SCHOTT & MEISSNER

Maschinen- und Anlagenbau GmbH

INNOVATIVE BONDINGS

Your specialist for

- Nonwoven bonding
- Heat treatment
- Thermofix technology
- Process technology

German engineering since 1986

With pride and an awareness of our responsibility, we can say that SCHOTT & MEISSNER is the global leader in manufacturing heat treatment and nonwoven bonding production lines. Our know-how, innovative strength and “German engineering” is in demand and prized on all continents. As experienced specialists in special-purpose engineering – from construction through to commissioning – we generate exclusively customer-specific solutions at our premises in Blaufelden in the county of Hohenlohe since 1986. Quality and reliability are values that we live and which are therefore naturally incorporated in our products.

The goal of our highly motivated and committed team is to make a reality that which often seems impossible for our customers on a daily basis.

We look forward to receiving your enquiry concerning all issues relating to nonwoven bonding, heat treatment, Thermofix technology and process technology.
Further information about SCHOTT & MEISSNER and our products and solutions can be found online at **www.schott-meissner.de.**

Warm regards

Achim Meissner
CEO

Stefan Meissner
CEO

Nonwoven bonding

Heat treatment

Thermofix technology

Process technology

Heat treatment and nonwoven bonding production lines

Heat treatment is at the heart of all our production lines. We harness hot air, contact heat and radiant heat to dry, melt or thermoset various materials in a continuous or discontinuous process. We specialize in nonwoven bonding production lines for thermal bonding using fibers and powders or with bonding agents for spray application, foam impregnation or liquid binder bonding.

History & milestones

Globally leading manufacturer of heat treatment and non-woven bonding production lines.

2022
- Extension of assembly hall 3

2019
- Development of the electrically heated Thermofix TFE flatbed laminating line

2017
- Generation change in the management

2013
- Completion of assembly hall 3 and office building 2

2011
- Formal opening of new Technology Centre and expansion of business premises

2010
- Delivery of first drum dryer to Japan

2004
- Delivery of first high-speed thermobonding line to South Africa

1998
- New construction of assembly hall 2

1992
- Delivery of the first Thermofix flatbed laminator in Germany

1991
- Move to the new premises in Rudolf-Diesel-Strasse in Blaufelden

1986
- Delivery of the first belt oven in Germany
- Heinz Schott & Wolfgang Meissner establish the company

TopCon LP thermobonding line with downstream equipment

”ERTEC“
Heat Recovery System

Depending on the application, SCHOTT & MEISSNER offers various systems for heat recovery in the ERTEC (EnergyRecoveryTEChnology) range.

“ERTEC-LEAN”

The heat treatment system in the “LEAN” series is a basic unit that was specially developed for the thermobonding processes of SCHOTT & MEISSNER. The hot exhaust air from the cooling zone is recycled in the process. The high level of heat recycling with a very low investment cost characterizes this system.

“ERTEC-CROSS”

The heat recovery system series „CROSS“ is a simple system that functions according to the cross-stream principle and is intended for low exhaust air volumes. “ERTEC-CROSS” is a complete stand-alone unit and can be seamlessly adapted to a SCHOTT & MEISSNER production line later. The unit is characterized by easy access for cleaning purposes, a high level of heat recycling and a modular design.

“ERTEC-DUO”

The “ERTEC-DUO” takes the „CROSS‘ series one step further with a 2-stage heat recovery process. In the first stage, make-up air is pre-warmed with exhaust air. In the second stage, the water-laden discharged air is brought under the dew point, i.e. the water is condensed out and can therefore be recycled back into the process.

“ERTEC-ROTO”

A heat recovery system fitted with a rotary heat exchanger disk. “ERTEC-ROTO” is a complete stand-alone unit and can be seamlessly adapted or refitted to a SCHOTT & MEISSNER production line later. This heat recovery system is often used for large exhaust air streams or where there is limited floor-space. This system is characterized by short amortization periods and a high level of heat recycling.

TopCon LP Double Belt Air-Through Oven

The TopCon LP (LowPressure) is a double belt oven in a modular design for nonwoven bonding with heated air by means of the convection-air-through principle with an option to change the direction of flow meter by meter. The fabric web is then cooled or bonded in a cooling zone, also by means of the convection-air-through principle. Additional equipment available: magnet system (to keep the upper belt in suspended position), working width adjustment, belt cleaning device, various heating systems, multi-flow zones, and calenders.

TECHNICAL DATA	
Useful working width	1,200 - 6,000 mm
Zone length	2,000, 3,000, 4,000 mm
Free clearance between conveyor belts	max. 300 mm
Heating media	Natural gas, LPG, heat transfer oil, steam, electric energy
Working temperature	max. 220°C (250°C optional)
Fibers	PES, PP, PA, BiCo, cotton, recycling fiber, flax, hemp, Kenaf, wood fiber and sheep wool
Weight range	45 - 10,000 g/m²
Web density	max. 250 kg/m³ (in conjunction with calibrating rollers)
Production speed	max. 100 m/min

END USES

- Upholstery for furniture industry
- Fibrefills and interlinings for garments
- Insulation material for buildings and the automotive industry
- Moulding parts for the automotive industry
- Filtration
- Geotextiles
- Medical applications and hygiene industry
- Interlining

TopCon HP Double Belt Oven with Double Hot Air Impingement

TopConHP (HighPressure) is a high-efficiency double belt oven in modular design for the thermally or chemically bonding nonwovens or nonwoven material. The fiber package is held in between the top and bottom conveyor belt and treated from both sides at high air velocity and large volumes of recirculated air. The air nozzles can be found directly on the conveyor belts or the fabric web. The air is pressed through or on the fabric at high pressure; the direct, highly efficient air treatment offers short lead times.

TECHNICAL DATA	
Useful working width	1,200 - 6,000 mm
Zone length	2,000 mm
Free clearance	max. 150 mm between the conveyor belts
Heating media	Natural gas, LPG, heat transfer oil, steam, electric energy
Working temperature	max. 220°C (250°C optional)
Fibers	PES, PP, Viscose, PE, BiCo, PA
Weight range	15 - 1,500 g/m²
Web density	max. 150 kg/m³
Production speed	max. 250 m/min

END USES

- Wipes
- Medical application and hygiene industry
- Interlining
- Filtration

Short lead times due to direct, highly efficient air treatment.

