



NONWOVEN
**DIFFERENTIATE YOUR
BUSINESS WITH OUR
SPECIALTY PORTFOLIO**
FOR YEARS TO COME

ANDRTZ

ENGINEERED SUCCESS



TECHNOLOGY SOLUTION PROVIDER

As the market becomes more and more demanding, ANDRITZ Diatec offers the latest technology solutions with a wide range of customization options to help customers find the right machine configuration to save time and money.



FULL MACHINE PORTFOLIO RANGE

ANDRITZ Diatec is able to supply turnkey converting machines for the production of a comprehensive range of sanitary products:

- Baby diapers
- Baby pants
- Adult diapers
- Adult pants
- Underpads
- Light Inco products
- Shaped pads
- Sanitary napkins
- Panty shields
- Food pads
- Lamination



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A reliable partner



ANDRITZ Diatec designs and manufactures a wide range of machines and technology solutions for the production of baby diapers, baby pants, adult incontinence products, sanitary napkins, panty shields and underpads. Always at the forefront of innovation, ANDRITZ Diatec has broadened its production horizons by delivering new lines for food pads, lamination, medical products, disposable gloves, headrests, surgical drapes and spool winding equipment. ANDRITZ Diatec is now part of the ANDRITZ Nonwoven business.



KEY TO SUCCESS

The key factor in our success is the relationship that we create and maintain with our customers from the design of the machine to the "nurturing" phase during machine installation intended to offer specialized support for a smooth start-up in the customer's plant.

DISTINCTIVE TRAIT

Important added-value from ANDRITZ Diatec is the capability to respond quickly and promptly to the changing needs of the present-day market, allowing customers to seize opportunities and translate them into concrete projects. We also provide full project management, from planning control to start-up of the line in order to secure a prompt return of investment.

YOUR BENEFITS

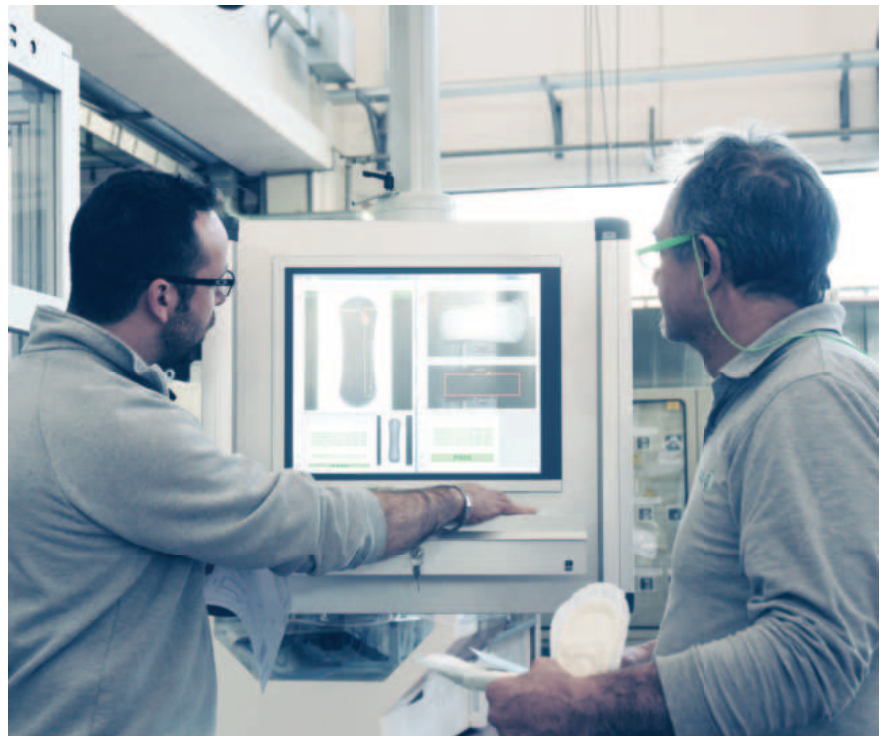
- Customer care
- Customer satisfaction
- Spare parts
- After-sales assistance
- ANDRITZ guarantee

Build your future in hygiene converting

In order to cover all of your final product and production requirements, our machine portfolio ranges from market entry to high capacities, precisely designed to meet your needs. The machines are built with a modular frame that allows customized configuration. Moreover, the compact layout ensures a smooth start-up and easy machine maintenance. Machines and retrofits can be installed easily according to customers' requirements. The full servo-technology simplifies ordinary operations and adaptation of the raw materials to the environmental conditions.

BENEFIT FROM A TRUSTWORTHY PARTNER

ANDRITZ Diatec machines are characterized by the use of high-precision mechanical tooling and high levels of automation. The bulky structure of the core formation provides stability and ensures minimized vibrations, thus making the production environment more pleasant. The production process is easy to monitor and adjust during operations. Our machines achieve high efficiency in terms of OEE and low waste rates. The use of top-notch components ensures long-term reliability of the machines and consistent savings in terms of spare parts and technical intervention.



CONSTRUCTION PHILOSOPHY

All our machines are designed, manufactured and tested entirely in Italy, using EU or US components, in compliance with CE regulations. Depending on customers' needs, ANDRITZ Diatec offers customized solutions according to production volumes, product recipes and all requirements relating to the customer's production plant. We

also ensure that we respect the project timing in order to meet customer's requirements. We are able to offer a full-range of extensions and retrofitting kits to keep our customers' machines state-of-the-art.

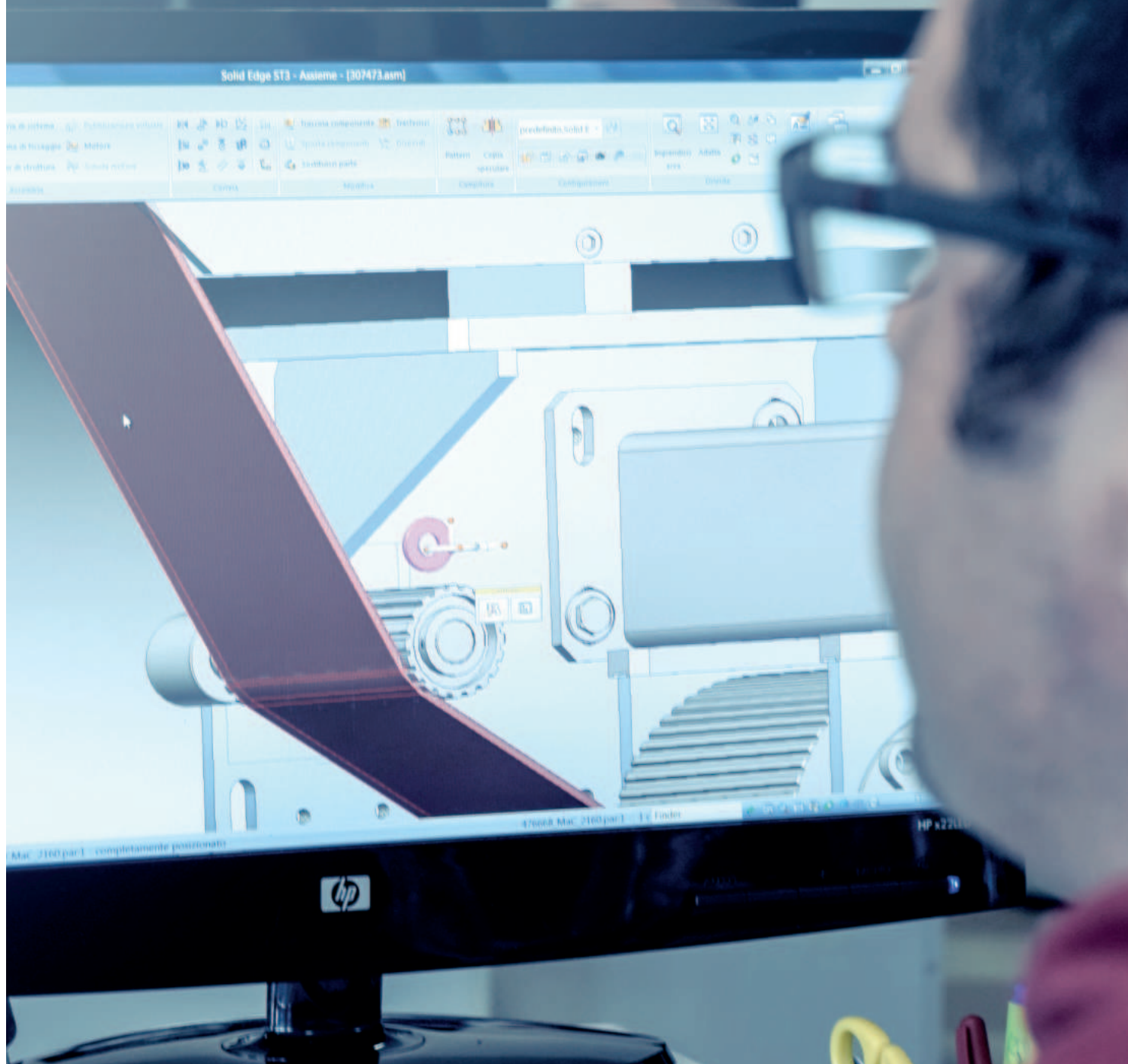
MACHINE MANAGEMENT

Our machines are easy to manage. All machine parameters can be

easily set, stored in the memory, recalled and changed according to the needs of the customer. All operations are carried out with the highest efficiency and security levels in order to simplify daily operations on the machine. A fast and easy size change configuration reduces machine downtime and hence increases production output.

YOUR BENEFITS

- Easy machine management
- Fast size change
- Limited number of operators required
- Linear production process
- Optimized raw material consumption
- Reduced energy consumption



Dedicated service

We know how important uptime is for your production efficiency:

We do everything to keep interruptions to a minimum. With remote assistance and a highly responsive service team, we can react to your issues in the shortest time possible.

FAST MACHINE START-UP

Our machines are thoroughly checked before shipment so as to speed up the start-up in the customer's plant and reduce machine downtime.

SPARE PARTS

We guarantee the supply of original spare parts with onsite installation, in accordance with the customer's timing and efficiency demands.

MAINTENANCE

Machine maintenance is made easier by the compact machine

layout, which leaves wide spaces for movement around the machine. Every process is linear and complies with the highest safety levels. Cost and time savings, efficiency and durability are guaranteed by the high quality of engineering and components used.

