

Coating Equipment

For the Building & Construction Industry



Top-quality laminated panels

Installing a Sheet-2-Sheet coating machine from Maan Engineering in your company gives you access to proven technology for bonding panels with Polyurethane Reactive (PUR) Hot Melt. You can also rely on a dedicated partner who is used to delivering bespoke services and more than willing to go the extra mile. With Maan Engineering, you're guaranteed the best product quality and production continuity.

The advantages of Maan Engineering:

- ✦ Extensive expertise in its area
- ✦ Complete machine line or integration
- ✦ A level of service that sets it apart
- ✦ Quality and process control



EXPLORE
DESIGN
CONFIGURE
PROVIDE

Applications

Maan Engineering serves a wide range of companies in the building and construction industry with its Sheet-2-Sheet Coating Equipment. Coating techniques are applied worldwide in construction, the furniture industry, the automotive sector, transport and manufacturing. We have extensive experience with the following applications.



Doors

Materials: MDF, HDF, HPL, CPL, Alu, etc.



Floors

Materials: PVC, HDF, MDF, foil, cork, etc.



Foam

Materials: PE and PU foams



Flexible packaging

Materials: PE, PET APET, BOPP, PP, metallised foil, etc.



Construction panels

Materials: EPS, PIR, XPU, hardboard, plastic panels, PE and PP sheets, foamed PVC, polyester, tinplate, metal, etc.



Other applications

Examples: Automotive, rubber, special foams, geotextile, textile

WHAT'S YOUR APPLICATION?

Are you looking for Equipment to bond a panel with PUR Hot Melt, but your end product isn't listed above? Then please get in touch for some advice, free of obligation, because we enjoy a challenge.

Maan Engineering strives to offer the best product quality and guarantee production continuity, which we achieve through market-oriented innovation, services that stand out from the crowd and supplying various configurations specifically adapted to customers' needs based on a standard range of products. The goal is to be a leader in hot-melt Coating Equipment for the Building & Construction and Label Industries.

**MAAN
ENGINEERING'S
MISSION**

CUSTOMER CASE

Post Industrie sped up production with Sheet-2-Sheet Coating Equipment

'Thanks to Maan's Sheet-2-Sheet Equipment, we've increased the speed of producing our trailer floors, without compromising the quality of the end product.'

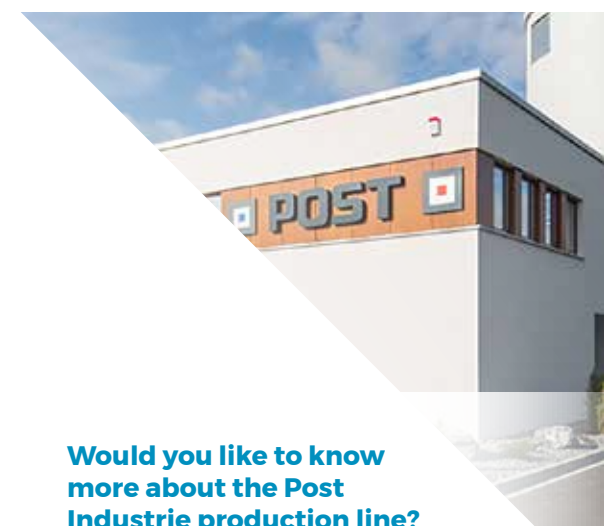
Better, faster, more efficient

Wünnemann says, 'The machine we previously used to press materials needed a lot of time to bond the materials. We were sure that there was a way of speeding up and improving the process, and making it more efficient.' Wünnemann is delighted with the process: 'Maan carried out some tests both before and after purchasing the machines, with the last test at our site during commissioning. That inspired a lot of confidence.'

Would you like to know more about the Post Industrie production line?

Read more about the Sheet-2-Sheet setup at Post Industrie at

www.maan-engineering.com.



Maan Engineering gives you

the  in progress

Optimal process control, undisturbed production and end products of the highest quality. We're delighted to contribute to the success of your company with our Sheet-2-Sheet coating machines.