TopCon MAP Double Belt Oven with either Air-Through or Air-Impingement Ventilation Mode

The newly developed TopConMAP (MultiAirPrinciple) double belt oven is a compact all-rounder in a modular design. This oven combines all the well-known and well-proven features of our TopConLP and TopConHP double belt systems in one system. This means, the oven offers adaptable air-through handling per meter and highly efficient impingement ventilation from both sides. The highlights of this oven are its high flexibility, compact design and the newly developed air ventilation principle, which ensures that there is negative pressure on the entire outer oven insulation for optimal leak tightness.

Our all-rounder

TECHNICAL DATA

Useful working width	1,200 - 6,000 mm
Zone length	2,000 mm
Free clearance between conveyor belts	max. 300 mm
Heating media	Natural gas, LPG, heat transfer oil, steam, electric energy
Working temperature	max. 220°C (250°C Optional)
Fibers	PES, cotton, recycled fiber, flax, hemp, Kenaf, wood fiber and sheep wool, PP, PE, BiCo
Weight range	80 - 12,000 g/m²
Web density	max. 250 kg/m³ (in conjunction with calibrating rollers)
Production speed	max. 100 m/min

END USES

- Upholstery for furniture industry
- Fibrefills and interlinings for garments
- Insulation material for the building and automotive industry
- Moulding parts (semi-finished) for the automotive industry
- Filtration
- Medical application and hygiene industry
- Interlining
- Wipes
- Application for air-impermeable products
- Carpet backing
- Double-coated nonwoven materials

Our modular design principle allows us to include a variety of options and extensions, depending on customer requirements.

AVAILABLE OPTIONS/EXTENSIONS

- THM – TwinHeatModule
- ACM – AirCleanModule
- Magnet systems
- Working width adjustment
- Cleaning brushes
- Heat recovery systems

THM - TwinHeatModule

ACM - AirCleanModule

RegulAir LP-C Single-Belt Air-Through Oven on Laboratory-Scale

The RegulAir LP in compact design for pilot plant/and development plants is mainly used for drying wet laid nonwovens. This machine type is available in three different widths and also in a modular design. The air flow is fixed and takes place in the air-through-principle with low air velocities from top to bottom. The advanced infeed also offers the option of IR pre-drying.

TECHNICAL DATA	
Useful working width	310, 610, 910 mm
Heating media	Electric energy
Working temperature	max. 235°C
Fibers	Special fibers such as ceramic, carbon, natural and synthetic fibers
Weight range	10 - 200 g/m²
Production speed	max. 100 m/min

END USES

- Filter applications
- Medical and hygiene applications
- Drying of coated and impregnated fabric webs
- Use in development and research
- Wetlaid processes (drying of wetlaid nonwovens)

RegulAir LP Single Belt Air-Through Oven

The RegulAirLP, in a modular design, works with the air-through process and is usually used for processing lightweight and air-permeable products which do not require a top conveyor. The air is forced to pass vertically through the fabric web, which allows gentle treatment of the fibers at low air velocities. Relevant technical features ensure optimal overall air and temperature distribution in the oven across the entire length and breadth of the ventilation area. The oven can be supplied with an air flow adjustment mechanism and, if needed, it can be fitted with a conveyor cooling zone. The flat design of the production line allows multiple ovens to be arranged on top of each other.

TECHNICAL DATA	
Useful working width	1,200 - 6,000 mm
Zone length	2,000, 3,000, 4,000, 5,000 mm
Free clearance	max. 400 mm
Heating media	Natural gas, LPG, heat transfer oil, steam, electric energy
Working temperature	max. 220°C
Applications	Drying, thermobonding, sintering
Weight range	20 - 8,000 g/m² (air-permeable)
Production speed	max. 300 m/min

END USES

- Fibrefills and interlinings for garments
- Thermobonding for lightweight nonwovens (no top conveyor)
- Interlining
- Drying after impregnation

RegulAir HP Single Belt Oven with Air Impingement Ventilation

RegulAirHP with single air-impingement ventilation.
Single air-impingement ventilation is used to dry the surfaces of mostly air-impermeable products, e.g., after coating, printing or one-sided impregnation. Depending on the product, the nozzles used are either hole-type or slot-type nozzles.

RegulAirHP with double air-impingement ventilation
Double air-impingement ventilation is used for drying heavyweight air-permeable materials such as carpets, or after impregnation from both sides. The air ventilates from both sides to the fabric web. The ratio between the top and bottom air can be adjusted.

TECHNICAL DATA	
Useful working width	1,200 - 6,000 mm
Zone length	2,000, 3,000, 4,000, 5,000 mm
Free clearance	max. 200 mm
Heating media	Natural gas, LPG, heat transfer oil, steam, electric energy
Working temperature	max. 220°C
Application	Drying, sintering
Weight range	20 - approx. 1,500 g/m² (air-impermeable)
Production speed	max. 300 m/min

END USES

- Carpet backing
- Interlining
- Air-impermeable fabric webs
- Drying of coated and impregnated fabric webs

3-Pass Dryer / Spray Bonding Lines

In its 3-pass dryer, SCHOTT & MEISSNER places special importance on the compact and modular design. If required, up to 3 air treatment systems, e.g. air-through or single- or double air impingement ventilation can be combined in one oven. The compact construction of this dryer ensures that any length treatment sections can be realized in the smallest possible floorspace. SCHOTT & MEISSNER has earned an excellent reputation in particular in the field of spray bonding by means of abrasive dispersion.

