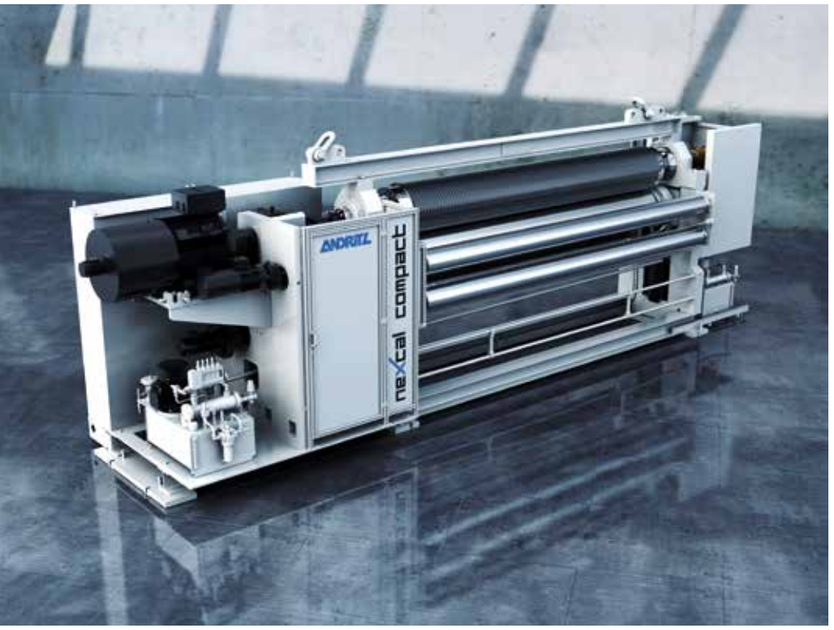
Whether your needs include spun-laid, drylaid, wetlaid, or technical applications with production speeds of up to 600 m/min, the neXcal compact offers you the precise solution for low and medium capacities. Moreover, neXcal compact is fitted with our proven Hot S-Roll technology and integrated cooling rolls to deliver highest quality.

PLUG AND PLAY

The neXcal compact saves you space thanks to its compact design. Delivered to your factory floor, it also saves you valuable time because there is no need for additional assembly. It arrives ready to be commissioned (plug and play).

SOME FINAL PRODUCT APPLICATIONS

- Medical
- Hygiene
- Roofing
- Geotextiles
- Filters



FEATURES

- Two types of neXcal compact:
  - Speed range up to 450 m/min for low capacities
  - Speed range up to 600 m/min for medium capacities
- Line force adjustable (during production) up to 150 N/mm over the entire web width
- Standard roll widths up to 3,800 mm (larger widths on request)
- Easy dismounting of upper roll
- Plug and play

Calender neXcal twin aXcess

Highest flexibility in the medium-capacity range: This three-roll calender was developed for high flexibility in the medium-capacity market. It serves a range of up to 12,000 t/a and is specifically tailored to suit your target market.

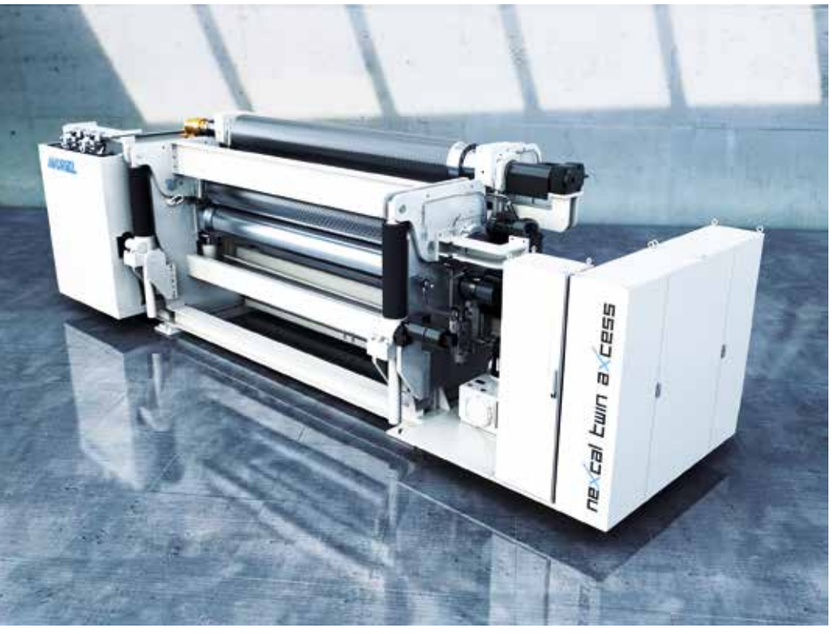
Its compact design takes up very little space and allows easy access to all components. The complete unit is delivered to your factory floor with only minimum assembly work required, saving you even more time.

Pre-heated counter-rolls as well as individual drive and supply units are just some of the practical details of neXcal twin aXcess calender. They help accelerate the roll change.

Benefit from maximum flexibility in the nonwovens market: Thanks to the constant height of the web infeed on the machine, there is no need to adjust the conveyor belt. Engraving on the same web side is ensured.