REMOTE ASSISTANCE

ANDRITZ Diatec is there for you at all times. Remote assistance is critical to guarantee that machine performance is kept high. Our engineers are always at your disposal by helping you identify problems and find remedies

promptly. In this way, operators' maintenance skills are improved and after-sales costs for interventions and machine stoppages are reduced.

AFTER-SALES SERVICE

ANDRITZ Diatec shares trust and growth with customers. This value is mirrored in the wide range of services that we offer.



YOUR BENEFITS

- Spare parts installation
- Safety inspections
- Preventive inspections for routine maintenance
- Production supervision
- Technical documentation



UPGRADES AND RETROFITS

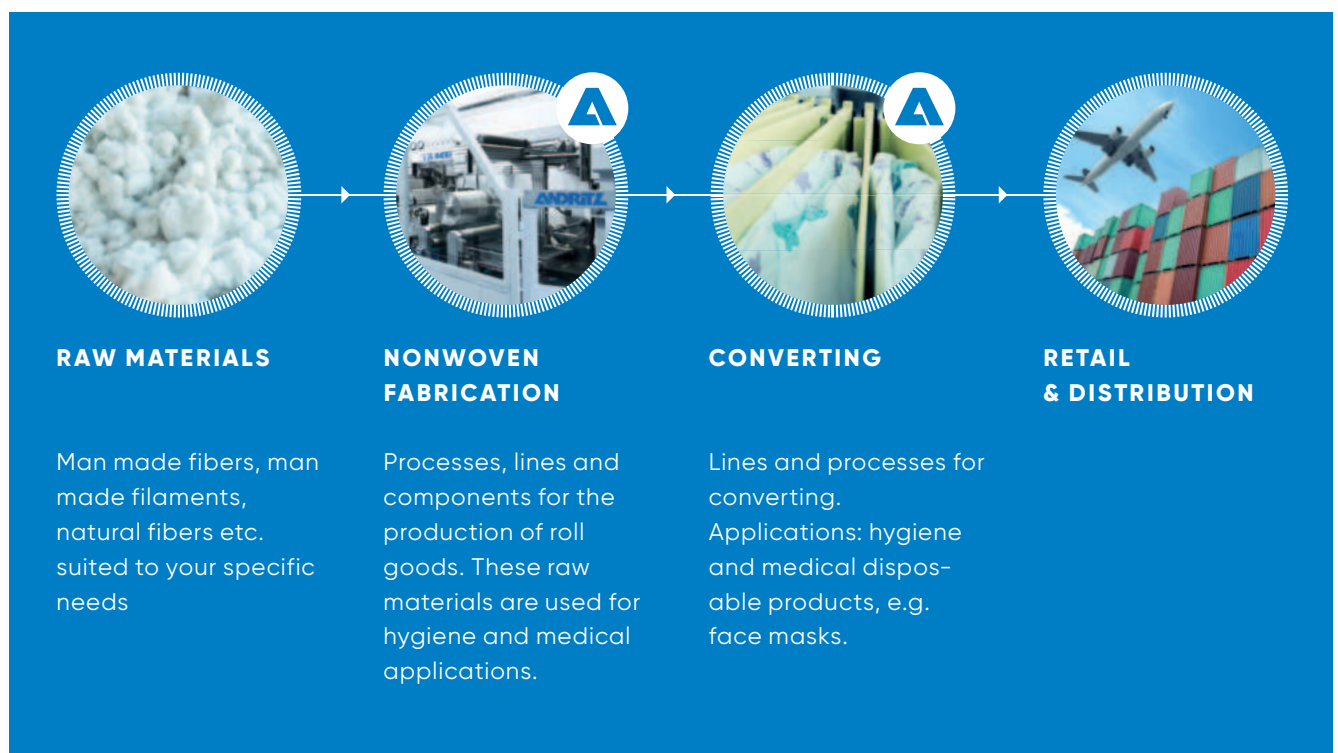
Our machines have a long lifecycle. The modular and compact frame makes refurbishment operations easier. Throughput can be optimized significantly by means of tailored upgrades, which also enable the final product structure to be updated in line with market demands.

SERVICE SUPPORT

- Control equipment and software upgrades
- Analysis of existing machines to upgrade and optimize production
- Training programs for machine operators

Full range in nonwovens production

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.



NONWOVENS UNLIMITED

ANDRITZ is a machinery supplier to offer nonwoven processes for roll goods production and also converting lines. In this way, ANDRITZ covers a great part of nonwovens value chain. Its expertise in the treatment of raw materials and market know-how of

possible end uses bring unique added-value for the nonwovens industry. Hygiene is a part of the DNA at ANDRITZ and thanks to the spunbond, spunjet, air-through bonding and spunlace pilot lines, all materials used in the converting lines can be tested and approved by the market in advance.

Develop your hygiene products with our experts

Continuous research and development targeting your needs: In an ever more demanding market, get the most out of your investment with the support of our test equipment and highly skilled engineers. You can benefit from more than three decades of experience and expertise.

RESEARCH AND DEVELOPMENT

Being dedicated to high quality and innovative production technologies propels us to seek ideal solutions. Let our combined forces achieve maximum results.

Highly skilled staff provide unique know-how drawn from our installed base and continuous R&D.

SPUNLACE TECHNICAL CENTER

Our spunlace pilot line in Montbonnot, France, includes state-of-the-art equipment to produce a wide range of spunlace fabrics. During the trials, the pilot line is able to operate at up to 500 m/min. Tests can be conducted in-line with the TT card or off-line with an unwinder. It is also equipped with a complete water filtration system so that trials can be conducted with all types of fibers. You can test natural or synthetic fibers, short or long fibers, paper fibers, and so on.

SPUNLAID TECHNICAL CENTER

Our spunlaid technical center in Krefeld, Germany, includes a wide range of pilot calenders for different applications and needs, more than 200 engraved rolls and shells, various sleeves, measurement systems and a 3D-microscope. It is well-equipped to handle many

fields of application like embossing for wipes, calibration for melt-blown material, laminating of roofing material or filters, thermo-bonding, perforating of top-sheets, compacting of wetlaid fabrics, comparisons between thermal and ultrasonic laminating, or textile finishing.

WETLAID TECHNICAL CENTER

Our wetlaid pilot line in Krefeld, Germany includes state-of-the-art equipment to produce a wide range of wetlaid fabrics for the automotive, aerospace, agriculture, construction, medical, wipes and hygiene industries, as well as the household goods sector. Arrangement of the components on a rail system ensure highest flexibility when extensions or modifications are needed.

AIR-THROUGH-BONDING TECHNICAL CENTER

CETI, the European Center for Innovative Textiles, is a research center for new textile applications and is located in Lille, France. ANDRITZ has been supplying the institute with the latest nonwoven technologies, including air-through bonding. The air-through bonding pilot line provides CETI and its customers with a R&D platform

for both flat and Omega ovens for prototyping the fast growing trends in hygiene applications.

YOUR BENEFITS

- Process expert support
- Equipment containing the latest technology
- Integrated laboratory to test nonwoven fabrics
- Simulation tool



Innovative solutions for hygiene products

ANDRITZ offers you customized solutions: For the production of hygiene products, we can deliver tailor-made processes. Take advantage of the vast expertise that ANDRITZ has to offer in a wide range of hygiene nonwovens technologies, such as web forming and finishing (air-through bonding, spunlace, spunlaid, spunjet, wetlace) and converting (baby diapers, feminine hygiene, adult incontinence).

COMPLETE AIR-THROUGH BONDING (ATB) LINES

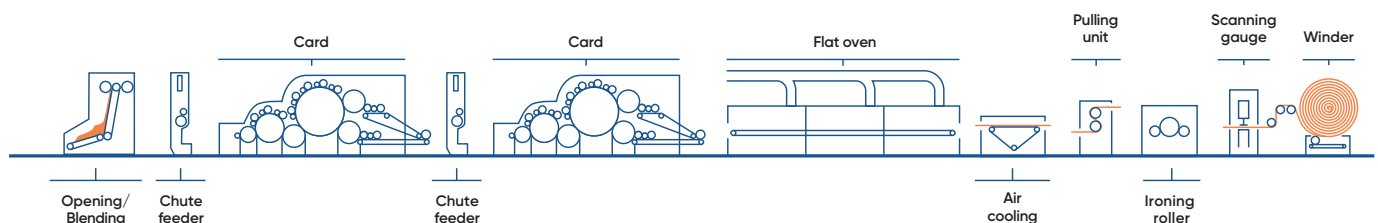
The ANDRITZ air-through bonding lines deliver all nonwovens fabric characteristics for hygiene end uses, such as top-sheets and acquisition distribution layers, and back sheets. The well-known ANDRITZ carding machines are the key to success in achieving perfect web uniformity and comfort. With the ANDRITZ air-through bonding line, you can benefit from high production capacity and high-performance fabrics from 16 to 80 gsm made from bi-component fibers produced at high speeds of up to 250 m/min.

COMPLETE SPUNLACE LINES

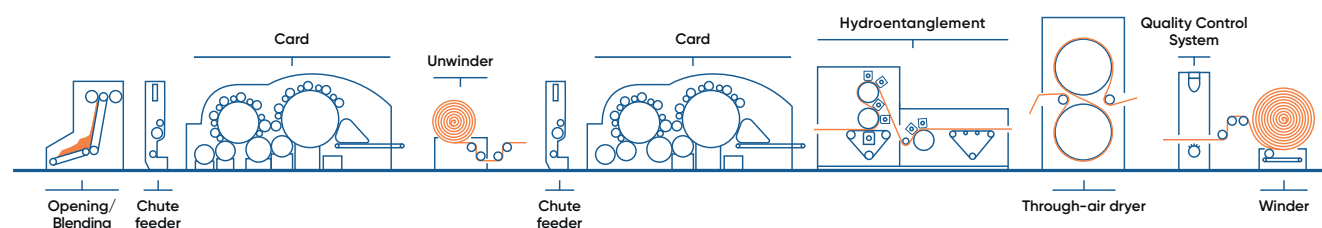
ANDRITZ is an active player in most of the world's spunlace production. In order to meet the market demands, ANDRITZ offers you a wide range of complete spunlace lines combining performance, efficiency and profitability. The premium line layout combines very high capacity of up to 25,000 t/a with low energy consumption and is able to produce all types of spunlace roll goods. Spunlace fabrics are made from all types of raw materials – natural or synthetic. Softness, drape, comfort, comfortability, high strength, and the fact that they contain no chemicals are the major characteristics that make spunlace nonwovens unique.