Up to 3 different air treatment systems can be combined

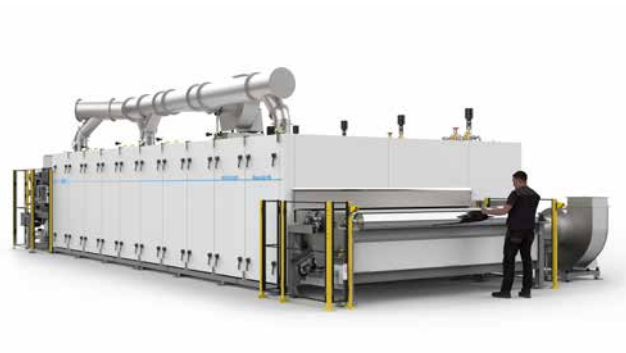
TECHNICAL DATA	
Useful working width	1,200 - 5,000 mm
Zone length	3,000, 4,000, 5,000 mm
Free clearance	max. 400 mm
Heating media	Natural gas, LPG, heat transfer oil, steam, electric energy
Working temperature	max. 235°C
Fibers	PES, cotton, flax, hemp, Kenaf, wood fiber and sheep wool
Production speed	max. 200 m/min

END USES

- Abrasive webs (scouring pads)
- Spray-bonded PES-nonwovens for winter garments, sleeping bags, etc.
- Latex-bonded natural fiber, e.g. coconut fiber mattress pads
- Interlining
- Spunlace lines, 3-pass dryers as an alternative to drum dryers
- Spray application of activated charcoal for filter applications

RegulAir HS – E ”Economic“ Single-Belt Oven using the Air-Through Method

RegulAir HS stands for high-speed systems in single-belt design. The ovens are available in two different versions and are suitable for thermobonding of direct carded fiber webs. In these ovens, particular emphasis was placed on uniform air distribution and controlled product transfer of the web pile from the upstream machine. This allows our customers to produce even low weight ranges at high production speeds in excellent quality.



TECHNICAL DATA	
Useful working width	2,600 - 3,200 mm
Zone length	2.000 mm
Heating media	Natural gas, LPG, heat transfer oil, steam, electric energy
Working temperature	max. 220°C
Fibers	PES, PP, PA, PE, BiCo
Weight range	15 - 150 g/m²
Production speed	max. 150 m/min

APPLICATION

- Filter applications
- Medical and hygiene applications
- Diaper layers (ADL, topsheet)
- Feminine hygiene products

RegulAir HS – P ”Performance“ Single-Belt Oven using the Air-Through Method

The RegulAir HS - P variant is designed for production speeds up to 300 m/min and offers all the advantages of the “Economic” variant as well as additional components and designs that are designed for the high speeds and have long service lives. Our modular design allows the implementation of customer-specific requirements in terms of throughput and production speeds as well.

TECHNICAL DATA	
Useful working width	2,600, 3,200, 3,600, 4,000, 4,500 mm
Zone length	2,500 mm
Heating media	Natural gas, LPG, heat transfer oil, steam, electric energy
Working temperature	max. 220°C
Fibers	PES, PP, PA, PE, BiCo
Weight range	15 - 150 g/m²
Production speed	max. 300 m/min

APPLICATION

- Filter applications
- Medical and hygiene applications
- Diaper layers (ADL, topsheet)
- Feminine hygiene products

Drum oven ”OSD“ Omega Sieve Drum

The “OSD” drum oven is characterized by its special mixing chamber principle in combination with improved insulation. The above points guarantee optimum utilization of energies and ensure maximum uniformity in terms of air and temperature distribution. The drum oven is often supplied in conjunction with a calender for surface treatment and thickness calibration.

TECHNICAL DATA	
Useful working width	1,200- 7,500 mm
Heating media	Natural gas, LPG, heat transfer oil, steam, electric energy
Working temperature	max. 265°C
Fibers	PES, PP, PA, PE, viscose, cellulose, etc.
Weight range	15 - 1,500 g/m²
Production speed	max. 750 m/min
Drum diameter	ø 1.6; 2.0; 2.6; 3.0 m
Versions	with infeed/cooling drums, transport rollers

APPLICATION

- Thermofixation e.g. for roofing membrane supports
- Thermofixation in spun bond machines
- Thermobonding for direct bonding e.g. ADL
- High performance drying for equipment machines
- Product examples: Cotton pads, surgical drapes, wipes, diaper pads, feminine hygiene products, etc.

Drum oven ”MSD“ Multi Sieve Drum

The “MSD” drum oven is especially designed for drying spunlaced nonwovens and can be connected in series with any number of drums. The drum arrangement is either horizontal or vertical, thus allowing the best possible utilization of the available installation space.

TECHNICAL DATA	
Useful working width	1,200- 5,500 mm
Heating media	Natural gas, LPG, heat transfer oil, steam, electric energy
Working temperature	max. 265°C
Weight range	15 - 1,000 g/m²
Production speed	max. 500 m/min
Drum diameter	Ø1.6; 2.0; 2.6 m
Versions	Horizontal/vertical drum arrangement

APPLICATION

- High-performance dryers, e.g. for spunlace lines or wet-laid lines
- Thermofixation for e.g. roofing membrane supports
- High performance dryer for finishing equipment
- Product examples: Cotton pads, wipes, roofing sheet carrier

”IR-Bond” Infrared Channel

SCHOTT & MEISSNER manufactures and designs complete coating production lines, e.g. for coating carpet backings. In addition to coating a backing by means of a doctor blade and dryer, the powder coating can be subsequently integrated in a dryer production line by means of a directly installed powder scatterer and IR oven. The IR channel can, in turn, also act as a pre-dryer for other production line concepts. The IR channel by SCHOTT & MEISSNER has a modular design. The treatment lengths and useful working widths can be adjusted in accordance with process requirements.

TECHNICAL DATA	
Useful working width	1,200 - 6,000 mm
Zone length	1,000 mm, 1,500 mm
Free clearance	max. 300 mm
Heating media	IR emitter (medium-wave/long-wave)
Melt powder	Co-PA, Co-PES, HD-PE, LD-PE, EVA, TPU
Production speed	max. 100 m/min

END USES

- Powder coating of carpet backings for later carpet forming or laminating, interior finishing for cars, trucks, etc.
- Carpet finishing - carpet backing by means of decor, fabric, foil or foam
- IR oven as pre-dryer in front of a convection oven, belt oven or drum dryer
- Additional module for a Thermofix double belt press

VapConHT Steam Oven

The steam oven manufactured by SCHOTT & MEISSNER is used in non-wovens bonding by means of phenolic powder or epoxy resin for either semi-curing or assisting in full-curing. The steam penetrates the fiber package and the thermal energy of the steam is used to activate the phenolic resin; this results in a first cohesion between powder and fiber. A double belt oven (TopConLP; AirConTS) is downstream to the steam oven in the full-curing process. Due to the pre-activation of the powder in the steam oven, the fabric web can be hardened in the double belt oven. A relevant thickness calibration can be undertaken via the double conveyor belt.