SOME FINAL PRODUCT APPLICATIONS

- Medical
- Hygiene
- Roofing
- Geotextiles
- Filters

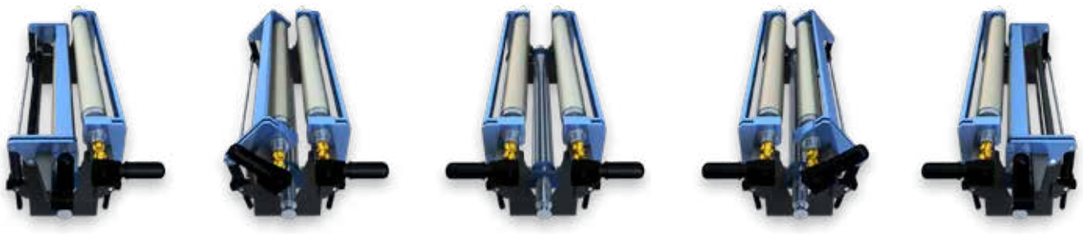


FEATURES

- Three-roll arrangement with one roll in production and one roll in stand-by position
- Two types of neXcal twin aXcess:
  - Speed range up to 450 m/min for low capacities
  - Speed range up to 600 m/min for medium capacities
- Line force adjustable (during production) up to 110 N/mm over the entire web width
- Standard roll widths up to 3,800 mm (larger widths on request)

QUICK AND EASY ROLL CHANGE
One counter-roll in the production position and one in the stand-by position enables quick and easy product and roll changes.

This is further enhanced by pre-heating or cooling down the roll while still in the stand-by position.



Calender neXcal

The benchmark for high-capacity spunbond production: This is the right solution for the demands of high-capacity nonwovens production up to 24,000 t/a with one engraving design in operation. Whether for hygiene, medical, or filtration applications, this calender is the right choice: it guarantees you the best results with just two rolls.

With a standard roll width of up to 5,800 mm and a speed of up to 1,000 m/min, the neXcal two-roll calender allows you to enter the high-capacity spunbond market with a variety of opportunities for multiple uses.

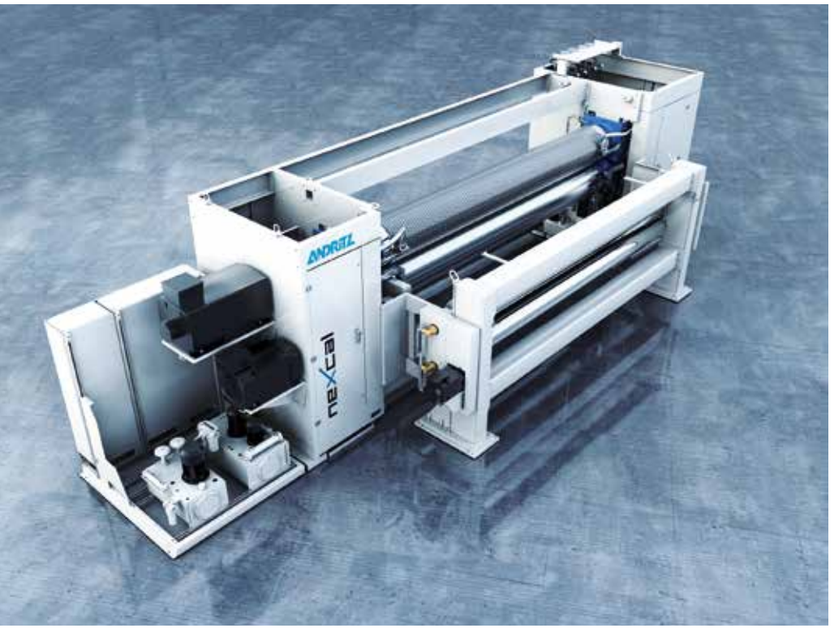
One engraving design enables you to produce a high volume of nonwoven fabrics continuously. The open machine design offers you easy access to the various components and supply units.

HIGH-SPEED PRODUCTION

This unit profits from our expertise in high-speed production for the paper industry. With this unit, you can produce up to 1,000 m/min of state-of-the-art nonwovens. You benefit from a smoother process thanks to the dust protection for all bearings and a separate cooling roll unit.

SOME FINAL PRODUCT APPLICATIONS

- Hygiene
- Medical
- Filters



FEATURES

- Speed range of up to 1,000 m/min
- Line force adjustable (during production) up to 150 N/mm over the entire web width
- Standard roll widths up to 5,800 mm (larger widths on request)
- neXtrend monitoring system

Calender neXcal twin

High flexibility in nonwovens production: Your nonwovens production plant requires high production capacity, fast reaction, high flexibility, and excellent efficiency. The three-roll calender neXcal twin is the response to all these demands for production of up to 24,000 t/a. Our roll arrangement offers you the benefit of fast and easy roll change.

Take advantage of a fast and easy product and roll change to increase both your production time and your flexibility.

Pre-heated counter-rolls as well as individual drive and supply units are just some of the practical details of neXcal twin. They help accelerate the roll change.

Other smart features of neXcal twin enhance efficiency under high-capacity production conditions.