YOUR BENEFITS

- ANDRITZ expertise in hygiene market
- Perfect web uniformity
- Versatility of fibers
- Technical centers: spunlace in Montbonnot, France; spunbond/calendering/wetlaid in Krefeld, Germany and air-through bonding at CETI, France
- Expertise in testing and converting



ANDRITZ air-through bonding line for hygiene end-uses, 16-80 gsm



ANDRITZ spunlace line for medical and wipes end-uses, 30-100 gsm

COMPLETE SPUNBOND FINISHING LINES

ANDRITZ spunbond solutions: 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.

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.

THE EXPERTS IN CALENDERING

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.

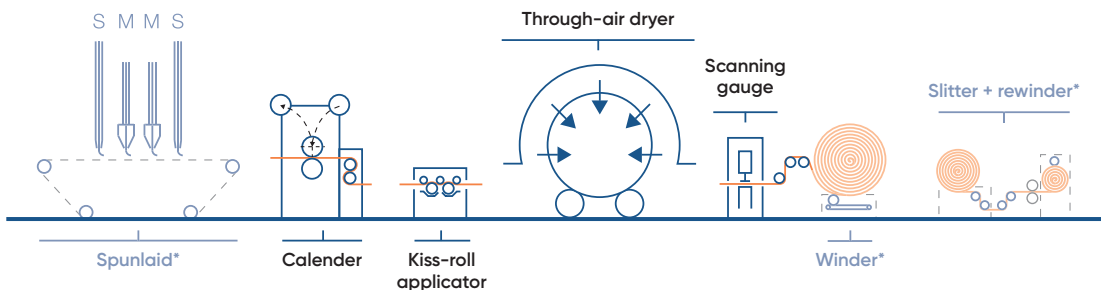
Benefit from reliable, flexible and proven technologies based on more than 750 innovative processes and engineering depth.

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.

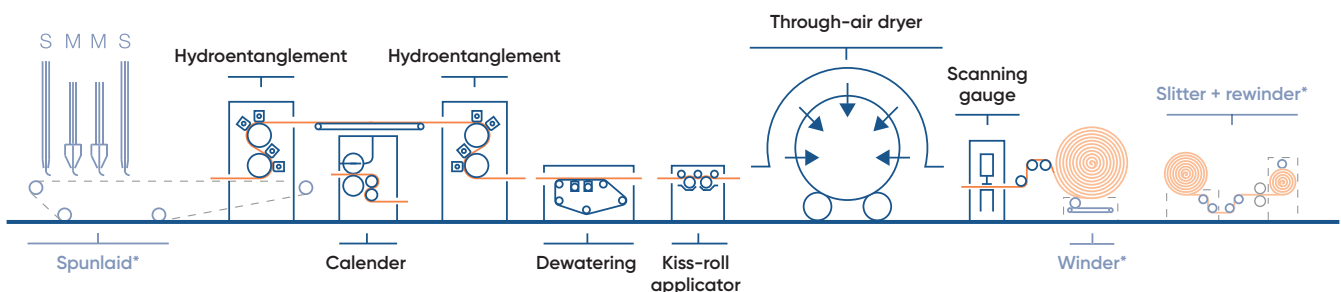
SPUNJET – A BONDING SOLUTION FOR ENDLESS FILAMENTS

The innovative 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.

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.



ANDRITZ spunlaid finishing line for hygiene and medical end-uses, 8-80 gsm



ANDRITZ spunjet line for the production of new generation spunlaid nonwovens, 20-80 gsm

* Technology provided by cooperation partners

Foresee digitally with Metris

Industrial Internet of Things (IoT) Industry 4.0, digitalization – current buzzwords that industries use when seeking to improve their performance and equip themselves for the future of industry.



ANDRITZ DIGITAL SOLUTIONS

As a technology leader with extensive and long-term experience in supplying industrial measurement, control, and optimization solutions for various industries, ANDRITZ is combining process and equipment expertise with the latest enhancements in the digital era. The result of this powerful combination is Metris: a portfolio of ANDRITZ Digital Solutions.

METRIS OPP

One of the flagship capabilities of the Metris assortment is its ability to optimize industrial processes with Metris OPP. It has been developed over the past decade within the pulp and paper sector and has recently been introduced to the nonwovens industry. It combines powerful analytical and data mining software with the knowledge of the world's top process experts to deliver a smart service initiative for customers.





A CONSTANTLY GROWING PORTFOLIO

The depth and effectiveness of the Metris portfolio continues to improve thanks to ongoing R&D, collaboration with key customers and institutions, and venture activities. Portfolio options all rely on the three strategic focus areas of the Metris brand: Industrial IoT

technologies, Smart Service concepts, and Venture activities. The main technological advancements integrated into individual Metris products are derived from big data analytics, smart sensor technologies, and augmented reality solutions. The Metris UX platform providing full support throughout the entire lifecycle of a

plant is the most recent of our IoT developments. With Metris solutions, customers foresee digitally due to the continuously improved portfolio and its performance – and to ANDRITZ providing tailored and fully integrated digital solutions from a single source.

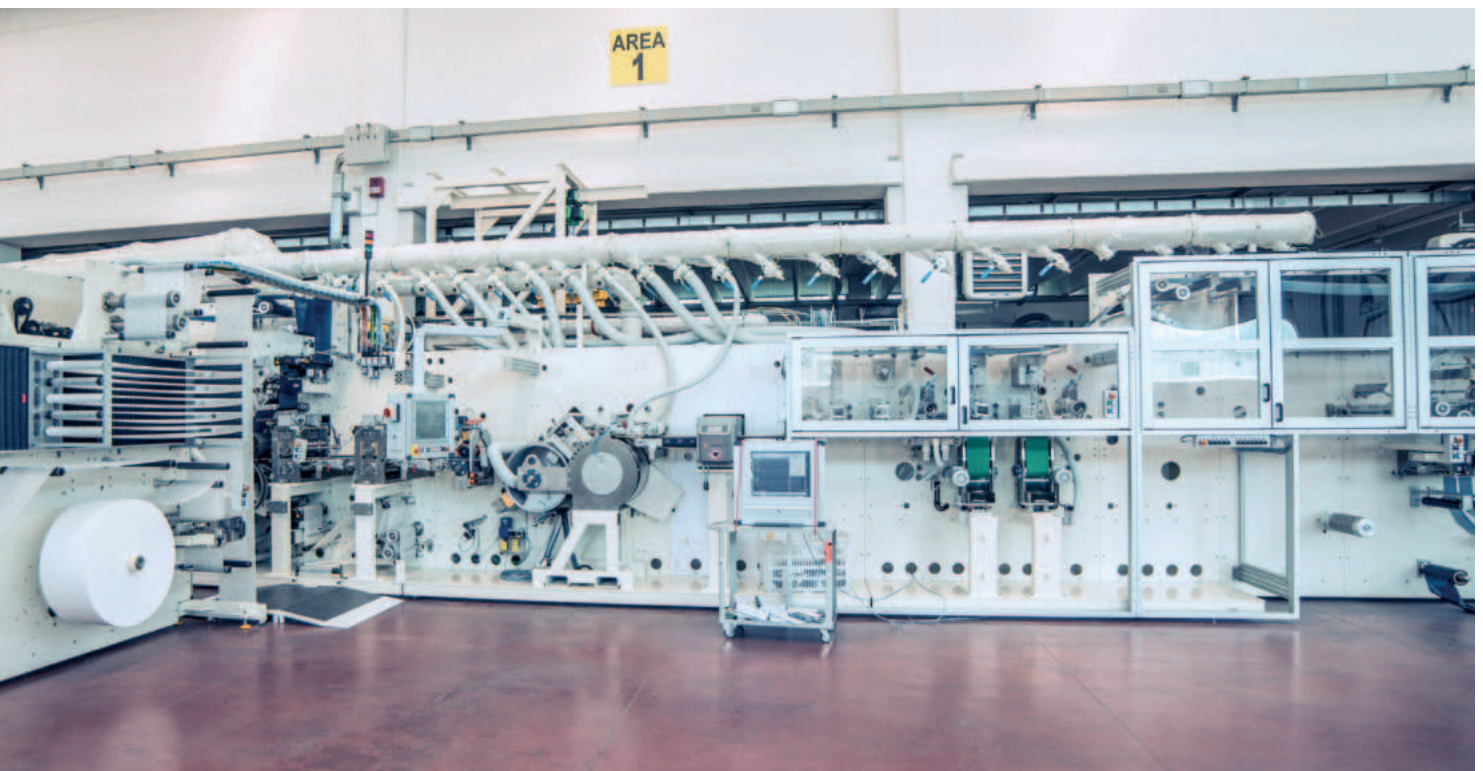
Benefits

Metris – ANDRITZ Digital Solutions

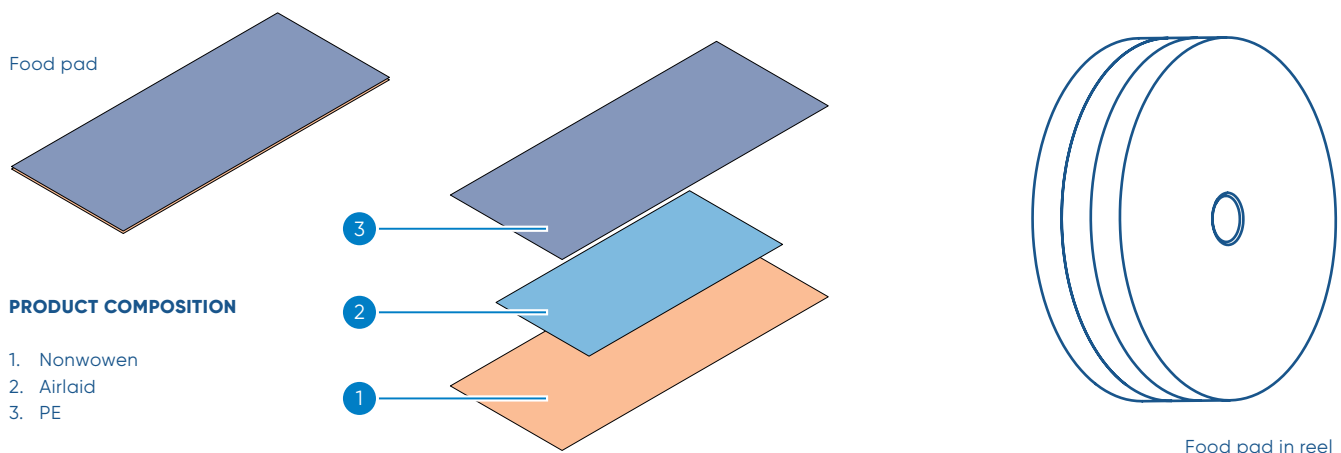
- **IIoT solutions across business segments**
- **Combined know-how from ten years' experience with Metris OPP**
- **Using the latest smart sensor technologies**
- **Big data analysis with tried-and-tested models for deviation analysis**
- **Providing information locally with augmented reality**
- **Extensive solution and process engineering knowledge**
- **Cyber security solution to safeguard data on the network**

Food pad converting machines

Modular design, maximum versatility: We at ANDRITZ Diatec are dedicated to providing the right D-TECH food pad machine for customers' needs. Our wealth of experience in this sector allows us to tailor machine configurations for customers' end-products. From pad sizes to packaging solutions, each step can be tailored to maximize customers' production options.