TECHNICAL DATA	
Useful working width	2,000 - 3,200 mm
Zone length	2,000 mm, 3,000 mm
Free clearance	max. 250 mm
Heating media	Steam, heat transfer oil
Working temperature	max. 160°C
Fibre / application	Cotton, recycled fiber, glass fiber
Powder	Phenol or epoxy powder
Weight range	600 – 4,000 g/m²
Production speed	max. 15 m/min

END USES

- Semi- and fully-cured recycled nonwovens for the automotive industry
- Fully-cured insulation material for domestic appliances

MatCon Pre-Heating Oven

We offer various types of pre-heating ovens specifically designed for the needs of the automobile supplier industry in order to heat up non-woven mouldings before they are taken to cold moulds or to shorten the residence time in hot moulds. The MatCon dryer is characterized by its discontinuous mode of operation. The cycle time of the oven is determined by the cycle time of the stationary moulds. The basic version of our pre-heating oven contains a „double-drawer-system", which means, while one drawer is drawn in the oven for heating up the moulded part, the second drawer is pulled out for being unloaded and / or loaded with a moulded part. Drawer movement is motor driven.

TECHNICAL DATA	
Useful working area	2,400 x 3,200 mm, or as required
Heating media	Natural gas, LPG, heat transfer oil, electric energy
Working temperature	max. 235°C
Fibers	PES, PP, BiCo, cotton, recycled fiber, flax, hemp Kenaf, wood fiber
Weight range	1,000 - 4,000 g/m²
Cycle time	approx. 50 sec. (depending on cycle of moulding press)

END USES

- Moulding parts for the automotive industry
- Moulding parts for the furniture industry

"CanDry" Cylinder Dryer

SCHOTT & MEISSNER's cylinder dryer is predominantly used for drying or pre-drying of high-speed fabric webs using contact heat, e.g., for interlining or hygiene applications. Inline combinations with one of our drum or belt dryers allows us to offer highly efficient drying concepts with low energy consumption. Speeds of up to 300 m/min can be reached. The number, diameter, etc of the heating drums are fitted and adjusted in accordance with the technical requirements of the process.

TECHNICAL DATA	
Useful working width	1,200 - 6,000 mm
Diameter of heating drum	500, 600, 800 mm
Heating media	Heat transfer oil, steam
Working temperature	max. 235°C
Fibers	PES, PA, Viscose, cotton, etc.
Weight range	20 – 100 g/m²
Production speed	max. 300 m/min

END USES

- Medical applications and hygiene industry
- Interlining
- Wipes
- Filtration
- Pre-drying
- Technical nonwovens

Drying or pre-drying of fast running fabric webs

Thermofix® TFE

THERMOFIX® TFE
Flatbed Laminator

The SCHOTT & MEISSNER flatbed laminator Thermofix® TFE works with contact heat and pressure. The product to be processed is fed through the flatbed laminator between two teflon-coated conveyor belts and heated by heating plates, each of which is located behind the conveyor belts.

The Thermofix® TFE is available in three different sizes (S, M, L) as well as two versions (E, P), which differ in the installed capacity.

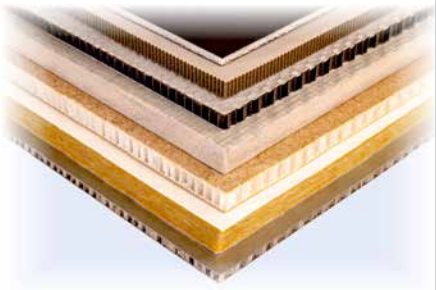
TECHNICAL DATA	
Useful working width	1,200 - 2,600 mm
Heating system	Electric power
Heating length	1.500 (S), 2,400 (M), 2,400 mm (L)
Cooling length	1.200 (S), 1,200 (M), 2,400 mm (L)
Version	Economic (E) / Performance (P)
Working temperature	230°C (250°C optional)
Temperature zones	18
Gap adjustment	0.1 - 200 mm
Production speed	max. 30 m/min
Options	Load cells, pressure booster, conveyor belt changing system, conveyor belt cleaning

APPLICATION

- Thermal lamination of various fabric, foil and foam webs
- Synthetic leather equipment
- Filter materials, membrane foils
- Chopped fiberglass mats

YOUR ADVANTAGES		
Design	Modular - fixed	Standard process lengths according to size
Temperature control	In zones	Constant and high product quality across the fabric width, even in the edge areas
Calender rollers	Ø 250 mm	Achieve high volume densities and for a uniform material thickness
Gap adjustment	200 mm	Easy accessibility for maintenance and cleaning work
Gap accuracy	0.1 mm	Precise adjustment of the heating and cooling plates
Load cells	Optional	Reduces conveyor belt damage and allows continuous process monitoring

MOBILTECH

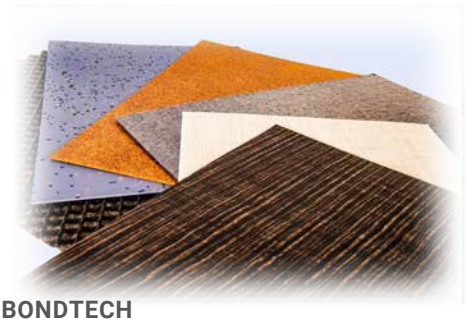


COMPOSITE

TEXTILE/CLOTHTECH

BUILDTECH

HOMETECH



BONDTECH

Thermofix® TFO

THERMOFIX® TFO
Double Belt Press

The SCHOTT & MEISSNER double belt press Thermofix® TFO works with contact heat and pressure similar to the principle of our Thermofix® TFE. Due to the separate height adjustment of the cooling plates, which is detached from the heating section, the product can also be calibrated and fixed to the desired thickness in the cooling section.

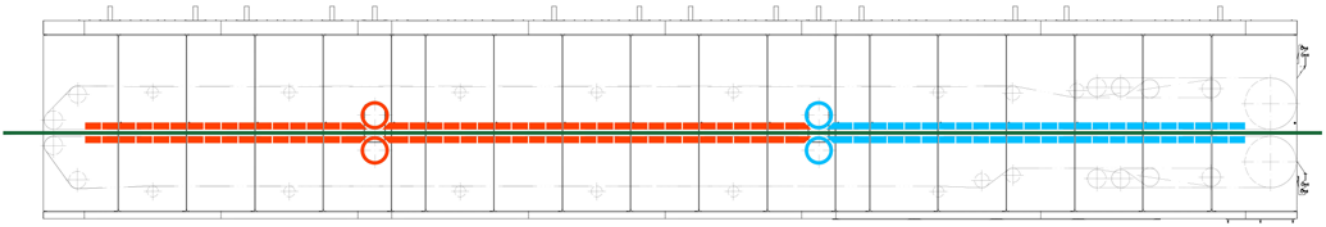
Our double belt press TFO is designed for high pressures and highest accuracies, whereas our flatbed laminator is used for simple laminating and laminating processes.