Thanks to the fixed height of the web infeed to the machine, there is no need to adjust the conveyor belt. At the same time, engraving on the same web side is always ensured.

SOME FINAL PRODUCT APPLICATIONS

- Hygiene
- Medical
- Filters

FEATURES

- Speeds up to 1,000 m/min
- Line force adjustable (during production) up to 150 N/mm over the entire web width
- Three-roll arrangement with one roll in production and one roll in stand-by position
- Standard roll widths of up to 5,800 mm (larger widths on request)
- neXtrend monitoring system

QUICK AND EASY ROLL CHANGE
Let your production time grow with our smart roll change process. You can pre-heat the counter-roll while it is still in its stand-by position. Rolls can be switched quickly into production position with individual drive and supply units on each counter-roll. Cool the roll down while it is in stand-by position. This quick and easy roll change ensures a smooth production process.

Calender neXcal twin pro

The new generation of nonwovens calendering: Combine flexibility, highest uptimes and intelligent production with excellent product quality and process stability. To meet the requirements of a modern nonwovens plant producing up to 30,000 t/a, our innovative calender concept takes you far beyond today's standards.

In a continuously changing nonwovens market, the demands of a first-class nonwovens production site are increasing constantly. The highest possible uptimes and an intelligent production process are major factors. This is where our neXcal twin pro comes in.

Its outstanding features and options become a new milestone for your nonwovens production: High-speed production of up to 1,300 m / min, IIoT systems, option for continuous bonding, for permanent spinning during roll change, and operator-friendly machine configuration.

YOUR BENEFITS

- Highest uptimes
- Energy-efficient process
- Smooth process due to continuous bonding and roll replacement concept
- Clean machine concept
- Constant, stable and repeatable production conditions and product quality

SOME FINAL PRODUCT APPLICATIONS

- Hygiene
- Medical

FEATURES

- Speeds of up to 1,300 m/min
- Line force adjustable (during production) up to 130 N/mm over the entire web width
- Three-roll arrangement with one roll in production and one roll in stand-by position
- Standard roll widths of up to 6,000 mm
- Extended neXtrend monitoring system as part of the IIoT concept
- Continuous bonding for permanent spinning during roll change
- Clean machine concept
- Direct drive (no chain drive)
- Simplified roll replacement during production

AR

View video footage of this brochure in our augmented reality App!

FOR FURTHER INFORMATION SEE PAGE 5

neXcal twin pro

DESIGNED FOR CONTINUOUS BONDING

With this innovative system there is no need to stop the spinning process during roll change. Benefit from reduced raw material and energy costs as well as increased availability of your production line. How does it work? When switching the engraving rolls, the Hot S-Roll moves, too. It is always connected to at least one engraving roll. And thus ensures a continuous bonding process. For a short moment both engraved rolls are in contact with the Hot S-Roll. This ensures a smooth process without any interruptions and gives more possibilities for a flexible production planning.

Monitoring system neXtrend

Optimize your calendering process: You're well-prepared for Industry 4.0 with the neXtrend monitoring system, which is part of our Metris family. You can monitor the conditions of your calender equipment and forecast your maintenance schedule. Continuous and constant monitoring ensure that you have top quality thanks to automation.

You minimize operation and maintenance costs with excellent process transparency. This avoids unforeseen shutdowns and damage, while improving your plant's overall availability. You reduce your spare parts stock with maximum utilization periods for your operating components. And with our remote support service, we can provide you with comprehensive advice on your equipment.

You can forecast future functional issues by means of predictive maintenance scheduled on the basis of the alert status as shown in the colored chart. That's process know-how and a depth of engineering you can rely on.

STANDARD VERSION VS EXTENDED VERSION

Our standard neXtrend monitoring equipment includes sensors to analyze main components like steel rolls, Hot S-Roll and several bearings. A regularly report gives you a perfect overview of the current status and maintenance tasks.

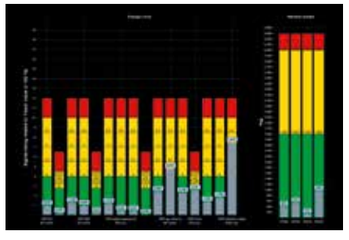
Moreover, with our extended neXtrend monitoring system you gain a deeper insight into your process. This paves the way for even more intelligent production. By monitoring energy consumption of all rolls and major auxiliary units in detail, you can take advantage of a transparent process and reduce energy costs.

This extended monitoring of vibration and seals ensures a stable production process. All this is documented in a comprehensive report.

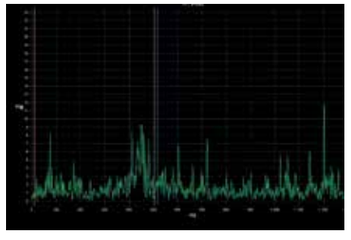
Remotely controlled service is also available. This makes service processes even faster and easier.