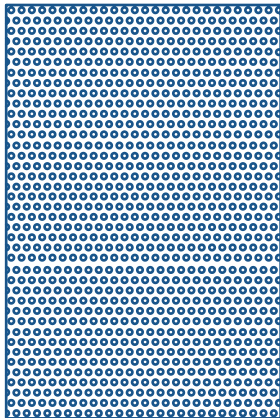
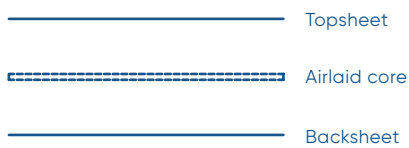
D-TECH food pad



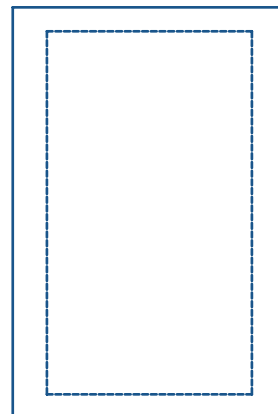
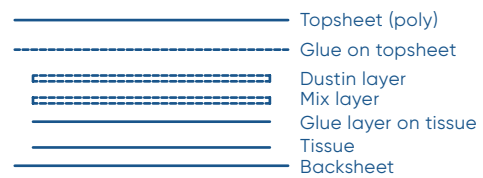
PRODUCT FEATURES

- Different pad sizes and colors
- Various absorption capacities
- Reduced thickness of the pads thanks to equipment for high compression
- Possible to work with airlaid or with fluff core
- Possible to add active substances (particles/ fibers) to maximize absorption and improve shelf life of perishable products

Edge pressing system



Open edge food pad



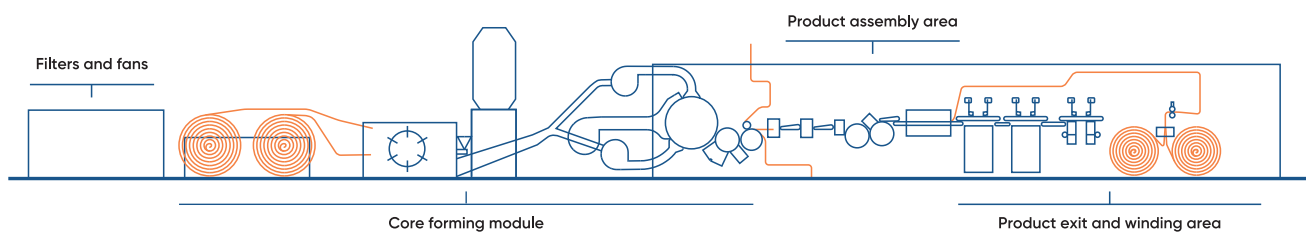
Closed edge food pad



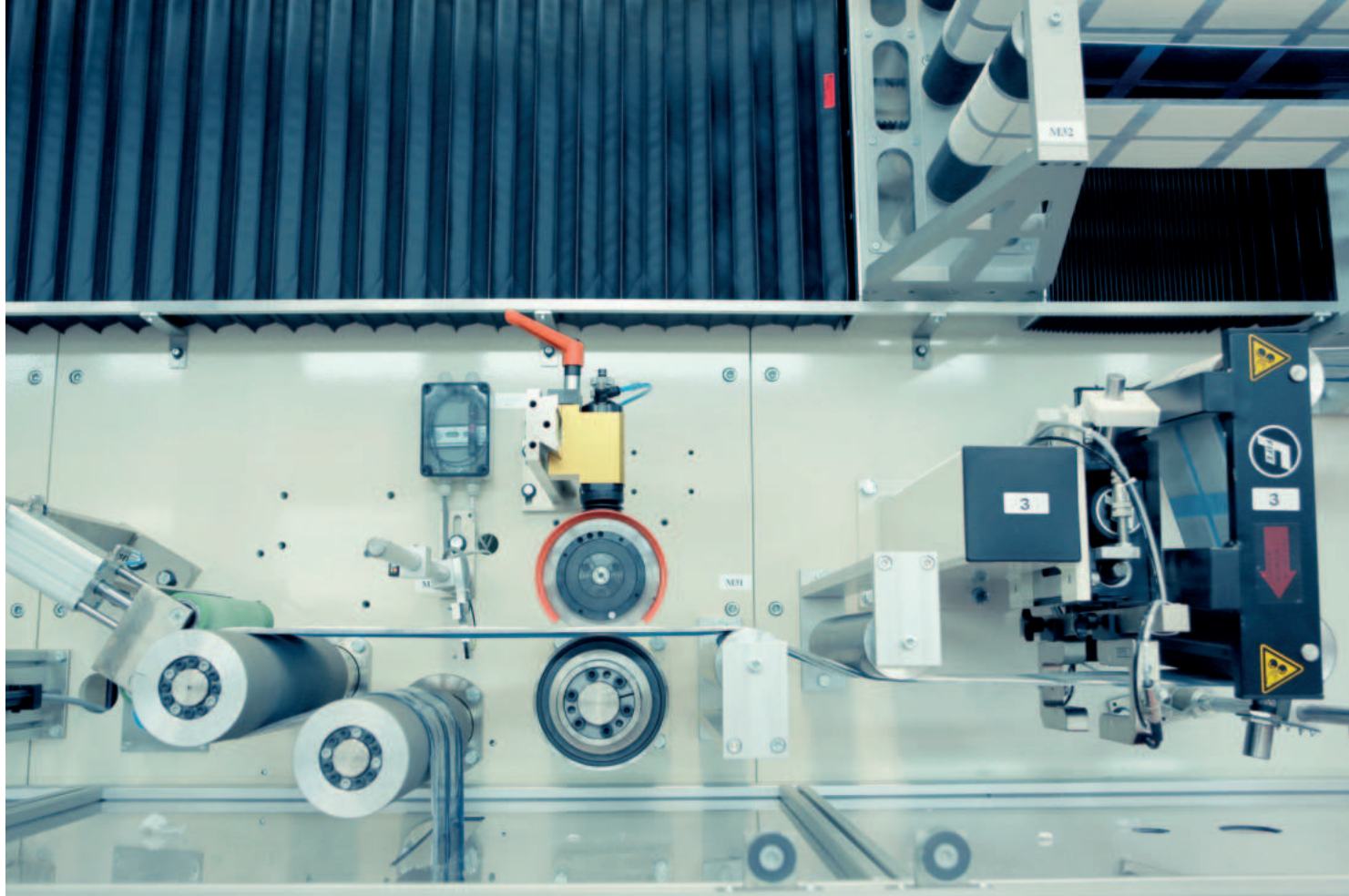
Possible stacking system for food pad

MACHINE SPECIFICATIONS

Linear speed	Up to 150 m/min
Production speed	Up to 1,500 pcs/min for each lane
Uptime efficiency	> 95%
Waste	< 1%
Product dimensions	From 50 mm up to 300 mm as width and 75 mm up to 700 mm as length with single or multiple lanes (different sizes on request)
Electric power supply	220/480 Vac, 50/60 Hz 3 phases + N + PE (24 Vdc auxiliary)
Consumed/installed electric power	200-300 kW 300-400 kW
Compressed air supply/consumption	6 bar/1,500 NI/min
Overall dimensions (LxWxH)	24,500 x 7,500 x 3,000 mm
Total weight	60-70 tons
Required crew	2 persons
Safety standard	CE



Pulp unwinder



Lanes slitting

In food pad machines, components can be freely combined and configured for the specific product required.

CORE FORMING MODULE

- Cellulose pulp stand
- Compact disc mill (or hammer mill) with double inlet
- 2D continuous core drum former
- Core processor
- Take-away drum
- S.A.P. or particles dosing system
- Trim slitting unit for core
- Separation system for core lanes

- Full servo motion system
- Web guiding system

OPTIONAL EQUIPMENT

- Airlaid unwinder
- Embossing unit
- Tissue unwinder
- Tissue water mist system
- Poly perforating unit
- Pre-cutting unit
- Rotary filter with second stage
- Additional size change kits
- Vertical stacker
- Manual exits for stacker
- Final product winder
- Packaging machine
- Cartoning machine
- Soundproof cabin
- Quality system LS with line scan camera
- Glue vision system
- Metal detector
- Material handling units

PRODUCT CONSTRUCTION AREA

- Backsheet unwinder
- Topsheet unwinder
- Cross-core unit
- Longitudinal pressing unit
- Cross-pressing unit
- Edge trim slitting
- Vacuum transfer drum
- Final cross-cutting unit
- Trim suction system
- Reject system
- Hot-melt system
- Manuals, drawing and software
- Onboard control panel



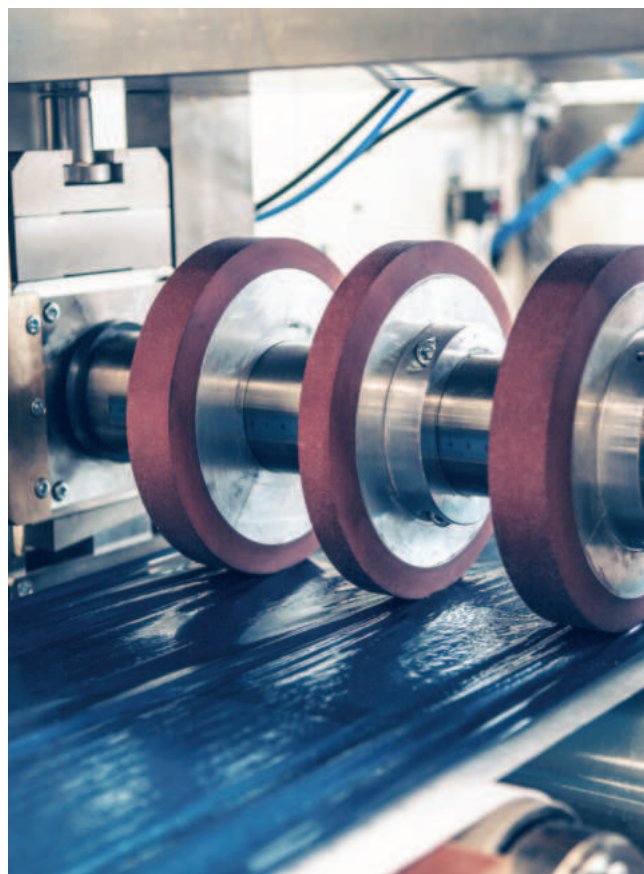
Food pad in reel



Food pad samples



Possible rewinding system



Longitudinal edge pressing unit



Human-machine interface

A photograph of a modern industrial manufacturing facility. In the foreground, a red robotic arm is positioned within a safety cage made of black metal mesh. The arm is reaching towards a conveyor system. In the background, there are various pieces of industrial machinery, including a large machine with a white roll of material and another with a large white coil. The floor is concrete, and the ceiling has exposed pipes and lighting fixtures. A yellow sign on the ceiling reads "AREA 5".