TECHNICAL DATA

Dimension	I	II	III
Useful working width	1,000 - 1,800 mm	1,800 - 2,400 mm	2,400 - 3,200 mm
Free clearance between the conveyor belts	200 mm	200 mm	500 mm
Heating media	Heated heat transfer oil using natural gas, LPG, electric energy		
Working temperature	max. 240°C		
Zone length heating/cooling	1,000 mm, 2,000 mm, 3,000 mm		
Production speed	max. 25 m/min		

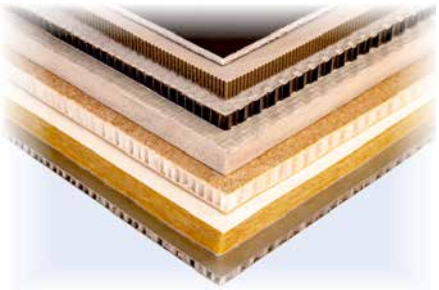
END USES

- Production of sandwich panels / composites
- Production of honeycomb panels / composites
- Thermobonding of nonwoven materials, e.g. TWINTEX or glass fiber webs with PP
- Thermobonding of grit, e.g. PVC granules to floor coverings
- Thermobonding of several textile fabric webs
- Thermobonding of fiber-reinforced plastics
- Thermobonding of recycled material to insulation panels or moulded parts
- Thermal lamination of multiple layers of fabric, foil and foam



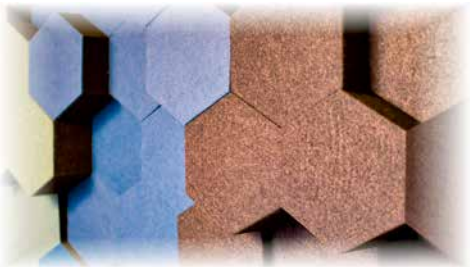
YOUR ADVANTAGES		
Design	modular - flexible	process lengths are adapted to customer requirements
Temperature control	+/- 1 °C	over web widths up to 3,100 mm
Surface pressure	12,5 kN/m²	for compressing and achieving high volume densities
Calender rollers	Ø 355/413 mm	for leveling the products
Calender rollers	200/500 mm	easy accessibility for maintenance and cleaning work
Gap accuracy	0,1 mm	precise adjustment possible even with thin product thicknesses

MOBILTECH



COMPOSITE

TEXTILE/CLOTHTECH



BUILDTECH

HOMETECH

BONDTECH

Cooling Calenders

Cooling calenders made by SCHOTT & MEISSNER are mostly found in combination with a hot air convection oven or a double belt oven (series: TopConLP; Top- ConHP; TopConMAP), in order to thermoset and calibrate well-tempered fabric web to the required high density (up to 300 kg/m³). The cooling calender is characterized by a sturdy and robust design, high precision, maintenance-friendliness and quick roller-change system. Additional components such as cooling units, hydraulic units and special roller surface coatings round off the range.

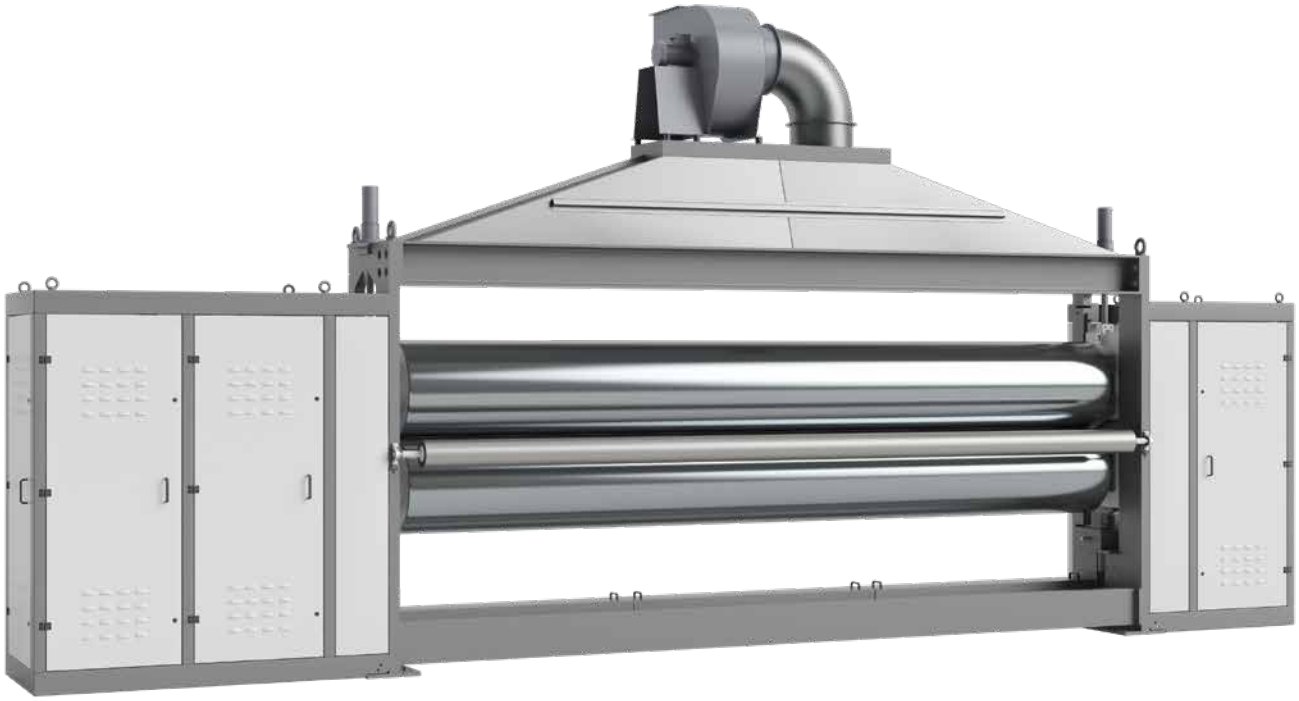
Nonwoven webs are calibrated to the required density.