YOUR BENEFITS

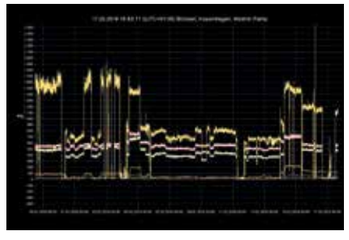
- Maximized production time
- Predictive maintenance
- Reliable process
- Ready for Industry 4.0
- Regularly report



Diagnosis objects including warning system



In-depth diagnosis



History and trend analysis

Hot S-Roll and CS-Roll

The heart of nonwovens calendering technology: As the world's first ever deflection-controlled roll, the S-Roll has revolutionized calendering technology for a wide range of applications. The heated roll surface ensures you obtain the best results for multiple end uses.

The heated Swimming Roll (Hot S-Roll) offers you an almost unlimited number of applications. Roll technology efficiency is crucial to the success of your final product: from thermobonding and laminating to embossing, perforating, and calibrating. Take advantage of our in-house manufacturing and the expertise resulting from continuous R&D – we have developed the Hot S-Roll that meets all your demands.

HOT S-ROLL FOR YOUR HIGH-SPEED PRODUCTION

The latest Hot S-Roll technology allows for nonwovens production at up to 1,300 m/min. Its revolutionary concept, with a contactless direct drive directly on the roll, ensures easy rotor heat insulation and active cooling of the stator. The Hot S-Roll provides you with great reliability and requires little maintenance due to its small number of parts.

TAKE A PEEK BEHIND THE SCENES

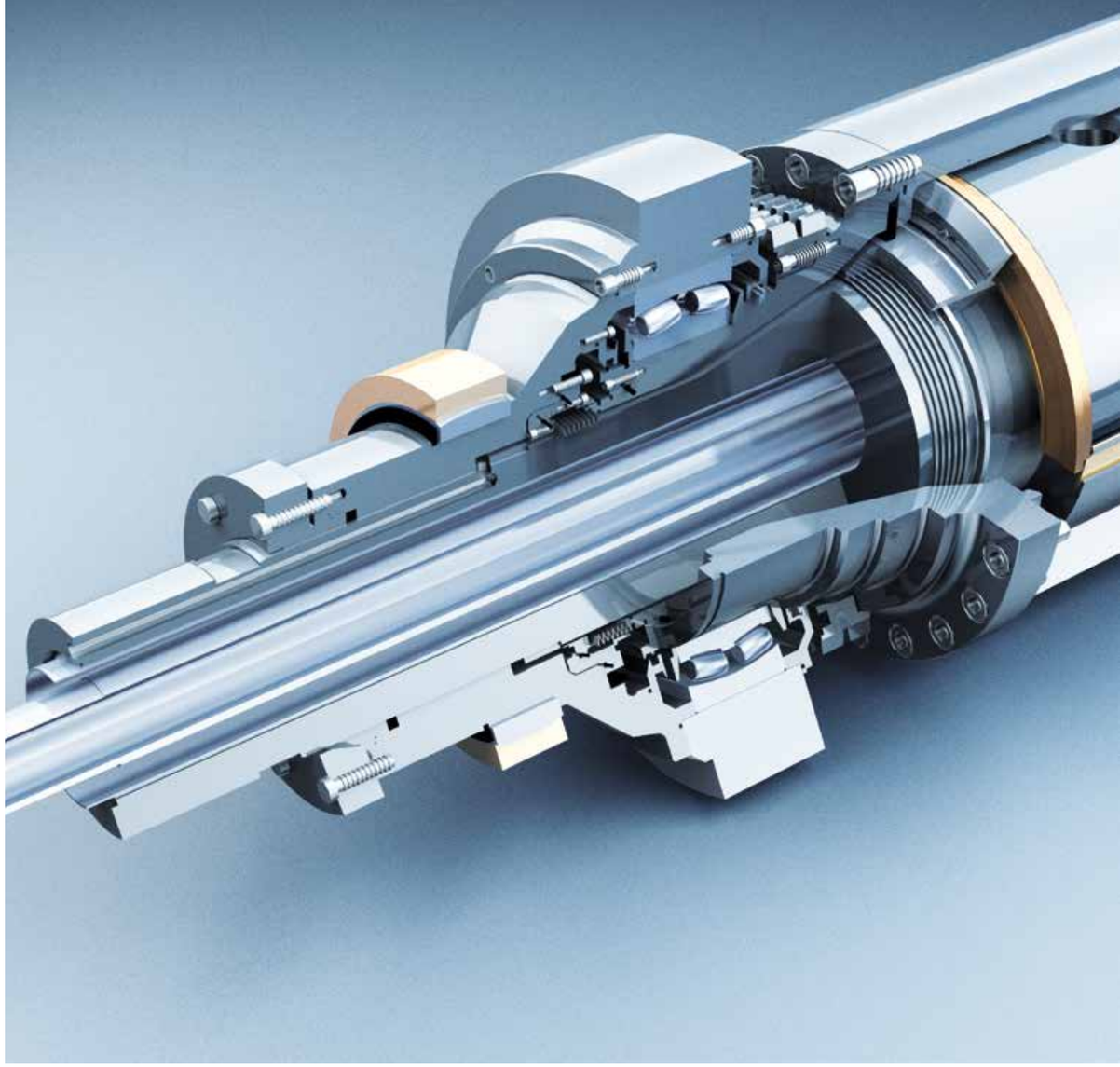
The roll has a fixed axle with a tube rotating around it. The two chambers inside allow the roll shell to follow the bending movement of the counter-roll. This enables rolls to be completely cylindrical and prevents friction. You can adjust line pressure and temperature individually.

