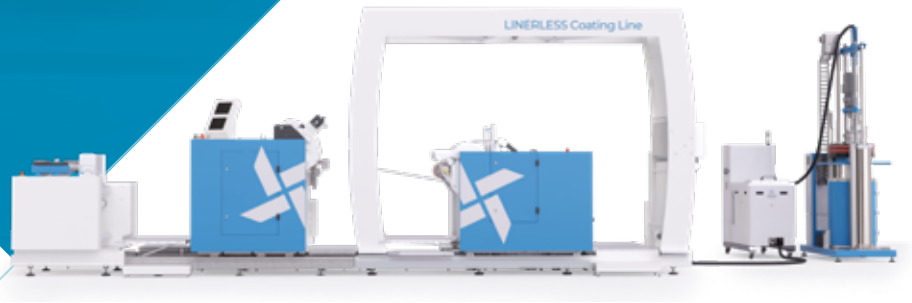
Strengthen your position with in-house coating equipment



Top-quality linerless labels and laminates

As a label producer, you face many challenges: 'How do I adapt my product to market demand?' 'How do I respond to the sustainability ambitions of the sector and society?' For this, you are often dependent on your suppliers. Are you in control of your own product specifications? Take the lead by coating yourself! Maan Hotmelt Coating Equipment stands for high-quality finished material, a unique top speed and smart controls. Distinguish yourself from your competitors and regain control of your own product.

Your continuity and quality are important to us. We test, and develop continuously, in order to provide you with the best possible technology. Together with our partners (integrators, our service network, but also well known raw material suppliers). We provide you with the best advice, the best equipment and you can always count on technical support.

MAAN ENGINEERING

EXPLORE
DESIGN
CONFIGURE
PROVIDE

The advantages of Maan Engineering:

- *Linerless labels*
- *High-quality label material*
- *Unique top-speed*
- *Smart control*

Silicone Coating Station

The Maan Silicone Coating Station has been developed for extremely precise application of silicone coatings on paper and foils. The coating layers are cured extremely quickly by means of an innovative inert gas chamber in combination with a UV lamp.

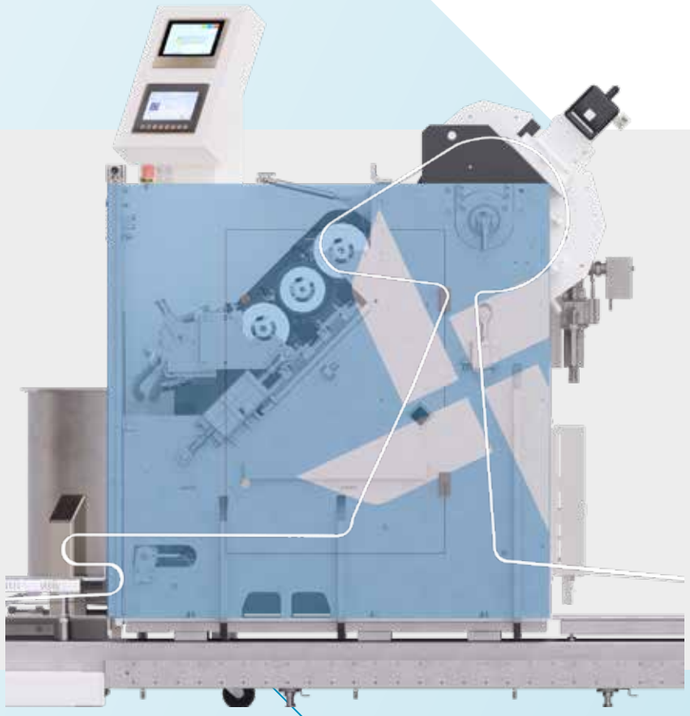
INDIVIDUAL DRIVEN ROLLERS

Manage your coating thickness to perfection

The coating thickness is mainly controlled by the footprint (interface with the substrate), the offset speed and the temperature of the rollers. The footprint can be easily adjusted. Even more precise coating? By controlling the offset speed relative to the web speed, you can influence the coating layer even more. The distance and the speed of the rollers can be set individually.