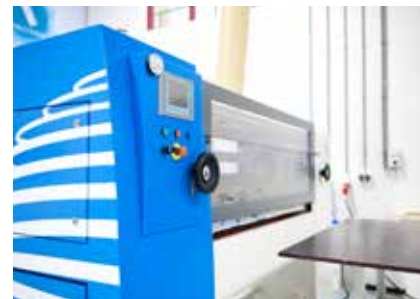
Knowledge and expertise

We understand the demands that the market places on the end product. Nobody knows the properties of PUR Hot Melt coatings better than the people at Maan, who work closely with the best material suppliers.



Research & Development

Maan Group is the company behind Maan. The group has its own successful R&D department; the brain behind all Maan's innovations based on hot-melt coatings.



Rooted in coating technology

Maan is a Dutch family business that has grown into a recognised coating and conversion specialist with machines that have proven their reliability over more than 20 years.



International service

Customers around the world know that Maan Engineering can always be relied on to stick to its promises. To ensure optimum performance, we look beyond our own products, and take into account the entire process.



Top-grade components

We are strong believers in the configure-to-order principle. Maan Engineering supplies solutions specifically adapted to customers' needs based on high-quality standard products, and the components to build the machines are also top-grade.



Research and testing facilities

Maan Engineering is happy to go that extra mile for its customers, and this commitment is reflected in our offer to conduct a free feasibility test or to use the research laboratory.



The basis for good bonding

**INTRODUCTION
TO THE BASIC
RANGE**



Controlled and dosed bonding

The Roller Coater is the basis of Maan Engineering's Sheet-2-Sheet Equipment. After optional pre-treatment, the panels are automatically or manually entered into the Roller Coater, where a precisely measured layer of adhesive is applied to one or both sides. The Maan Roller Coater sets itself apart thanks to heated steel rollers, adjustable seals, robustness and quality.

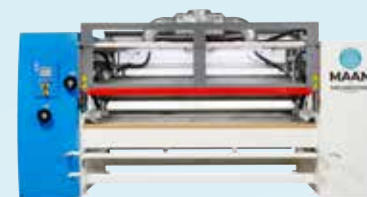
Heated and coated coating rollers

The heated rollers in the Roller Coater are driven separately. Depending on the application, the rollers are coated. This coating layer has an anti-adhesive effect, ensuring that the roller is easy to clean.



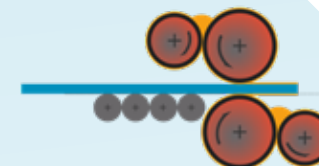
Seals

The hot melt is applied to the Roller Coater with hot-melt guns cleverly positioned above the coating roller and doctor blade. This prevents old adhesive gathering at the edges of the roller. Maan Roller Coaters are also equipped with Teflon seals as standard, positioned on the roller.