HOT S-ROLL

Increased line force in center

Even line force at full fabric width

Increased line force at the edges



Inside of the Hot S-Roll

CALIBRATING CS-ROLL

The CS-Roll is a unique product: A deflection-controlled calibrating roll designed primarily for airlaid processes. Through compacting and calibrating, the roll achieves thickness reduction, slight pre-bonding, less trapped air, and a precise definition of material thickness.

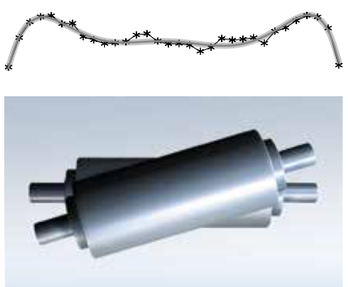
CS-Roll

FEATURES

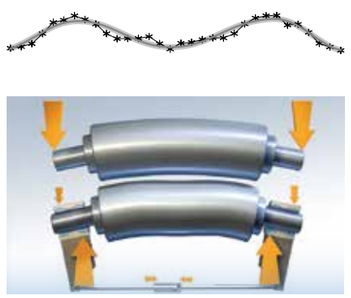
- Hydraulic pressure chamber
- Variable adjustment of fabric width
- Variable line force
- Correction: left – center – right
- Line force: 30 – 150 N/mm
- Surface temperature range 200 °C, 250 °C, 275 °C
- Roll surface width up to 7,000 mm
- Speed up to 1,300 m/min
- CS-Roll available for e. g. airlaid processes with a speed range of up to 600 m/min

SUPERIOR PERFORMANCE COMPARED TO TRADITIONAL SYSTEMS

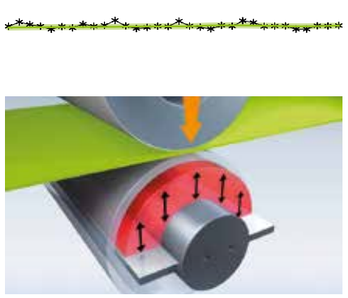
The Hot S-Roll establishes an even line force along the entire roll.



Standard X-crossing technology



Standard single roll bending technology



ANDRITZ Hot S-Roll

The counterpart to the Hot S-Roll

The right counter-roll that fits your needs: Whether smooth or engraved, nitrogen- or induction-hardened, you have the right counter-roll for your purposes. The large diversity in final nonwovens applications means there are many different counter-roll requirements.

In the manufacture of smooth or engraved counter-rolls, our experts select the right materials to meet your requirements in terms of hardness and surface finish. Your individual application will determine whether to use nitrogen or induction hardening, special coatings, or hot grinding.

THE BEST ROLL MATERIAL FOR YOUR PRODUCTION

In standard thermobonding processes, a nitrogen-hardened, engraved roll has a hardness layer of 0.5 – 0.7 mm.

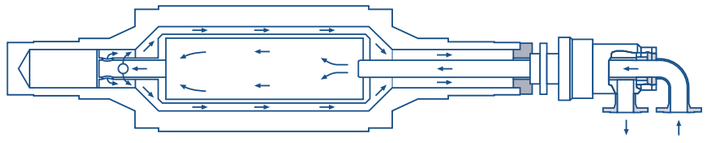
The roll surface and, in particular, the engraving are hardened and offer a solid surface to withstand small impacts. This provides you with very high, reliable quality, keeping your re-engraving effort to a minimum.

An induction-hardened counter-roll is your best choice for high-end production with outstanding quality requirements. The homogeneous material allows for induction hardening and results in a large number of re-engravings. The entire engraving and roll body is hardened with a hardening thickness of 5 mm. This provides a more robust roll surface.

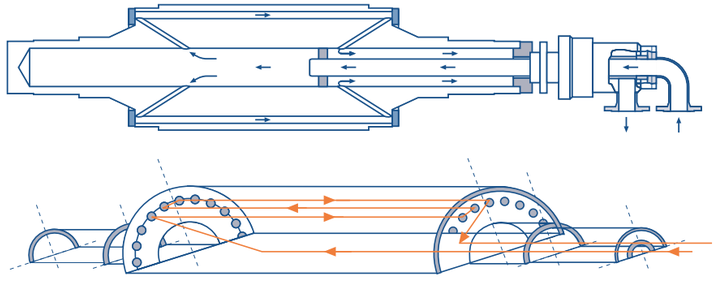
CENTRAL VS. PERIPHERAL BORE

Low-capacity nonwovens production of up to 9,000 t/a, speeds of up to 450 m/min, and medium temperatures require a central bore in the counter-roll. A temperature accuracy of ±1 °C over the entire web width ensures you obtain the best quality and results.

For medium and highest-capacity nonwovens production of 9,000 – 30,000 t/a, a counter-roll with peripheral bore and a tripass system is your best choice to optimize the oil flow and energy transfer. You benefit from a short thermal reaction time and a temperature accuracy of ±1 °C over the entire web width.