YOUR BENEFITS

- Fast size change
- Customization in core composition and fluff density
- Upgrades for quality and capacity increase
- Process stability and reliability

Robotized end of line

Lamination machines

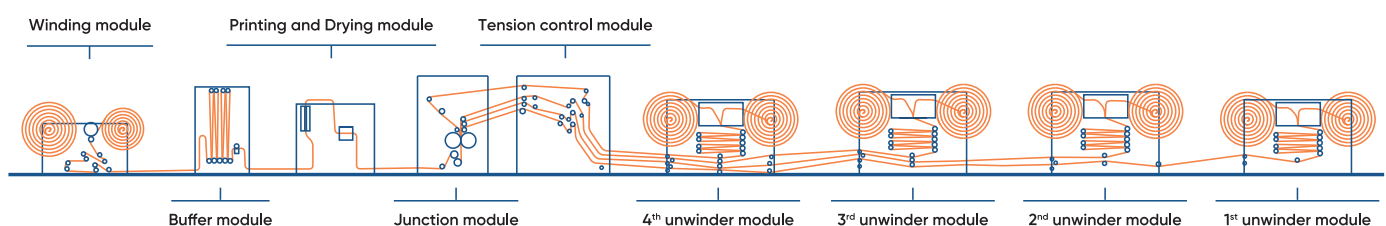
Exactly the right laminating machine to suit your needs: Depending on the end-use, ANDRITZ Diatec offers turnkey finishing lines for the production of multilayer composites. Each D-TECH line can be customized ensuring the highest production flexibility and end product quality. The various bonding technologies of the machines enable operators to produce different types of end-products, providing a broader range of options to the customer.



YOUR BENEFITS

- Customized process and machine layout for specific needs
- State-of-the-art technology
- Fast size change
- Innovative ultrasonic side sealing solutions for higher strength and system reliability
- Optimized energy consumption

D-TECH lamination line



COMPONENTS

Linear speed	Up to 500 m/min
Max. raw material width	Up to 3,200 mm
Unwinders	With manual or automatic splicing units
Tension control units and banana rolls	For each raw material there is: <ul style="list-style-type: none"> • One tension control unit • One pulling unit • One banana roll
Calender	Three different sealing technologies: <ul style="list-style-type: none"> • Ultrasonic sealing technology • Thermobonding sealing technology • Hot-melt sealing technology
Flexo printing unit	One or more colors in widths up to 3,200 mm
Silicon paper applicators	To apply one or more silicon paper strips with hot-melt glue
Slitting unit	To slit the two edges and cut the sealed web into two or three layers
Rewinding unit	In-line rewinder with automatic splicing unit to produce short reels or jumbo rolls

FIELDS OF APPLICATION

BUILD-TECH

- Polyethylene, polypropylene, aluminum, polyester laminates for roof underlinings, and wind and vapor barriers for roofs, walls and floors
- Bonding insulating materials for thermal and acoustic applications: piping, ventilation ducts or floor heating systems

MOBIL-TECH

- Heat-resistant aluminum and glass fabric laminates for heat shielding and interior design

MED-TECH

- First-aid products
- Laminates for pharmaceutical apparel
- Surgical drapes

HYGIENE-TECH

- Textile backsheet
- Frontal tape
- Elastic closure tape
- Elastic compound for ears

CLOTH-TECH

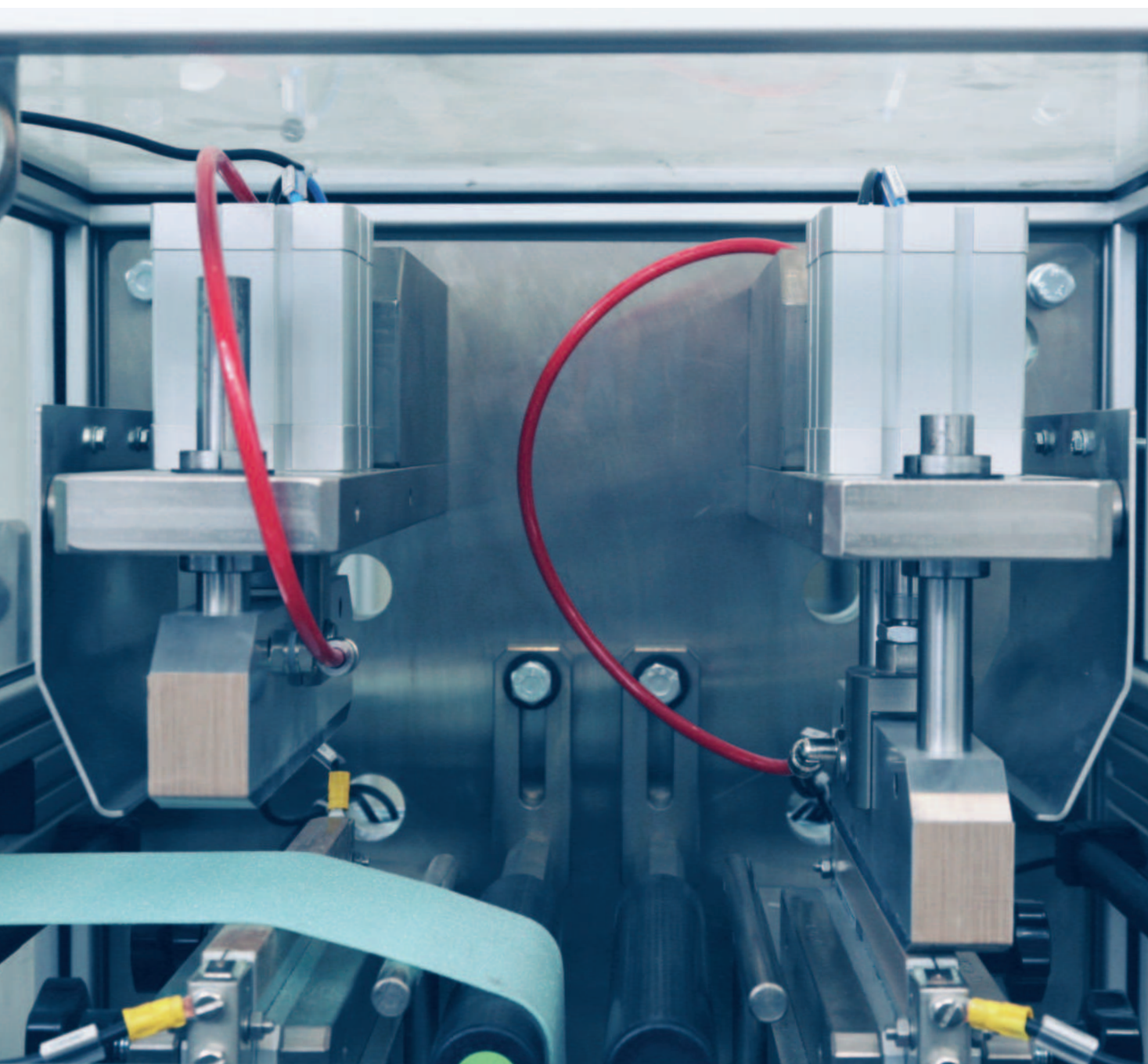
- Laminates for clothing applications used in the chemical and petrochemical sectors etc.