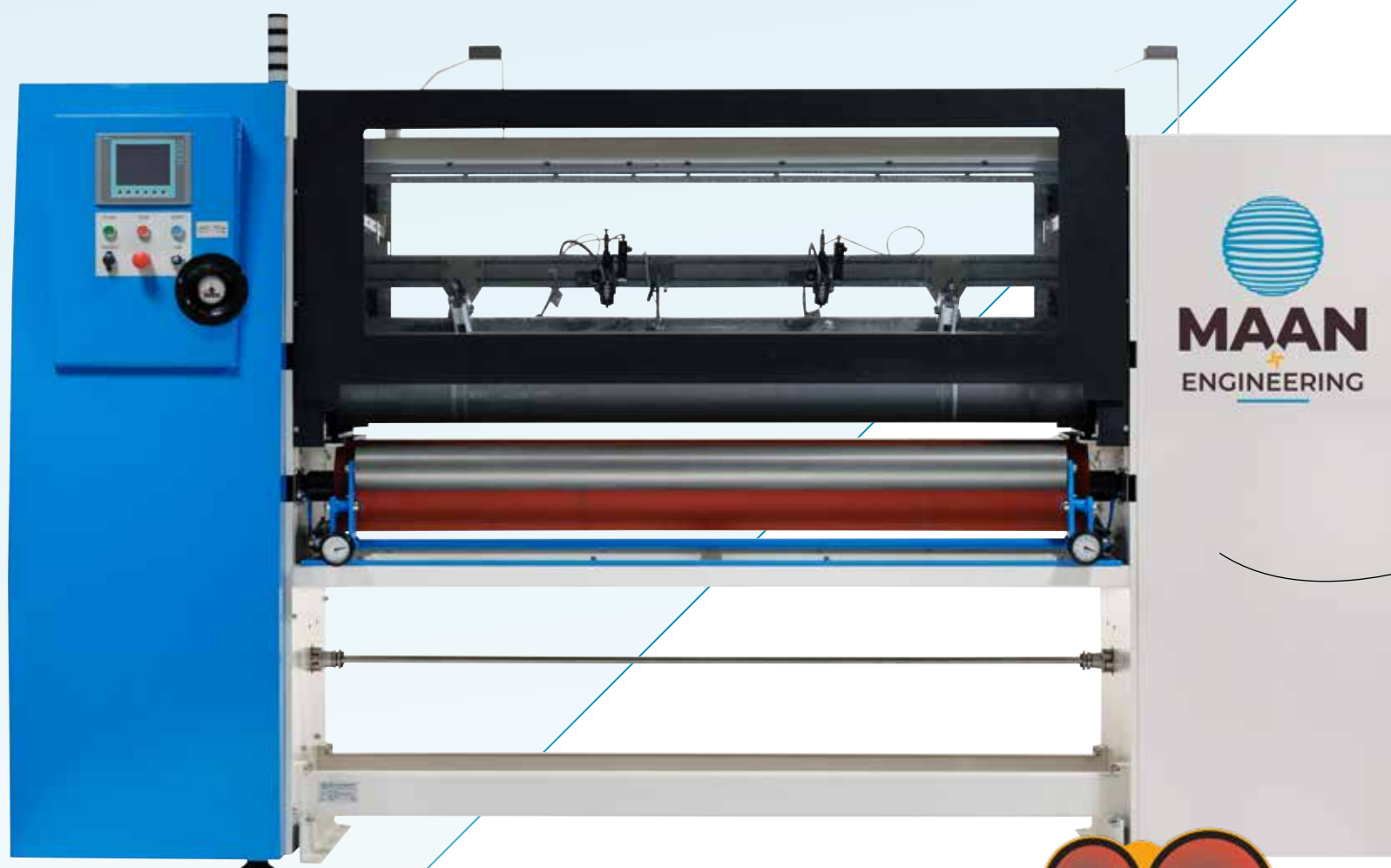
Single or double sided bonding

Depending on your products and processes, the coating rollers apply the PUR Hot Melt coating on either one or both sides. The Roller Coater Top only bonds the top side. With the Double version, the transport roller at the bottom is replaced by a coating roller and doctor blade, and hot-melt guns are also installed. This allows adhesive to be applied to two sides of a panel via a passage.



Control of the coating weight

Depending on the type of adhesive, the production speed of the Maan Roller Coater varies between 3 and 30 metres per minute. The machine can apply a coating weight between 20 and 400 grams per square metre. The standard throughput height of the Roller Coater is between 3 and 100 mm, and can be adjusted electronically.



OPTIONS

Various options are available for the standard Roller Coater, so it can be set up entirely according to your needs. If you'd like to find out more about Maan Roller Coater options, please contact our account manager.

Operating controls

The Maan Roller Coater is easy to operate, thanks to a powerful and user-friendly graphic interface based on Siemens components.



Melt adhesive while maintaining quality

A melt-on-demand, pre-melt system that guarantees the best coating quality. The Drum Melter in the Sheet-2-Sheet Equipment ensures rapid start-up and process control.