TECHNICAL DATA	
Useful working width	1,000 - 7,000 mm
Roller diameter	max. 850 mm
Cooling medium	Water
Surface treatment	approx. 20 °C
Surface quality	chrome, Teflon, all types of special coatings
Linear load	max. 50 N/mm (for narrow useful working widths)
Pressure source	pneumatic, hydraulic
Production speed	max. 300 m/min

END USES

Cooling calender as downstream equipment after double belt oven to compact well-tempered nonwoven webs made of:

- Natural fibers (hemp, flax, etc.)
- Recycled fibers
- Viscose; PES; PP; PA



Cooling calender with 6,000 mm useful working width

Surface finishing calender for polyester nonwovens with thermal oil heater

Heating Calender

One of our best sellers since its introduction to the market, the heating calender made by SCHOTT & MEISSNER is characterized by its temperature accuracy, sturdy design, high precision roller adjustment, maintenance-friendliness and quick roller-change system. Depending on the process requirements and linear pressure range the calender can be fitted either with pneumatic or hydraulic cylinders. Additional components such as the roller gap compensation system, a heating unit, cooling unit, twin motor drive, and special roller surface coatings round off the range.

SCHOTT & MEISSNER's hydraulic heating calender has made an excellent name for itself especially in the field of geotextile production with useful working widths of up to 7,000 mm.

TECHNICAL DATA	
Useful working width	1,000 - 7,000 mm
Roller diameter	max. 850 mm
Heating medium	Heat transfer oil
Surface temperature	max. 240°C
Surface quality	chrome, Teflon, all types of special coatings
Linear load	max. 100 N/mm
Pressure source	pneumatic, hydraulic
Production speed	max. 300 m/min

END USES

Surface finishing, thermosetting and calibration of

- Geotextiles
- Wipes
- Interlining
- Spun bond fabrics
- Fibrefill nonwovens
- Natural fiber nonwovens
- Spunlace
- Technical nonwovens

Longitudinal Cutter

Pressure cut principle of type PLC

For light weights that allow "squeezing" of the cut edge or fabric web e.g. wadding for clothing, geotextiles or wipes.

- Cutting blade: Ø 450 mm
- Material thickness: max. 150 mm
- Density: max. 60 kg/m³
- Weight: up to approx. 2,000 g/m²

Driven blade type RLC1 / RLC 2

For products in the higher weight range for which a right-angled cutting edge is required. (e.g. insulation materials, padding for furniture, mattresses).

- Cutting blade: Ø 610 mm (RLC1), 810 mm (RLC2)
- Material thickness: max. 200 mm (RLC1), max. 300 mm (RLC2)
- Density: max. 100 kg/m³ (RLC1), max. 160 kg/m³ (RLC2)
- Weight: max. 5,000 g/m² (RLC1), max. 10,000 g/m² (RLC2)
- Options: Sharpening unit, cooling unit

Cross cutter

Series RXC1 – Rotary Blade, Powered

For lightweight nonwoven and low production speeds that can be stopped for cross cutting.

- Type: powered rotary blade
- Cut: fabric web must be stopped briefly for cross cutting
- Cutting frequency: approx. 7 cuts/min
- Web thickness: max. 180 mm
- Web weight: max. 2,000 g/m²
- Blade diameter: max. Ø 400 mm
- Products: nonwoven filters, needle-punched nonwovens, fibrefills, etc.

Series RXC2 – Rotary Blade, Powered / Cut-On-The-Fly

For lightweight to very heavyweight webs. No temporary stop of fabric web required for the cross cutting. The cross cut is realized synchronously to the web's production speed, in a cut-on-the-fly-principle.

- Type: rotary blade, powered and cut-on-the-fly
- Cut: cut-on-the-fly cross cut, synchronized to the web's production speed, no line stop required
- Cutting frequency: approx. 8 cuts/min
- Web thickness: max. 300 mm
- Web weight: max. 10,000 g/m²
- Blade diameter: max. Ø 810 mm
- Products: insulation materials

Cross-Cutter

Type BXC - band saw driven / traversing

For heavy nonwoven weights with high foam or natural fiber content.
The web does not have to be stopped for the cross-cut, as the cross-cut takes place synchronously and on the fly with the movement of the web.

- Type: driven band saw
- Cut: standing or traversing
- Cutting frequency: approx. 4 - 8 cuts/min
- Web thickness: max. 300 mm
- Web weight: max. 12.000 g/m²
- Products: Filling absorbent cotton, insulation materials, etc.
- Options: Saw blades (concave, convex, toothed)

Series PXC – Pneumatic Guillotine

For lightweight to mediumweight nonwoven webs that must be cut without stopping.

- Type: Guillotine / pneumatic knife bar
- Cut: fabric web does not need to be stopped for cutting
- Cutting frequency: max. 25 cuts/min
- Web thickness: max. 145 mm
- Web weight: max. 3,000 g/m²
- Products: Recycled webs, nonwovens, fibrefills, needle-punched nonwovens

Type HXC1 - hydraulic guillotine, smooth cut design

For light to heavy and fast running nonwoven that need to be cut without stopping.

- Type: hydraulic blade bar
- Cut: without production stop, only smooth cut
- Cutting frequency: max. 30 cuts/min
- Web thickness: max. 200 mm
- Web weight: max. 5.000 g/m²
- Products: Filling nonwovens, insulation materials, needled nonwovens, recycling

Type HXC2 - hydraulic guillotine, perforation cut design

For light to heavy and fast running nonwoven webs that also require an additional perforation cut.

- Type: hydraulic blade bar
- Cut: without production stop,- perforation or smooth cut
- Cutting frequency: max. 30 cuts/min
- Web thickness: max. 200 mm
- Web weight: max. 5.000 g/m²
- Products: Filling nonwovens, insulation materials, needled nonwovens, recycling

Downstream Equipment

Roller Accumulator

Accumulator with one- or two-slit technology that is characterized by a basic material thread-in as well as precise control of the tensile strength of the material. Suitable for lightweight to heavyweight fabric webs that can be diverted via rollers taking into account the tensile strength.

J-Box Accumulator

Compact design.
A significant amount of accumulator capacity can be realized with this type of accumulator. A requirement for this is, however, that the fabric web can be loop-accumulated. Draw-in rollers ensure that the fabric web is laid into a sheet metal tray; the tray is emptied by draw-off rollers. Its use is limited to very lightweight materials.