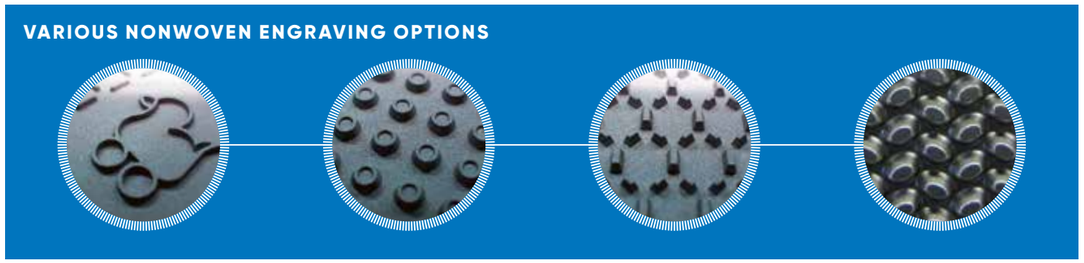
Central bore of counter-roll



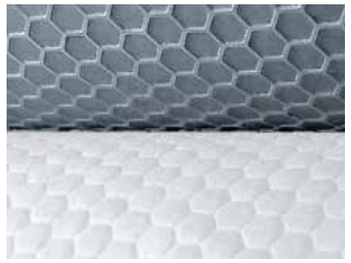
Peripheral bore of counter-roll with tripass system

Engraving options

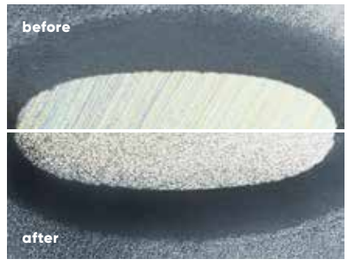
Complement each process with perfectly suited engraving: The multi-faceted nonwovens market with its unlimited scope of final applications demands different designs. Whether you need perfect engraving for visual purposes or to influence the product properties, we offer the right engraving to complement your process.



Thermobonding under a microscope



3D engraving



Surface treatment NTS ("Nano-to-surface")

THE RIGHT ENGRAVING

Whether it is an oval, pyramid, dot, diamond, 3D, flower, or animal, the right engraving provides you with a unique signature for the final application. Hygiene or medical applications require reliable strength and a defined MD/CD ratio.

This means your arrangement of engraving points has to be exact. An oval design is most commonly used to provide these properties. Hygiene products are becoming softer and softer, and pressure marks are decreasing.

SPECIAL ENGRAVINGS

You can achieve a visual 3D look and more bulkiness with special engravings. In a lamination process, dot and diamond engravings are the most suitable method for your needs.

Dot engravings are often used for filter applications and a diamond design fits perfectly for roofing materials.

NANO-TO-SURFACE TREATMENT

Take advantage of the outstanding NTS ("Nano-to-surface") treatment development for new and existing engraved rolls. Micro-engraving on top of the engraving reduces the amount of polymers adhering to the engraving valleys and flanks. This minimizes your risk of wrap-ups and reduces the need for cleaning. You benefit from increased production times and more reliability in your calendering processes.

Heating systems

Take a peek behind the scenes: To achieve optimum results in your product and your production process, a perfectly tuned heating system is essential. It commonly consists of a heater, secondary circuit and pressure / heating circuit.

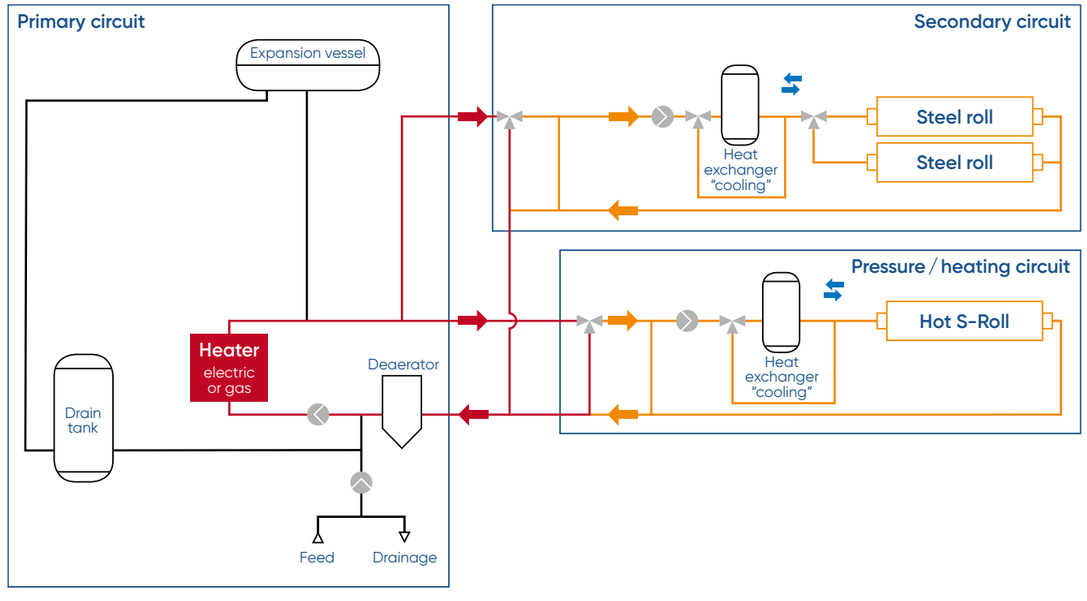
PRIMARY CIRCUIT
The thermal oil heater supplies the steel roll and the Hot S-Roll with heated thermal oil and can either be electrically heated or gas-fired.