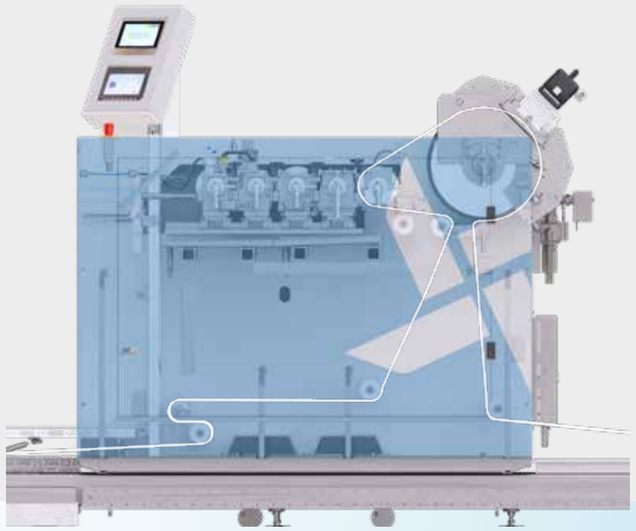
3-ROLLER SYSTEM

In the 3-roller system, the anilox roll applies the silicone from the buffer to the coating roll with exactly the right thickness. The coating roll then applies the silicone to the substrate. For specific applications, a 5-roller system is available for extremely low coating weights.



5-ROLLER SYSTEM

The 5-roller system is extremely well-suited for the application of low silicone weights. These five individually driven rollers create a thinner and more precise coating layer. The first two rollers dose the basic amount of silicone by setting a minimum gap between the rollers. Differential speeds and pressures are used to reduce the silicone layer from roller to roller, decreasing the coating thickness in a controlled way.



HIGH-PERFORMANCE INERT CHAMBER

Unique technology

In the high-performance inert chamber, the coating dries extremely quickly by UV radiation. The oxygen content in this high-performance inert chamber, with oxygen levels below 50 ppm, is continuously monitored. This results in high-quality hardening and optimised nitrogen consumption.

SLEEVE TECHNOLOGY

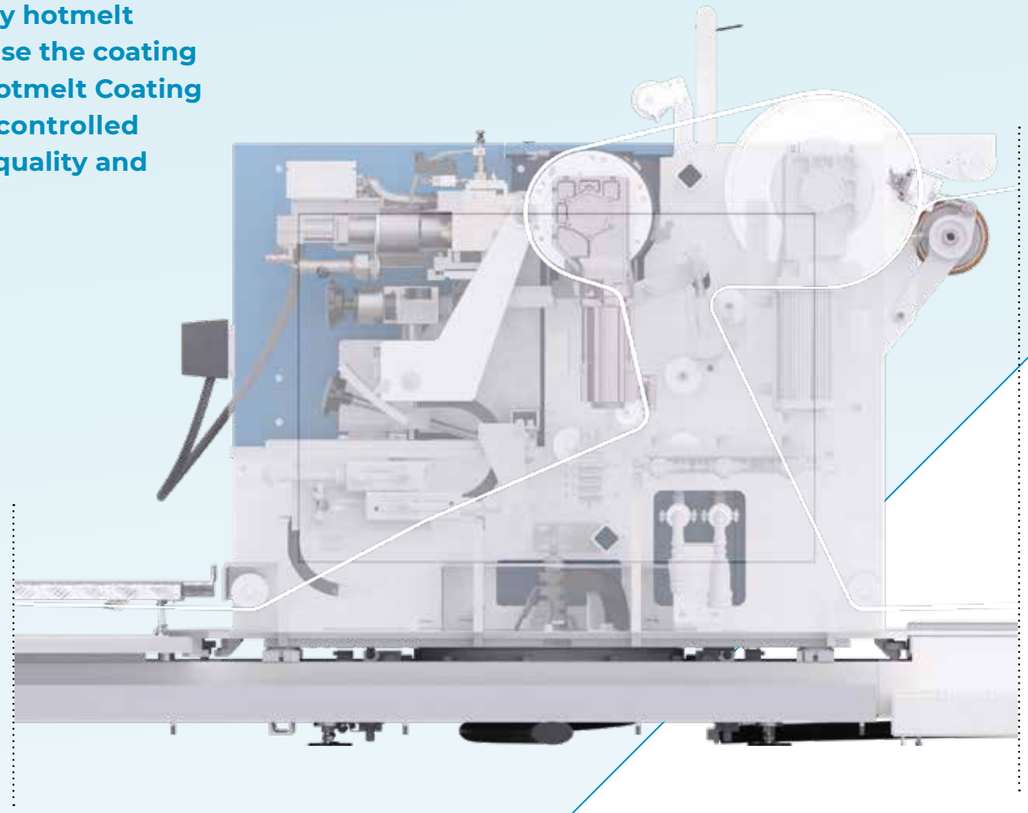
The coating roller in the Silicone Coating Station is fitted with a sleeve. This system makes it easy to mount and swap the sleeves on the coating roller, making it very easy to change the coating width and coating pattern.