Automatic ventilation valve

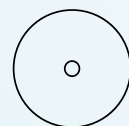
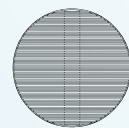
The automatic ventilation and venting valve is unique to Maan Engineering's Drum Melter. When production stops, the adhesive is automatically pumped out of the circuit to avoid contact with the air.

Glue Pressure Sensor

This sensor monitors constant adhesive pressure and system safety. If the pressure sensor indicates no demand for adhesive, the pressure is lowered and the pump switches off.

Different stamping plates

The Maan Drum Melter only melts the top layer of the hot-melt adhesive. Depending on adhesive consumption, the Drum Melter can be fitted with a smooth, ribbed or axial melting plate.



Level Sensor: powerful combination with the Roller Coater

Together, the Roller Coater and Drum Melter are a formidable team. The level sensor in the Roller Coater measures the amount of adhesive in the adhesive buffer. When it's low, this sensor sends a warning to the Drum Melter, and the pre-melter is topped up.



THE TWO ROLLERS OF THE ROTARY LAMINATING PRESS ARE DRIVEN INDEPENDENTLY OF EACH OTHER. THIS IS THE WAY TO ACHIEVE THE BEST QUALITY PANELS.

INTERESTED IN THE OPTIONS?

Various options are available for the standard Drum Melter and Rotary Laminating Press, so these can be set up entirely according to your needs. Please contact our account manager.

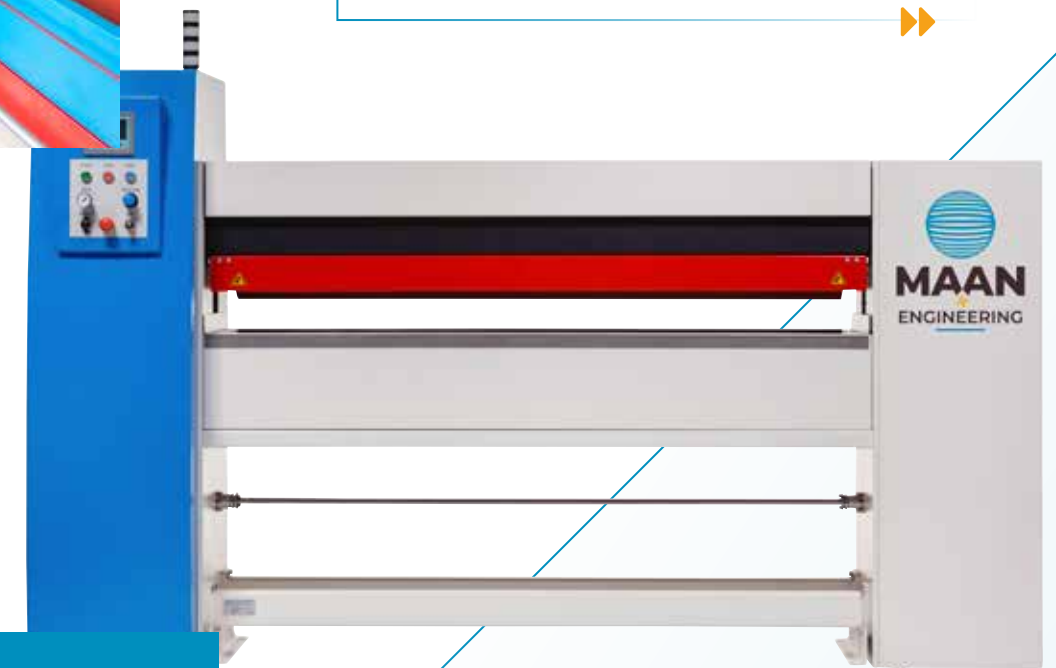
When the adhesive layer has been completely applied to the substrate, it's laminated in the Laminate Index Station or Sheet Feeding Station. The Maan Rotary Laminating Press then transfers the adhesive to increase the strength of the panel.

Separately driven rollers For the best quality

The two rollers of the Rotary Laminating Press are driven independently of each other, and the speed is determined individually. This is the way to achieve the best quality panels. The rubber-covered rollers optimise pressure distribution and prevent damage to the product.