SECONDARY CIRCUIT
The secondary circuit allows optimal control of the steel roll temperature. It is connected to the thermal oil heater by a 3-way valve. Heat exchangers can lower the oil temperature in a controlled manner.

PRESSURE/HEATING CIRCUIT
The pressure / heating circuit allows optimal control of temperature and deflection compensation of the Hot S-Roll. It is also connected to the thermal oil heater by a 3-way valve. Heat exchangers can reduce the oil temperature in a controlled manner.

HIGH-TEMPERATURE OILS
For high process temperatures, a special thermal oil is used for the primary circuit. The pressure / heating circuit for the Hot S-Roll is then operated independently with its own oil. The circuits are separated by a heat exchanger. Thus the heating unit operates with two different types of oil.

COMPACT AND USER-FRIENDLY DESIGN
Thermal oil heater, secondary circuit and pressure / heating circuit have a compact design. They are completely pre-assembled, cabled, piped and functionally tested and can, therefore, be commissioned within a very short time. Temperature adjustment and display via touch panel is user-friendly and ensures reliable process control.



Needleloom

Robust and reliable for consistent quality: For your technical spunlaid applications, such as roofing, geotextiles or filtration material, our needle-loom range offers you a variety of punching speeds and width sizes.

ANDRITZ eXcelle needlelooms use the technology based on oil-lubricated modules with patented guiding piston design. Oil keeps the bearing at optimum working temperature, securing long-lasting use. Needleboard patterns have been adapted for optimum visual appearance and high versatility throughout wide ranges of advance pitch.

OPTIONAL EQUIPMENT
- Dynamic Harmonic Shifter (DHS) for needling process with heavy punching load
- Quick exchange of bed / stripper plate
- Intermittent air blowing network
- Dedusting suction systems
- Heavy-duty delivery press
- Magnetic bars
- Pneumatic centralized needleboard pinning system

YOUR BENEFITS
- **Highly durable equipment**
- **Wide range of possible needling densities**
- **Clean environment**
- **Low maintenance requirement with change of oil after 14,000 working hours**
- **Easy cleaning and maintenance**
- **Low cleaning requirement**

Spunjet

A bonding solution for endless filaments: The patented nonwovens process called Spunjet is the in-line hydroentanglement of continuous filaments, creating a new generation of spunlaid nonwovens. Spunjet offers you the best properties ever achieved in 80 % of existing and in new nonwovens applications.

This new process has been developed to better address applications such as geotextiles, roofing, packaging, synthetic leather, and as many others.

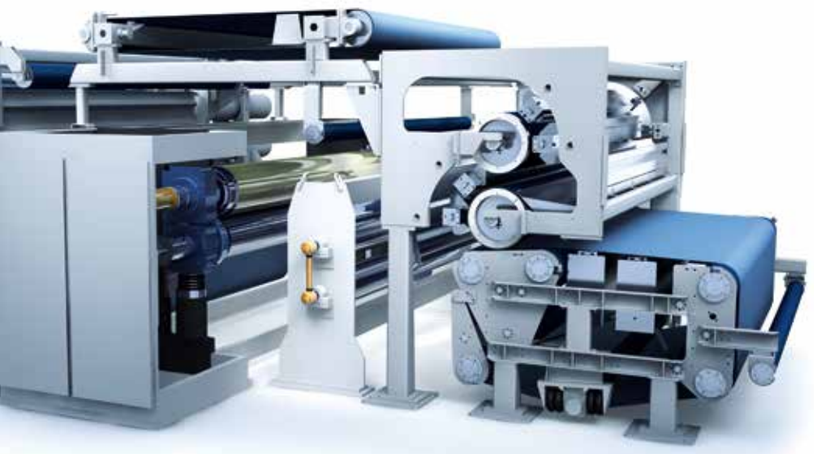
Spunjet configurations can open up exciting new business opportunities for you in terms of innovative products. It can also add value to your existing products.

By combining two first-class bonding technologies, you can benefit from the typical strength of spunlaid as well as the softness of spunlace. The spunjet process offers you additional softness, bulkiness, drape, and tensile strength while maintaining the isotropic MD / CD ratios in your fabric properties.

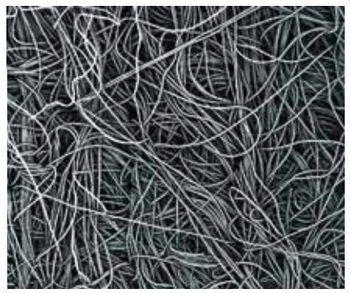
Spunjet lines can operate at speeds of up to 1,000 m/min. The high-quality water needles generated by the spunjet injectors ensure high-grade bonding of your continuous filament webs.