Belt Accumulator

Simple design.
A significant amount of accumulator capacities can be realized with this type of accumulator. A requirement for this is, however, that the fabric web can be accumulated in “loops”. Draw-in rollers lay the fabric web onto a running belt in loops; they are removed from the conveyor belt by draw-off rollers.

Stacking Unit

The fully automatic stacking unit from SCHOTT & MEISSNER is characterized in particular by short cycle times and high stacking accuracy. The stacking unit consists of three conveyor belts or an optional rake.

- Accelerator belt
- Shuttle belt
- Stacking belt / cross belt

TECHNICAL DATA	
max. useful working width	max. 5,000 mm
Mat length	max. 3,000 mm
Stacking height	max. 1,500 mm (customized designs possible)
Positioning	Pallet / without pallet
Production speed	max. 20 m/min
Stacking cycles	max. 8 cycles/min

Unwinding Units

SCHOTT & MEISSNER offers various unwinding units for feeding different products. Optionally equipped with load cells, web tension control devices and spreader rollers or as a driven version, allow also the feeding of materials that are sensitive to tension.

TECHNICAL DATA	
Useful working width	max. 5,000 mm
Roller diameter	max. 1,200 mm / 1,500 mm
Production speed	max. 20 m/min (with web accumulator up to 50 m/min)
Material	Fabric, non-woven, films, carrier material

Ascending Batch Winder

The ascending batch winder is a simple standard machine for winding slow webs, up to a useful working width of 7,000 mm. Especially in the field of geotex nonwovens, wiping cloths, technical and needled nonwovens this winder is applied. The circumferential ascending batch winder can be upgraded with additional components to increase flexibility or the degree of automation. Add-on components can be, for example, a pressure support roller for winding compression, an automatic ejection device for the finished roll, or an integrated cross cutter.

TECHNICAL DATA	
Useful working width	max. 7,000 mm
Roller diameter	max. 1,200 mm / 1,500 mm
Winding weight	max. 1,500 kg
Winding type	Winding rod, winding tube, coreless
Production speed	max. 30 m/min (in connection with web accumulator)

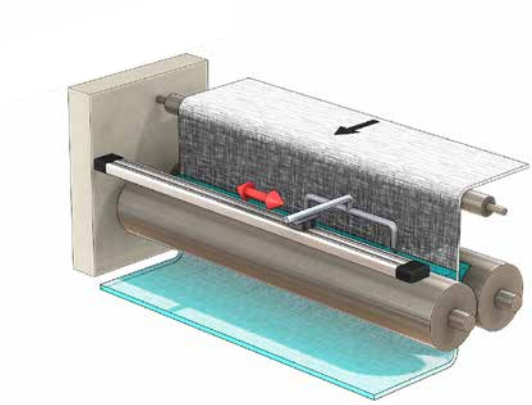
Automatic Winder for High-Loft Products

This automatic circumferential winder from SCHOTT & MEISSNER is found especially in the area of “high-loft” fleece nonwovens batting. The various winding stations in conjunction with the winding conveyor belt allow an almost on-the-fly changeover to a new roll without the need for web accumulation.

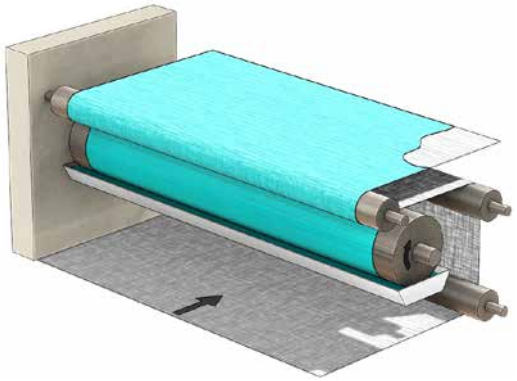
TECHNICAL DATA	
Useful working width	max. 5,000 mm
Roll diameter	max. 1,500 mm
Winding weight	max. 800 kg
Winding type	Winding rod, winding rod and sleeve
Production speed	max. 50 m/min

Wet Coating Systems

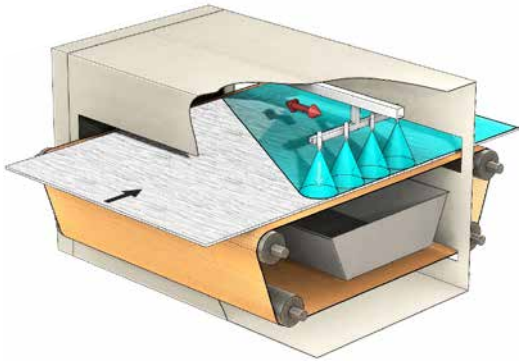
Foam Impregnating Unit
Currently the most common, widely-spread and most flexible impregnation principle on the market is surface coating by means of single-, double-sided or full impregnation. As the liquor is "foamed", the water input and thus the amount of moisture to be driven out is very low.



Slope Padding / Kiss Coating
(single-sided surface coating using a scoop roller)
The scoop roller dips into a dispersion bath and then applies the liquor on the fabric web.
"Slope Padding" for single-sided finishing by means of high-viscosity dispersion (e.g. for carpet backing); alternatively " "Kiss Coating" for single-sided finishing by means of low-viscosity dispersion (e.g. for top layers of diapers)



Spray Application
(single- or double-sided surface coating)
This process is mainly used in the production of high quality wadding or abrasive nonwoven materials. Application is by means of alternating spray nozzles, crosswise to the fabric web flow. The application is carried out via spray nozzles that oscillate across the continuous web.

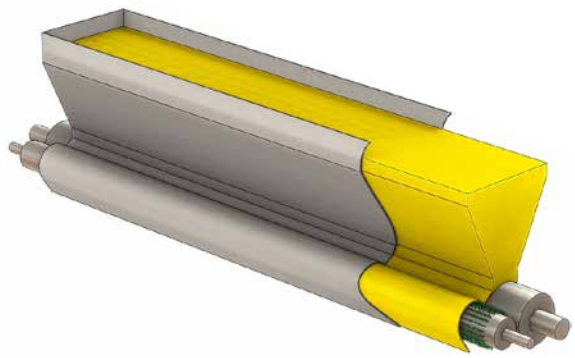


Dry Coating Systems

Powder Scattering System "PowderScatt"

This powder scattering system is mainly used for scattering powders such as EVA, PP, HDPE, copolyamide, etc. The particles are brushed off the scattering roller by means of an eccentric wheel driven needle unit.

