



Coating & Converting Equipment

Release and adhesive coating equipment for the worldwide label printing industry

Maan Engineering | Coating & Converting Equipment



MAAN-ENGINEERING.COM

Your Label. Our starting Point

The coating equipment from Maan Engineering stands for high-quality finished material, unique top speed and intelligent control. Label producers can distinguish themselves in the market through the use of their own coating techniques. The innovative equipment from Maan Engineering enables producers to manufacture unique materials, such as clear-to-clear labels and multilayer labels, in a single pass. The coating equipment can be operated both as a stand-alone solution and integrated into existing print and converting lines. With the new HYBRID Maan technology, label producers can produce laminate and linerless on a single machine.



LINERLESS LABELS | HIGH QUALITY LABEL MATERIAL | UNIQUE TOP SPEED | INTELLIGENT CONTROL

Hotmelt Coating Station

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

COATING HEAD

Precise and versatile

The basis of the Hotmelt Coating Station is the Coating Head. Three individually driven pumps guarantee extremely precise dosing. The Coating Head can hold various types of nozzle, such as the DieRect Roller Nozzle and the SlotNozzle.



UNIQUE - 3 INDIVIDUAL PUMPS

Homogeneous coating layers

The glue head has three individually driven 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.

DIERECT ROLLER

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 shaft, resulting in extremely thin coating without streaks or thickness tolerances. The simple changing of nozzles means that patterns can be very easily adjusted.

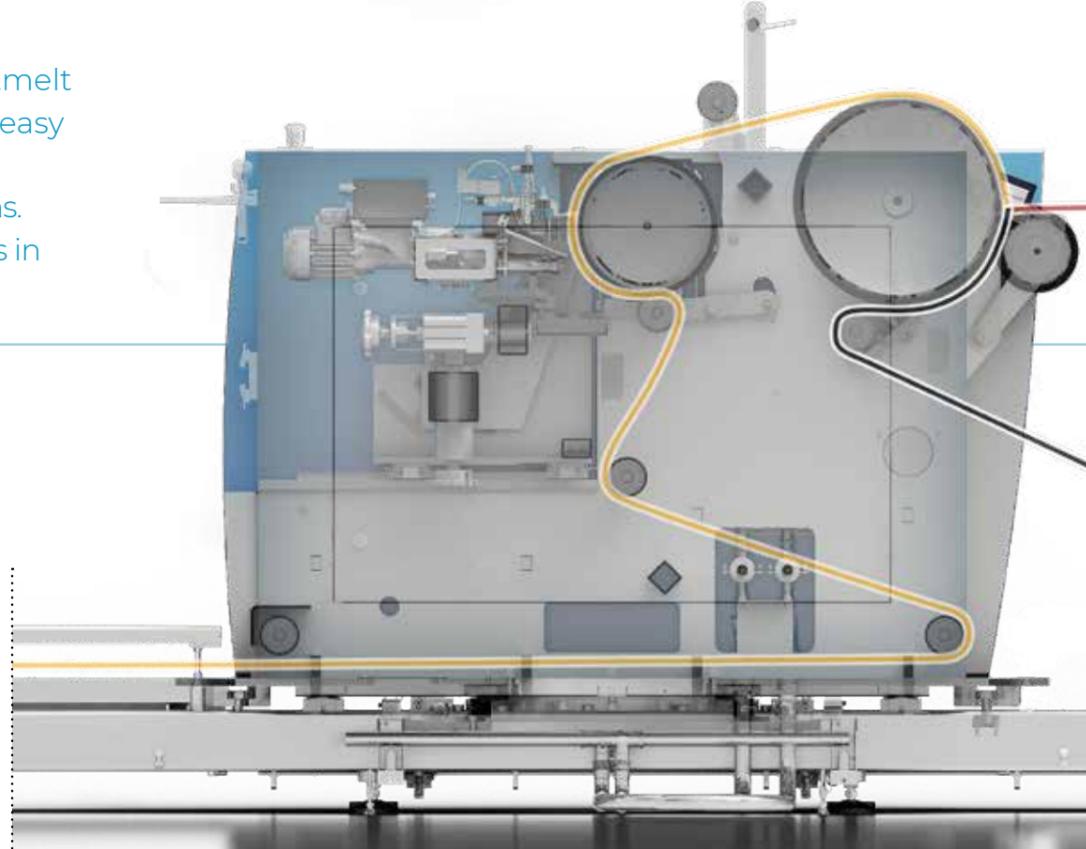
SLOTNOZZLE

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". These are easily changed and allow patterns to be quickly modified or exchanged.

NEW SLEEVE TECHNOLOGY

The coating roller in the Hotmelt Coating Station is fitted with a sleeve. The hotmelt is transferred to the substrate via this easily replaceable sleeve, making it simple to vary the coating width and coating pattern.