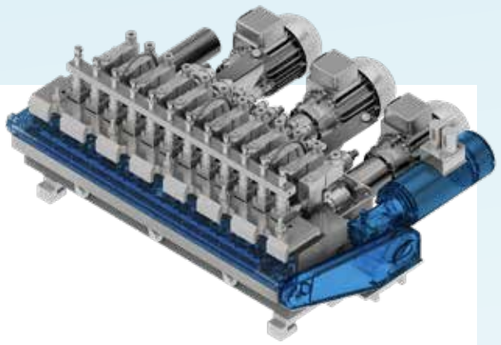
Hotmelt Coating Station

The Hotmelt Coating Station applies high-quality hotmelt coatings to paper and foils at high speed. Because the coating thickness and patterns are easy to adjust, the Hotmelt Coating Station has a broad range of applications. The controlled glueing process results in the highest coating quality and the best end product.

Easy variation in web widths

A rubberized sleeve is placed around the hot-melt coating roller. The width of the sleeve is linked to the paper- and coating width and ensures a stable adhesive layer with the right thickness. The sleeve fits closely to the roller, even under high coating pressure, and is easily interchangeable.





COATING HEAD

Precise and versatile

The coating appearance is mainly determined by the advanced, heated coating head that is equipped with heating elements and temperature sensors. It is divided into pump sections, to apply the most homogeneous coating layer possible. Each pump section feeds 4 valves and consists of a servo-driven pump that feeds the adhesive via the valves to the nozzle. The nozzle applies the adhesive to the substrate and determines the coating pattern.

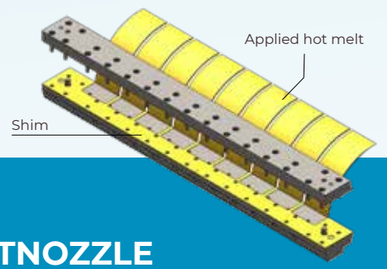
HYBRID TECHNOLOGY

A innovative technology for the production of both linerless labels and laminates on one production line. The HYBRID coating technology enables the production of both linerless and laminate on a single machine. Rotate the Hotmelt Coating Station to apply hotmelt to both sides of the paper or foil web. Unlike other alternatives, changing takes only 15 minutes.

UNIQUE - 3 INDIVIDUAL PUMPS

Uniform dosing

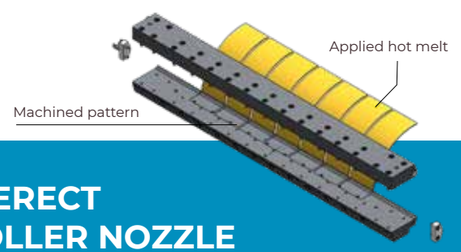
The coating head is driven by three individual pumps, allowing the glue to be applied faster and more homogeneously over the whole width. This facilitates adjustment of the glueing pattern. The setting of the coating weight is coupled to the web speed. The coating weight remains constant, even with changing web speeds.



SLOTNOZZLE

Quick pattern changing

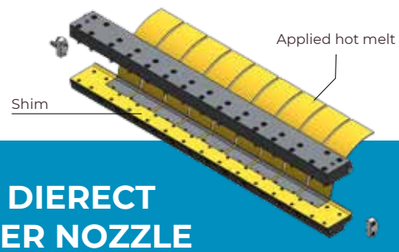
Standard and simple principle for hotmelt extrusion. Via the pre-melter and heated hose, the glue is extruded onto the substrate via the SlotNozzle. The glue patterns from the SlotNozzle are determined by “shim plates”. They are easily interchangeable and allow patterns to be quickly modified or exchanged.



DIERECT ROLLER NOZZLE

Patented application technology

The DieRect Roller Nozzle has a hardened roller that eliminates hard contaminants from the glue. The glue is extruded directly onto the substrate and spread on the substrate with the roller, resulting in extremely thin coating without streaks or thickness tolerances. The easy changing of nozzles means that patterns can be very easily adjusted.