PRODUCT FEATURES

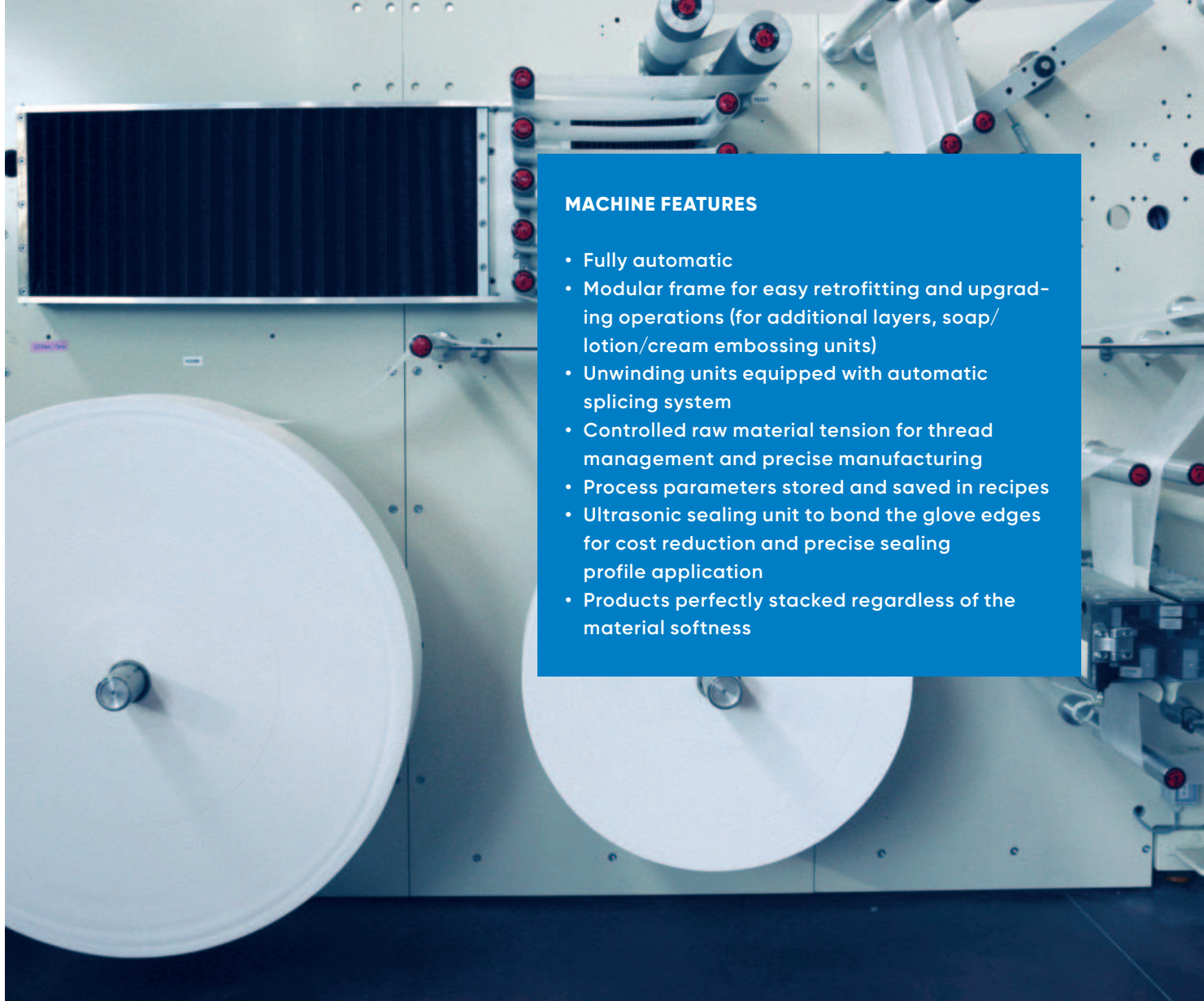
- Customizable products
- Nonwovens, breathable polyethylene layers, metal coatings, aluminized layers and netting for roofing and construction
- Production of high-performance laminates in roll form
- Production of multi-layer composites with ultrasonic, thermobonding and hot-melt calender
- Production of turnkey finishing lines from unwinders to tension controls, sealing units, printing of the web (flexographic and ink jet printers), silicon paper applicators, visual control systems, slitting and rewinding units

Gloves and head-rest converting machines

Fitting in with market needs: Regardless of the field of application, we at ANDRITZ Diatec provide the best D-TECH machine configuration for the production of gloves and head rests. We offer a multitude of solutions and seek the ideal one to cover the needs of producers all around the globe.



Sealing module



MACHINE FEATURES

- Fully automatic
- Modular frame for easy retrofitting and upgrading operations (for additional layers, soap/ lotion/cream embossing units)
- Unwinding units equipped with automatic splicing system
- Controlled raw material tension for thread management and precise manufacturing
- Process parameters stored and saved in recipes
- Ultrasonic sealing unit to bond the glove edges for cost reduction and precise sealing profile application
- Products perfectly stacked regardless of the material softness

Nonwovens unwinder

FIELDS OF APPLICATION

Disposable gloves can be used in numerous applications:

PERSONAL AND MEDICAL CARE

- As an alternative to wet wipes or traditional basin baths, when conveniently pre-moistened with a pH-neutral substance

PET CARE

- Effective disposal of pets' waste without any additional tools or substances

HOUSEHOLD CARE

- Easy entrapment and removal of dirt, dust and allergens from furniture surfaces
- Antistatic action for a prolonged dust-repellent effect

CLOTHING CARE

- Easy cleaning and polishing of leather shoes

CAR CARE

- Practical removal of dirt and dust from car interior surfaces



Rectangular glove

MACHINE SPECIFICATIONS

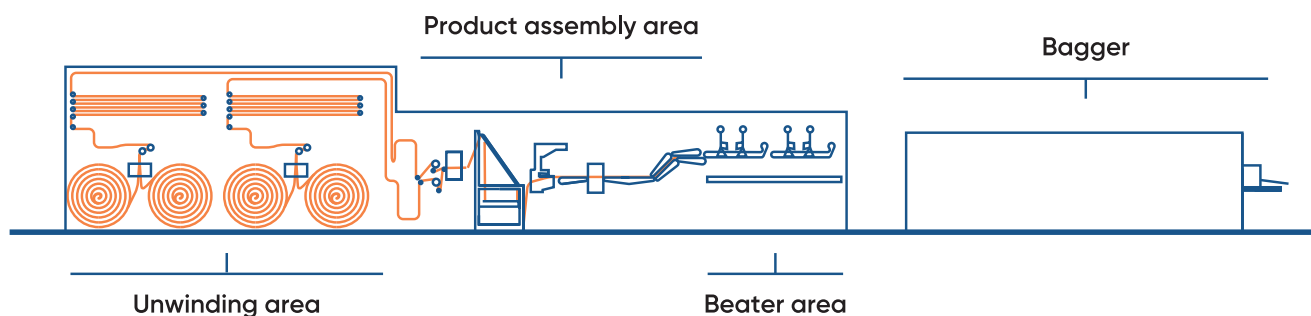
Linear speed	Up to 100 m/min
Production speed	Up to 600 pcs/min
No. of raw materials	Up to 2 (more upon request)
Min. and max. raw material width	120-650 mm (other dimensions on request)
Max. roll weight	120 kg
Max. no. of cycles for the stacking unit	20 per minute
Max. no. of pieces per stack	50
Raw material type	NW- PE- PP, others upon request
Type of bonding	Ultrasonic

PRODUCT FEATURES

- One-layer or two-layer solutions
- Two different shapes, rectangular or anatomic
- Extremely soft and gentle to the skin
- Hypoallergenic

COMPONENTS

One layer	Two layers
1 unwinder	2 unwinders
1 web guide	2 tension controls (nr 2 pullers + nr 2 load cells)
1 or 2 folding units (one for gloves – two for head rests)	2 web guides
1 pulling unit	1 slotted glue applicator to laminate two raw materials inline
1 or 2 ultrasonic units	1 calender
Vacuum conveyor belt	1 or 2 folding units (one for gloves – two for head-rests)
Final cutting unit: rectangular or anatomic	1 pulling unit
Edge trim removal	1 or 2 ultrasonic units
Soap/lotion/perfume applicator (optional)	Vacuum conveyor belt
Speed-up conveyor belt	Final cutting unit: rectangular or anatomic
Reject system	Edge trim removal
Conveyor belt	Soap/lotion/perfume applicator (optional)
2 stacking units	Speed-up conveyor belt
Conveyor belt to bring all stacks to packaging	Reject system
Imbibition unit	Conveyor belt
Packaging systems: bags, cardboard boxes	2 stacking unit
	Conveyor belt to bring all stacks to packaging
	Imbibition unit
	Packaging systems: bags, cardboard boxes



ADVANTAGES

Disposable gloves offer key advantages over wet wipes and dusters, including:

PRACTICALITY

- Disposable
- Ergonomic, for a perfect fit on the user's hand

COMFORT AND DURABILITY

- Extremely resistant and thick material thanks to the "two-layer solution"
- Soft and caring to the skin

HYGIENE

- Completely covering the user's hand
- Effective prevention of cross-contamination

LESS STRESS AND MORE EFFICIENCY

- Reduction of musculoskeletal stress common to manual cleaning processes

TIME-SAVING

- No need for additional cleaning tools
- Quick and easy cleanup

YOUR BENEFITS

- Integrated insert cutting, turning and placing system for maximum process stability
- Upgrades for quality and capacity increase
- Efficient raw material management
- From concept and engineering to start-up and service, our experts are close to you

Surgical drape converting machines

Customize your choice: With our D-TECH surgical drape lines, we provide multiple and comprehensive solutions for every kind of surgical drapes. ANDRITZ Diatec offers different technology solutions to produce a wide variety of drapes with customized dimensions and tailored packaging alternatives.