YOUR BENEFITS

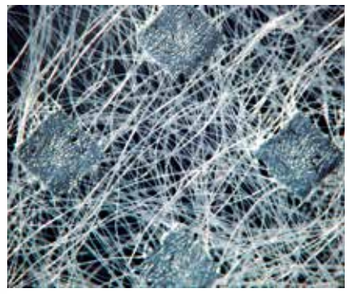
- **Added product value**
- **Softness and bulkiness**
- **More flexibility**
- **New business opportunities**
- **Suitable for 80 % of nonwoven applications**



ANDRITZ spunjet equipment



Microscopic view of SpunjetBond web (× 20)



Microscopic view of spunbond web (× 20)

THREE OPPORTUNITIES IN THE SPUNJET PROCESS

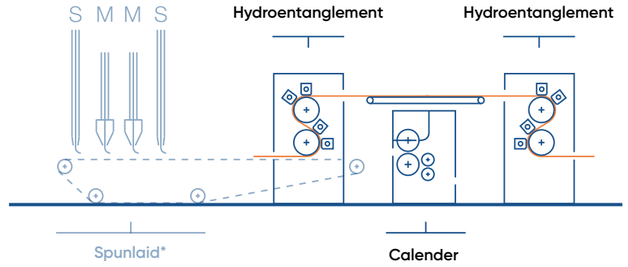
Depending on the spunjet configuration, a variety of nonwoven fabric properties are available to you.

Spunjet Bond

Process: In-line hydroentanglement of spunlaid filaments

Characteristics

- Working width: up to 5,800 mm (larger widths on request)
- Speed: up to 300 m/min
- Fabric weight: 25 to 250 gsm

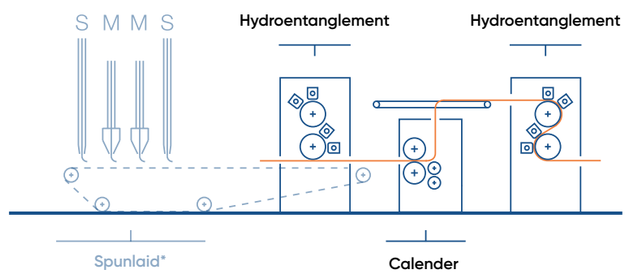


Spunjet Soft

Process: Jet finishing of spunbond web for extra softness and high loft

Characteristics

- Working width: up to 5,800 mm (larger widths on request)
- Speed: up to 1,000 m/min
- Fabric weight: 10 to 150 gsm

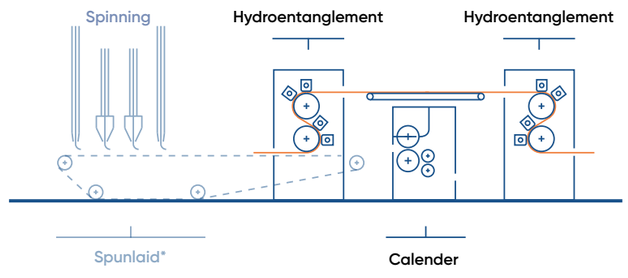


Spunjet Splittable

Process: Splitting and hydroentanglement of spunlaid bi-component filaments filaments

Characteristics

- Working width: up to 5,800 mm (larger widths on request)
- Speed: up to 100 m/min
- Fabric weight: 30 to 300 gsm



* Technology covered by cooperation partners

Finishing – Kiss-Roll applicator and padder

Adding value to nonwovens: In finishing applications, nonwovens acquire improved product properties, manifold functionalities, and a significant added value. The properties that can be achieved include hydrophilic, permanently hydrophilic, anti-static, alcohol repellent, flame resis tant, and many more finishes.

LOW ADD-ON FOR HYGIENE APPLICATIONS

neXkiss and neXdos offers you a process-oriented solution guaranteeing the highest product quality, production stability, and the best possible liquor handling. This process can be used for low add-on or for the single-or double-sided application of hydrophilic finishes for the nonwoven top layers of diapers at production of 600 m/min.

YOUR BENEFITS

- Excellent liquor pick-up
- Short web guiding
- Minimum fabric impact
- Maximum production stability

PERFECT IMPREGNATING OF NONWOVENS

By impregnation with a wide range of chemicals, nonwovens acquire manifold functionalities and a significant added value. Our neXchem padder with S-Roll technology was especially developed to suit the manufacturing conditions in the nonwovens industry and can be used universally for all current finishing products.

Dryer

State-of-the-art dryer for medium to high line capacities: The neXdry system is a compact dryer designed to meet your spunbond and / or spunjet demands for reliability, cost efficiency, and easy maintenance access. The omega roll with a large open area of 96 % optimizes your process performance.

INNOVATIVE DRUM DESIGN

You benefit from extremely efficient drying because the neXdry U-Drum has an extraodinarily large open area of 96 %, which allows high air flow at a low pressure drop. Its structural rigidity and integrity mean you can implement it on lines with large working widths of up to 6 m.

YOUR BENEFITS

- High energy efficiency
- Extremely durable
- Dual temperature zones
- Quick and easy maintenance

neXdry for spunlaid processes

GET THE MOST OUT OF YOUR INVESTMENT

At ANDRITZ Nonwoven, 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.

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