Electronic height adjustment

The Rotary Laminating Press is equipped with electronic height adjustment as standard. The operator can easily enter the height of the workpiece on the touchscreen.



ROTARY LAMINATING PRESS

The right force

Additional techniques

For perfect adhesion of the hot-melt coating, various materials require specific pre-treatment.



IR station

Panels made of materials such as glass and plastic must be heated before they enter the Maan Roller Coater. This opens the molecules in the material, ensuring better adhesion.



Round Brush or Cross Brush

Brushing wood removes dust particles, which would otherwise negatively affect the bonding surface. Depending on the application, Maan Engineering can supply a cross brush or round brush.



Corona treatment

Plastic materials have to undergo corona pre-treatment. This creates an electrostatic field, resulting in a more granular structure and better bonding surface.



Laminating Index and Sheet Feeder

The Maan Laminating Index Station or Sheet Feeder can laminate materials such as wood, foam, aluminium and plastic. You can easily laminate a substrate with adhesive applied to it on one or both sides.

BASIC RANGE SPECIFICATIONS

	STANDARD RANGE			
Roller width (mm)	800	1600	2000	2400
Coating width (mm)	100-800	100-1600	100-2000	100-2400
Substrate height (mm)	3-100	3-100	3-100	3-100
Speed (m/min)	3-30	3-30	3-30	3-30
Coating weight (g/m2)*	20-400	20-400	20-400	20-400
Temperature range (°C)	30-200	30-200	30-200	30-200

**Depending on the type of hot melt, substrate surface and production speed*

CUSTOMER CASE

Arly expands its range with high-quality hot-melt coating technology

The Dutch company Arly Laminating-Quilting broadened its range of laminating technology in 2016 when it purchased a Roller Coater from Maan Engineering. The company can now laminate sheets with hot-melt coating technology. Director-owner Wim Timmermans says, 'Maan Engineering is a company with a technical background, so you can rely on top quality products and skilled employees. And the service is also excellent.'

Strategic move

The purchase of the Maan Roller Coater was a strategic investment. According to Timmermans, 'We carry out active market research and saw the opportunities offered by hot-melt laminates. Investing in this hot-melt plate bonding machine led to a welcome addition to our existing range.'

In addition, he sees opportunities in the field of sustainability, 'Companies that want to do business in a socially responsible manner are more likely to choose hot melt because it doesn't contain any solvents.'

A quality product that stands out from the crowd

The Maan Roller Coater combines hot melt with high-quality application technology for laminating sheets. 'It's true that this process is slightly more expensive, but you end up with a quality product that really stands out.' The machine has been operating successfully for more than three years. 'The product works and Maan gives us the right service, exactly what you want when you buy something. In addition, the relationship with Maan Engineering is very pleasant. There is an atmosphere of mutual trust, and we can communicate openly.'



Arly Laminating-Quilting is located in the Dutch town of Nieuwkuijk and is active in the furniture, automotive, medical and technical textile industries, among others. The company does a lot of contract work, in addition to manufacturing an extensive range of its own products.

Would you like to find out more about the Maan Roller Coater at Arly?

Read the full customer case at www.maan-engineering.com.

CONFIGURATIONS



Sheet-2-Sheet configuration



Roll-2-Sheet configuration

Integration

De Maan basic machines can be used as stand-alone components or integrated into a semi-automatic production line. Our software and hardware is also set up for integration into fully automatic production lines.

MORE CONFIGURATIONS?

Check out the Maan Engineering website at maan-engineering.com

Maan activities worldwide:



Coating Equipment for the Building & Construction and Label industries

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FIND OUT MORE?

If you'd like to find out more about Maan Engineering's Sheet-2-Sheet Coating Equipment, you can find more information on our website at www.maan-engineering.com. You're also very welcome to visit our demonstration and test centre in the Dutch town of Raalte. Please contact our account manager without obligation.

**MAAN
GROUP**

the  in progress