D-TECH surgical drapes line



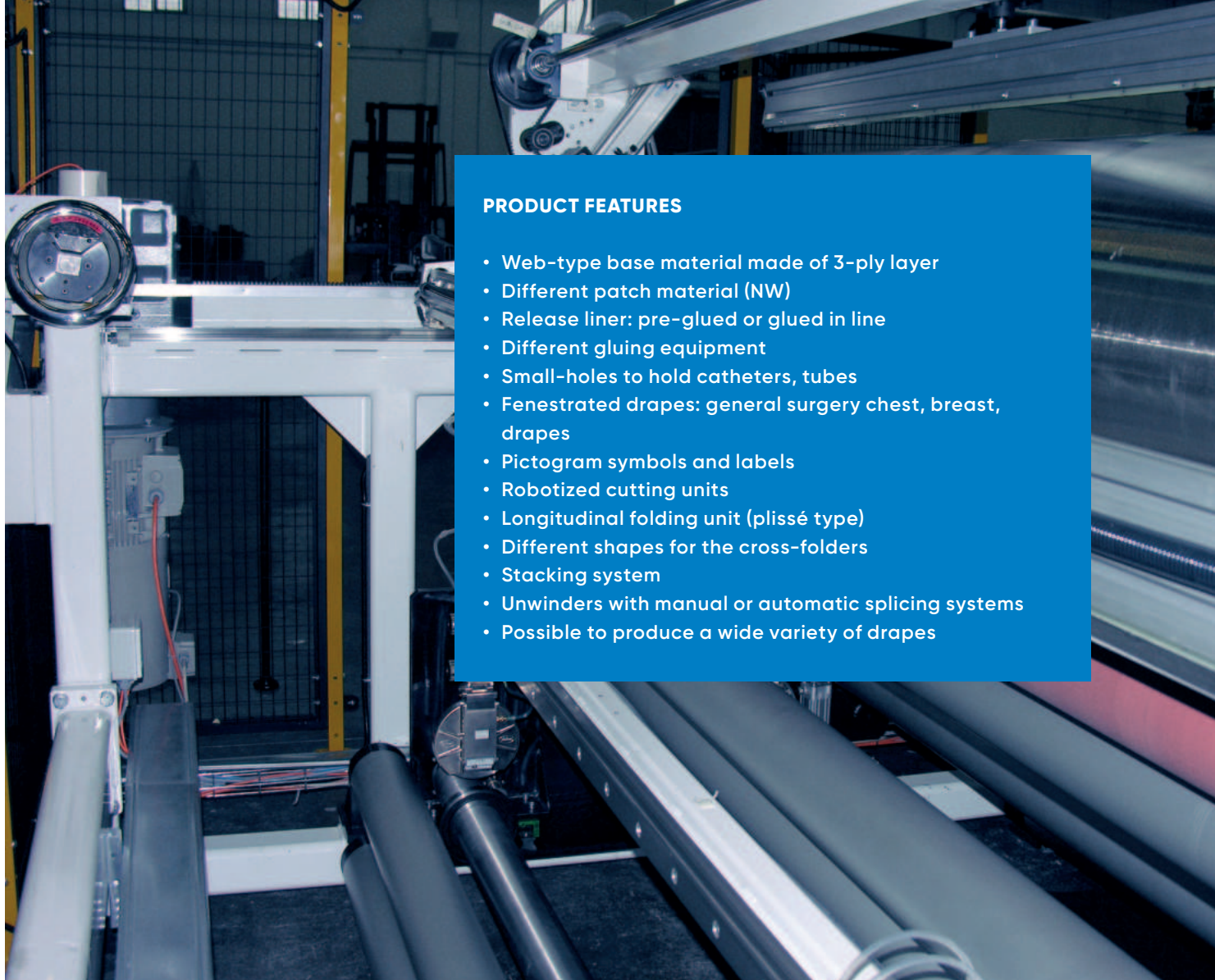
Turret unwinder



Cantilever unwinder

PACKAGING SOLUTIONS

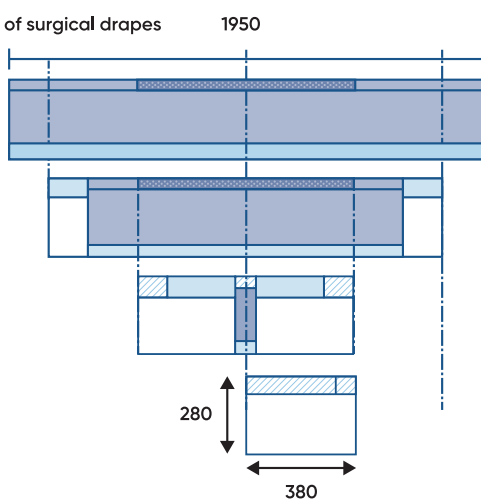
- Cut, folded and stacked
- Individually wrapped in plastic bags
- Roll-to-roll package



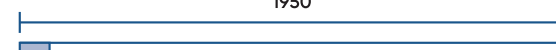
PRODUCT FEATURES

- Web-type base material made of 3-ply layer
- Different patch material (NW)
- Release liner: pre-glued or glued in line
- Different gluing equipment
- Small-holes to hold catheters, tubes
- Fenestrated drapes: general surgery chest, breast, drapes
- Pictogram symbols and labels
- Robotized cutting units
- Longitudinal folding unit (plissé type)
- Different shapes for the cross-folders
- Stacking system
- Unwinders with manual or automatic splicing systems
- Possible to produce a wide variety of drapes

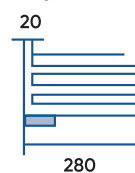
Cross folding of surgical drapes



1950



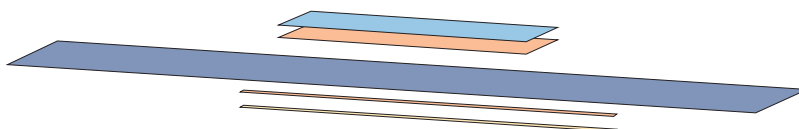
Longitudinal folding of surgical drapes

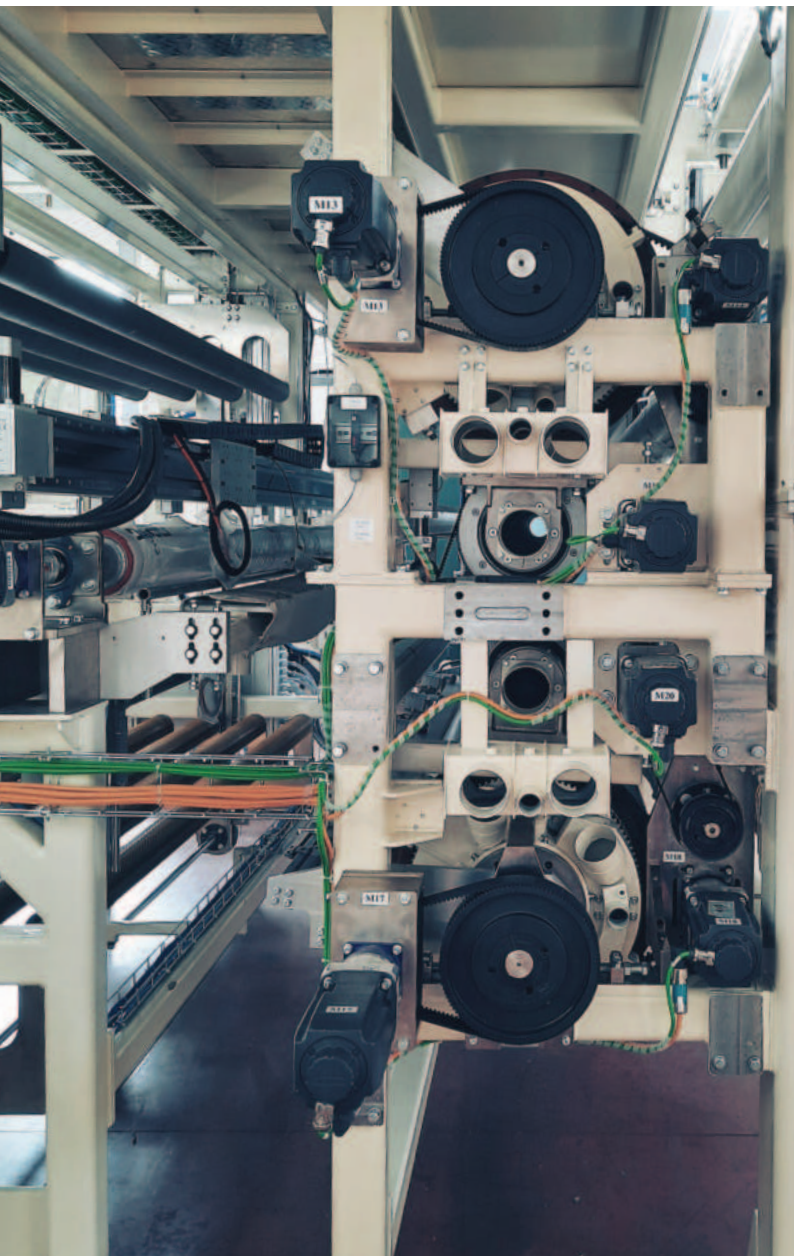


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PRODUCT COMPOSITION

1. Basic material (laminated web)
2. Patch (NW)
3. Strip of adhesive silicon paper
4. Other materials

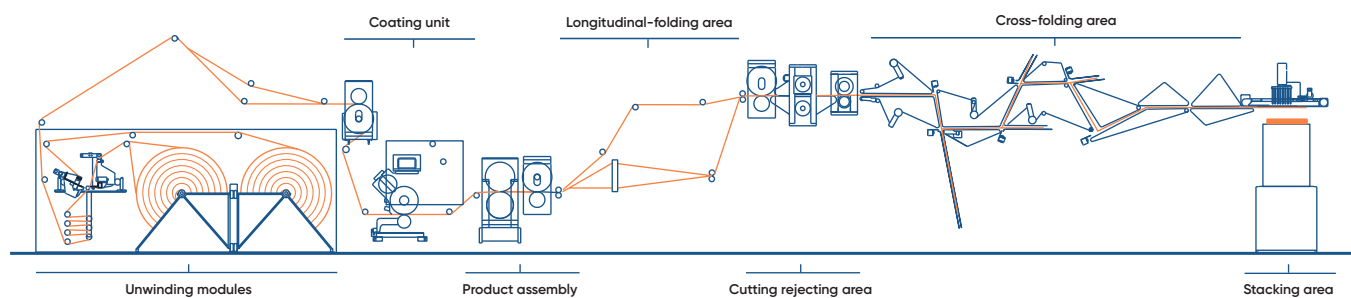




D-TECH surgical drape line

MACHINE SPECIFICATIONS

Linear speed	Up to 100 m/min
No. of raw materials	Up to 7 (more upon request)
Max. raw material width	2,400mm
Max. product length	4,000mm (longer upon request)
Lamination type	Full range of sealing technologies: <ul style="list-style-type: none"> • thermobonding • ultrasonics • hot-melt glue
Cutting systems	Robotized cutting units
Min. and max. finished product dimensions	400 X 400 mm - 2,400 X 4,000 mm
Folding types	Longitudinal (plissé) and cross-folding units
Min. and max. finished and folded product dimensions	60 X 300 mm - 300 X 300 mm (different dimensions upon request)
Finished product collection	Stacking units or roll-to-roll
Type of packaging	Plastic bags or cardboard boxes
Safety standard	CE





YOUR BENEFITS

- Flexible in product composition
- Fast and easy operation and size change
- Fully customized configuration
- Ergonomic structure
- Process in line with white room requirements

Folding system

In surgical drape machines, components can be freely combined and configured for the specific product required.