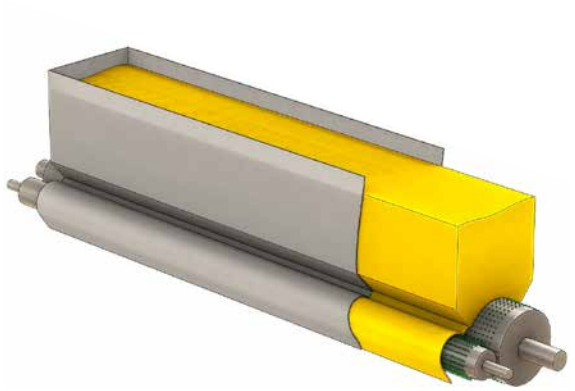
- Useful working width: max. 5,000 mm
- Material: powder
- Grain size: 100 - 600 µm
- Scattering amount: 5 - 250 g/m²



Granule Scatterer „GranScatt"

This granule scatterer is suitable for granules in the form of PVC, wood corundum granules, activated charcoal, etc. A brush roller gently releases the particles off the scattering roller, with no mechanical working of the granules, to prevent any change or damage to the original form.

- Useful working width: max. 5,000 mm
- Material: granules
- Grain size: > 0.5 mm
- Scattering amount: 250 - 5.000 g/m²



Fibre Scatterer „FiberScatt"

This unit recycles fiber waste.
It allows shredded fiber waste that arises when moulding non-woven mats (e.g. for vehicle wheel-housing linings) back into the production process.

- Useful working width: max. 4,500 mm
- Material: shredded fiber waste
- Scattering amount: 300 - 2.000 g/m²

Customized Machines

Our competence in designing and manufacturing customized production lines, in particular in nonwoven technology, is based on decades of experience.

In addition to our core business, our equipment can be found in many areas of general industry. For example, SCHOTT & MEISSNER manufactures dryers and machines for industrial laundries, spun bond machines, in the construction and ancillary building trades, as well as special systems for all branches of industry. Especially in the field of compression belts, we have acquired extensive know-how, resulting in highly automated large-scale production lines - consisting of unwinding, endless creation, impregnation and drying systems up to the compression winder with integrated belt rolling, for the production of large rolls. If required, additional finishing tasks, such as cutting to roll discs, packaging in customer cartons can be automated and integrated into our scope of delivery. From the raw foam roll to the ready-to-ship carton, the entire line is supplied from a single source, with manpower requirements reduced to a minimum. Of course, all system components are also available as stand-alone machines.

Sintering Oven / High Temperature Oven

This type of high temperature furnace or sintering oven was especially developed for temperature ranges up to 450°C. The innovative air ventilating system makes it possible for the fabric web to “float” with the result that this oven can also do away with the transport system, if needed. This system is also able to handle heat recovery and thermal incineration.

SCHOTT & MEISSNER Pilot plant in Blaufelden

Technology Center

At our Technology Centre in Blaufelden, we have built a laboratory facility in which we, together with our customers, test new product ideas and determine the setting parameters for the production lines to be produced at a later stage. We place particular emphasis on using the Technology Centre in as many ways as possible We can carry out tests with the individual units such as the scattering systems, dryers or Thermofix® units. The individual units can also be combined into a complete production line for laminating, backing or consolidation.

Flexibility through rail systems

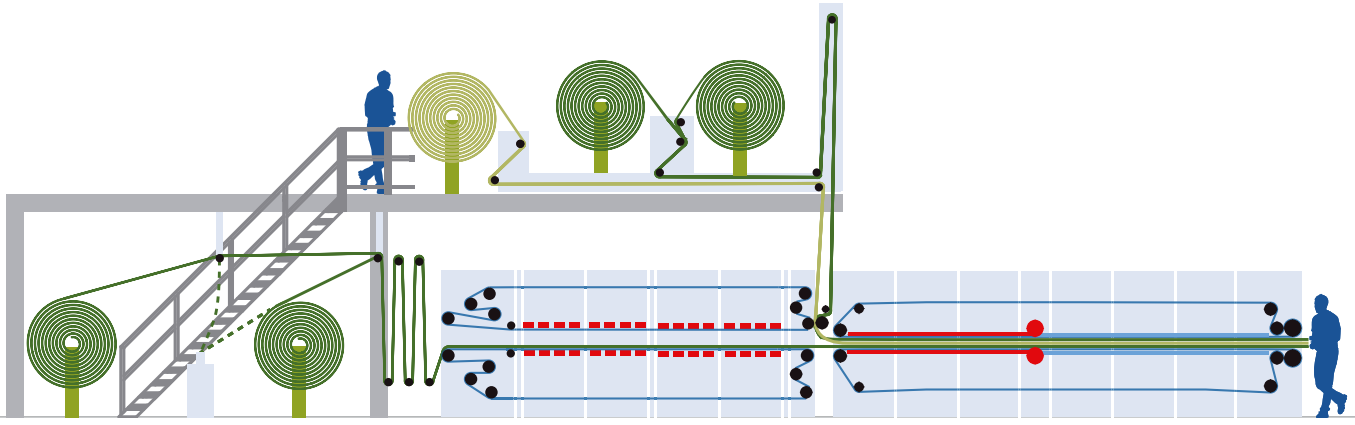
The laboratory Thermofix® is installed on a rail system. This allows us to move the machine as close as possible to the pre-dryer so that the preheated material does not cool down. If a spreader still needs to be placed between the preheater and Thermofix®, it is simply retracted.

TECHNICAL DATA	Thermofix TFO	Thermofix TFE	TopCon MAP
Web width	1,600 mm	1,800 mm	1,600 mm
Heating section	2,000 mm	1,500 mm	2,000 mm *
Calender	yes	yes	no
Cooling Section	2,500 mm	1,200 mm	500 mm
Processing temperature	max. 260°C	max. 250°C	max. 220°C

* (+500 mm switchable)

EQUIPMENT

- Thermofix® TFO – Double Belt Press
- Thermofix® TFE – Flatbed Laminator
- TopCon MAP – Double Belt Oven
- Heating Calender
- Powder scattering unit
- Fiber Scattering Unit
- IR field for pre-tempering



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