GLUE CIRCUIT TEMPERATURE CONTROL

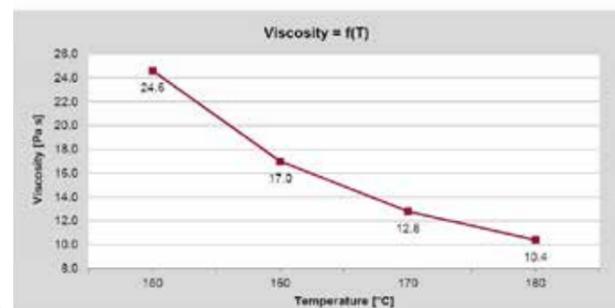
Controlled glue supply

The Hotmelt Coating Station is combined as standard with a melt-on-demand Drum Melder 200 and a Tank Melder 65 glue buffer upline of the Coating Head. This combination ensures a controlled supply of glue at the right application temperature. 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

Smart melt-on-demand pre-melter

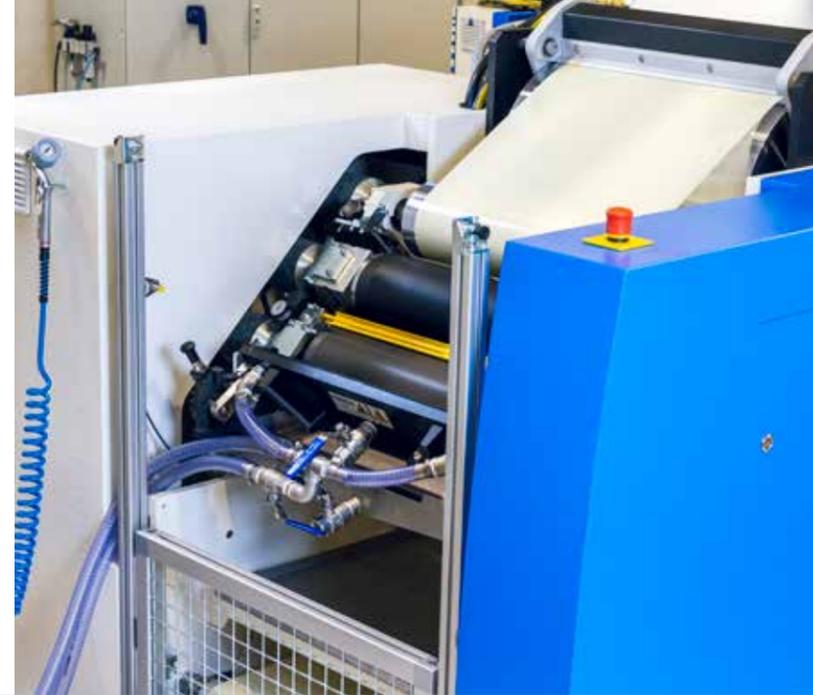
The DM200 is a luxury hot-melt Drum Melder for melt-on-demand applications. Fitted with Siemens control system, automatic venting valve and glue pressure sensor. The smart integration of these three components ensures a controlled production process.



Influence of temperature on viscosity

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 cleanly and quickly by means of an innovative inert gas chamber in combination with a UV lamp.



Infeed station



3-ROLLER SYSTEM

Optionally with 5 rollers

The Silicone Coating Station is available as a 3-roller or 5-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.

INDIVIDUALLY DRIVEN ROLLERS

For optimum control

The rolls of the Silicone Coating Station are independently driven and their speed can be individually controlled. This ensures an optimum distribution of the silicone on the substrate and prevents pinholes. The temperature is precisely monitored and controlled during the process.