PRODUCT COMPONENTS

- Web-type base material made of different laminated layers
- Absorbent material (NW)
- Silicon layers
- Discrete elements
- Stickers and velcro elements

STANDARD EQUIPMENT

- Unwinder for basic material with automatic or manual splicing system
- Unwinder for absorbent material with automatic or manual splicing system
- Unwinder for silicon paper material with automatic or manual splicing system
- Unwinders for lateral panels with automatic or manual splicing

- Cutting unit for holes in MD and CD
- Gluing equipment for absorbent, silicon paper and lateral layers
- Equipment to apply silicon paper, lateral panels, discrete elements
- Sticker applicators and printing units
- Folding unit in MD (plissé)
- Cutting and reject unit
- Folding units in CD
- Winding unit for roll-to-roll products
- Visual device for quality control
- Housing guards
- Manuals, drawings and software
- Onboard control panel

OPTIONAL EQUIPMENT

- Automatic splicing system in the unwinder for the basic material
- Automatic splicing system in the unwinder for the absorbent material
- Automatic splicing system in the unwinder for the silicone paper material
- Automatic splicing system in the unwinder for the lateral panels
- Kiss and pre-cutting units for silicon paper and discrete elements
- Additional gluing equipment for human skin biocompatible glue
- Automatic splicing system in the winding unit roll-to-roll
- Semi-automatic folding table

Face mask converting machines

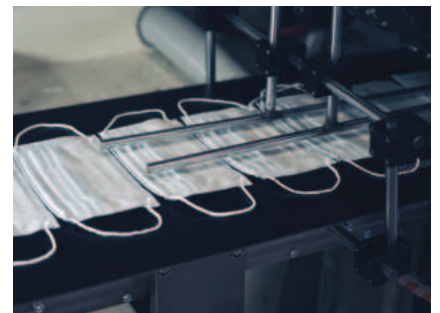
Ensure highest quality and hygiene standards: The global health crisis has propelled us to seek effective solutions as a contribution towards overcoming the COVID-19 pandemic. Disposable face masks are now important more than ever. With this in mind, we have modernized a technical solution for our fully automatic, high-speed D-TECH face mask converting lines for the production of surgical and respiratory disposable face masks.



D-TECH face mask line



3-ply folding system



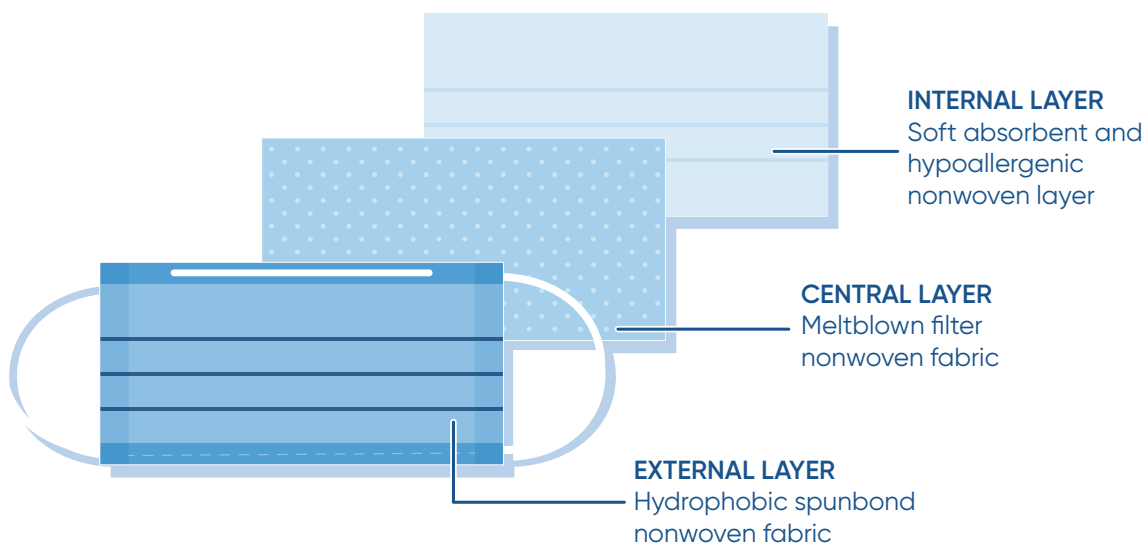
Fully assembled face masks

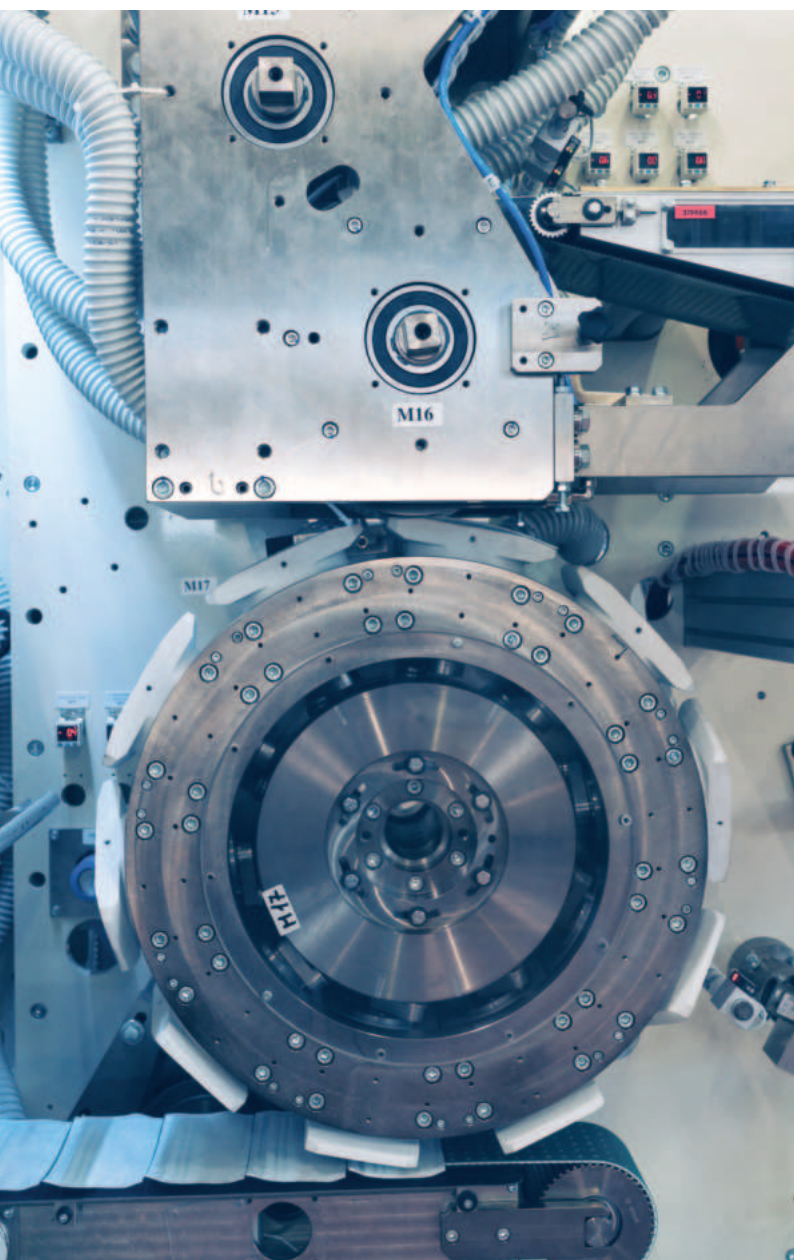


PRODUCT FEATURES

- Ear loops sealed inside the mask
- Optional fourth layer
- Customizable product design and sealing pattern
- Flexibility in packaging options: Products can be packed in bags by an automatic flow wrapping machine or in cardboard boxes by an automatic cartoner
- Different face mask sizes available
- Full range of respiratory face masks

3-LAYER SURGICAL FACE MASK



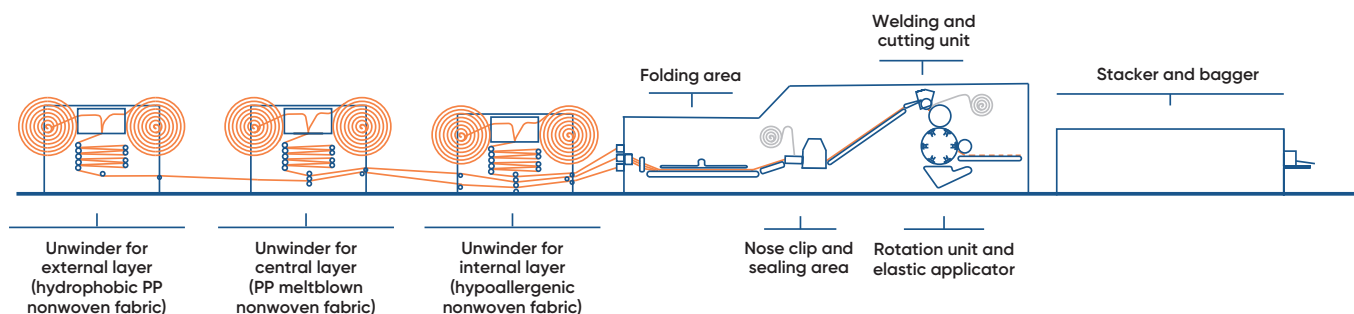


90° rotating unit

MACHINE SPECIFICATIONS

Production speed*	Up to 600 pcs/min
Uptime efficiency	90%
Waste	1-3%
Product dimensions*	Maximum width: 95 mm Maximum length: 175 mm
Electric power supply	220/480 Vac, 50/60 Hz 3 phases + N + PE (24 Vdc auxiliary)
Consumed / installed electric power	130 kW
Compressed air supply / consumption	6 bar / 2,000 NI/min
Overall dimensions (LxWxH)	14,000 x 2,500 x 4,500 mm
Total weight	25 tons
Required crew	2 persons (1 operator + 1 auxiliary)
Standard safety	CE

* Specifications of respiratory face mask machine vary according to product design





YOUR BENEFITS

- High-production speeds lead to enhanced production capacity
- Non-stop production and robust construction
- High-end continuous production due to splicing systems
- Operator-friendly process and reduced maintenance downtimes
- Energy-efficient process
- Additional quality control system for highest quality standards
- Flexible approach with a variety of packaging solutions (flow wrapping, cartoner)
- Full support from ANDRITZ Nonwoven experts optimize your production

Edge sealing

In face mask machines, components can be freely combined and configured for the specific product required.

PRODUCT ASSEMBLY AREA

- Unwinders for three layers
- Longitudinal folding
- Nose clip unwinder and applicator
- Edge folding system
- Longitudinal and cross folding station
- Final cutting unit
- Ear loop unwinder and applicator
- Vertical stacker
- Filter system for dust removal
- Full servo-motion system
- Installation, training and manuals

OPTIONAL EQUIPMENT

- Unwinder(s) for additional layer(s)
- Ultrasonic sealing for product edges
- Ink-jet-printing system
- Line scanning camera for quality control
- Kit for small mask size
- Manual exit for stacker
- Automatic flow wrapping machine
- Automatic cartoner
- Automatic case packer
- Retrofit kit for production of respiratory face masks

- Complete module for combined machine: surgical and respiratory
- Retrofit kit for face masks with ties



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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