SHIM DIERECT ROLLER NOZZLE

Best of both worlds

The Shim DieRect Roller Nozzle has a hardened roller that eliminates hard contaminants from the glue. The glue is extruded directly onto the substrate and spread on the substrate with the roller, resulting in extremely thin coating without streaks or thickness tolerances. The advantage of the Shim Dierect Roller Nozzle is that the pattern is determined by the Shim plate. These Shim plates can easily be exchanged.

Melting technology

CONTROLLED GLUE SUPPLY

The Hotmelt Coating Station is combined with a 'Melt-on-demand' Drum Melter 200 and a Tank Melter 65 adhesive buffer as standard, upline of the coating head. This combination ensures a controlled supply of glue at the right application temperature. Because a slight deviation in the processing temperature of the glue has a significant influence on its viscosity, and hence on the coating quality.

DRUM MELTER

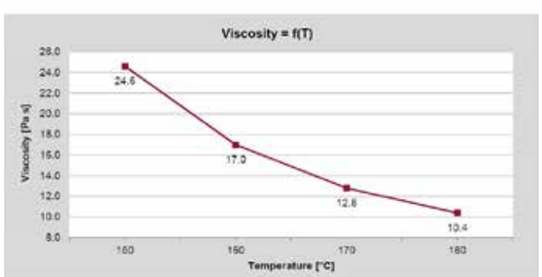
Melt-on-demand pre-melter

DM200 are luxury hotmelt Drum Melters for melt-on-demand applications. Fitted with a Siemens control system, automatic venting valve and glue pressure sensor. The smart integration of these three components ensures a controlled production process.

TANK MELTER

Top grade buffer unit for hotmelt.

Besides functioning as a buffer unit, the Tank Melter can also be used for pre-melting hotmelt in block or granular form. The melting chamber of the Maan Tank Melter65 has two zones. In the upper zone, the glue supply can be built up, after which the glue enters the melting chamber via an agrid. This means that only a small part of the adhesive is kept at temperature, preventing degradation of the adhesive. This buffer also makes it possible to change a drum without interrupting production.
The adhesive is pumped from the melting chamber to the Hotmelt Coating Station by a gear pump.



Influence of temperature on viscosity.

COATING LINE SPECIFICATION

	Coating Line 540	Coating Line 660
Web width (mm)	330 - 540 (13" - 21,25")	330 - 660 (13"- 26")
Mechanical speed (m/min)	150 (500 f/min) OPTIONAL 225 (750 f/min)	
Web thickness (um)	40 - 200	40 - 200
Web tension (N)	40 - 250	40 - 250
Silicone Coating Station	**3-Roller system**	**OPTIONAL 5-Roller system**
Silicone coating weight (g/m^3)	0.8 - 1.5 g/m^2	0.5 - 1.5 g/m^2
Hotmelt Coating Station	**DieRect Roller Nozzle**	**SlotNozzle**
Hotmelt coating weight (g/m^3)*	10 - 50	20 - 300

*Depending on type of materials and glue.

HIGH SPEED CONFIGURATION
225 m/min

For working at higher speeds, the Maan Coating Lines can be equipped with a high speed option. This option ensures that the mechanical production speed of the machine is increased to 225 m/min (750 F/min). The high speed option contains: more powerful motors, a second UV-lamp on the Silicone Coating Station and more cooling capacity of the cooling unit.

OPTIMAL CONTROL AND INTEGRATION

The coating station can be controlled from one central panel which real-time data is continuously available. The user-friendly control options enable operators to optimize their production process for the very best results.

We offer the very best coating equipment to the best converters (our partners)

To ensure that the various stations are seamlessly connected and perfectly managed by the control system, we work closely with various integrators. This way you can be sure that Maan Coating Equipment can be perfectly integrated in every coating line.

the in progress

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

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.

Knowledge and expertise

We understand the demands that the market places on the end product. Nobody knows the properties of hotmelt and silicone 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 hotmelt and silicone coatings.

Find your way in the label supply chain

Are you considering adding coating technology to your process? Then you need to adjust your production process and raw materials. We will be happy to guide you through the label supply chain, so you know where to turn to. To facilitate this, we have published a tool on our website that allows you to easily find your way to different suppliers. Scan the QR codes:

Applicator suppliers

Raw material suppliers

International service

Our speciality is coating equipment. Together with our partners, we ensure that your equipment is perfectly serviced, on site and remotely.

FIND OUT MORE?

Find more information on our website: **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 ENGINEERING

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