HIGH-PERFORMANCE INERT CHAMBER

Unique technology

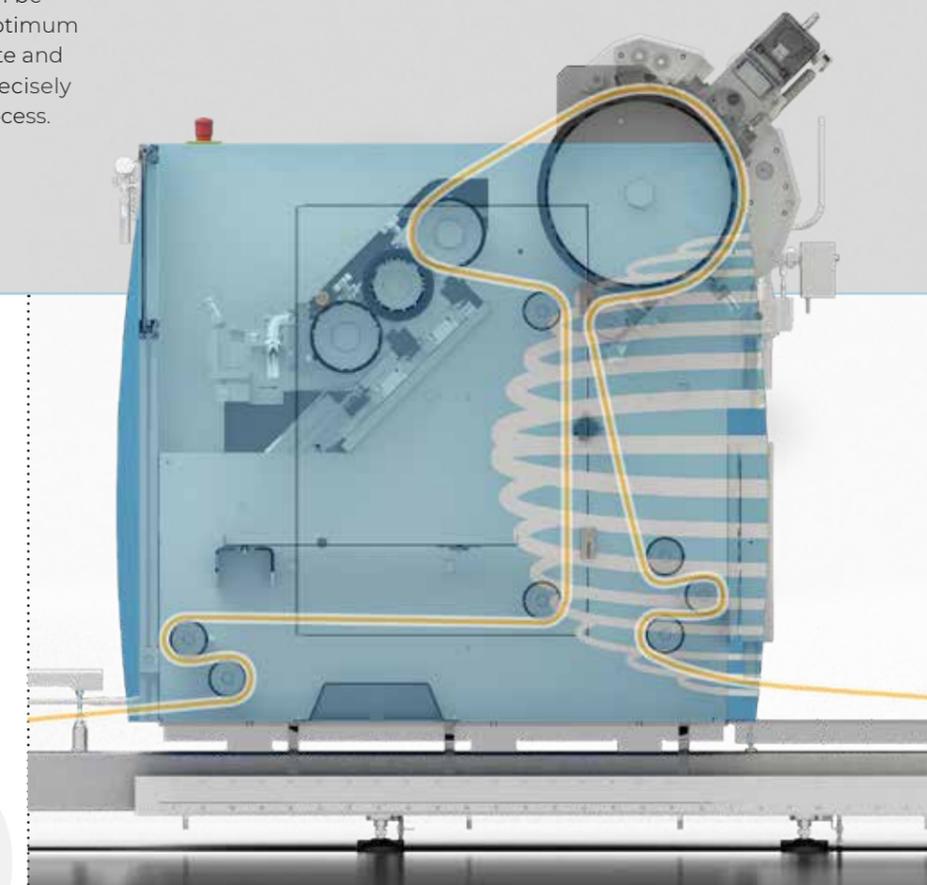
In the high-performance inert chamber, the coating is dried extremely quickly by UV radiation. The oxygen content in this high-performance inert chamber, with oxygen levels below 50 ppm, is continuously monitored. This results in high-quality curing and optimised nitrogen consumption.



INFEED STATION

Controlled infeed and web tension

After the infeed unit, the substrate web is gripped by the infeed station that directs the web and measures and controls the web tension in the other process steps. The corona pretreatment to improve the adhesion of the silicone coating also takes place in this station.



Hotmelt Coating Station and Silicone Coating Station

A powerful combination with a wide range of applications

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INNOVATIVE HYBRID TECHNOLOGY

Rotation of the Hotmelt Coating Station allows the web passage for hotmelt coating to be reversed within 15 minutes. As a result, both linerless and laminate can be produced on one coating machine.

NEW! HYBRID technology

① HYBRID Lamination Coating Line

Innovative hotmelt and silicone coating line for the production of both linerless labels and laminates.

② Hotmelt Coating Line

Hotmelt coating line for the application of hotmelt coating to silicone-coated paper for the production of laminates.

③ Linerless Coating Line

Coating line for the application of silicone and hotmelt coatings for the production of linerless labels.

Coating Line Specifications	Standard			Special	
	330 (13")	430 (16")	530 (20")	560 (22")	660 (26")
Web width (mm)	330 (13")	430 (16")	530 (20")	560 (22")	660 (26")
Mechanical speed (m/min)	150 (500 f/min) OPTIONAL 225 (750 f/min)				
Web thickness (µm)	40-200	40-200	40-200	40-200	40-200
Web tension (N)	40-250	40-250	40-250	40-250	40-250
Maximum roll diameter (inch)	40	40	40	40	40
Core diameters (inch)	3 - 6	3 - 6	3 - 6	3 - 6	3 - 6

Silicone Coating Station	3-Roller system	OPTIONAL 5-Roller system
Silicone coating weight	0.8 - 1.5 g/m ²	0.5 - 1.0 g/m ²

Hotmelt Coating Station	DieRect Roller Nozzle	SlotNozzle
Hotmelt coating weight*	10 - 50	20 - 300

*Depending type on hotmelt



① Layer thickness measurement

Live measurement for monitoring the coating weight of the hot-melt coating hotmelt coating.



② High-Speed option

The high-speed option for the coating lines has a mechanical speed of 225 m/min.



③ 5-Roller system

5 rolls on the Silicone Coating Station. For the application of extremely thin silicone coatings.



④ HYBRID technology

Rotating Hotmelt Coating Station for quick change of the web passage for the production of linerless labels and laminates.



CONTROL AND INTEGRATION

All machines are controlled from one central panel on which real-time data are continuously available. The user-friendly controls enable operators to optimise the production process for the very best result.

The integration of different coating & converting techniques into one line creates added value. One roll of paper results in completely printed, punched and wound material.

HYBRID Coating Technology

New, innovative technology for the production of both linerless labels and laminates.

The HYBRID coating technology enables the production of both linerless and laminate on a single machine. Rotate the Hotmelt Coating Station to be able to apply hotmelt to both sides of the paper or foil web. By contrast with other alternatives, changing takes only 15 minutes.

Innovative and smart

Maan's smart solutions offer label producers a huge range of options for using their own coating techniques. They enable the production of proprietary laminate materials and special labels, such as linerless labels, clear-2-clear labels, multilayer labels and tyre labels. The latest addition to the range is the hybrid technology with which linerless and laminate can be produced using a single machine.



Linerless labels



Laminates

MAAN ENGINEERING B.V.

Maan Engineering B.V. develops and produces top-grade release and adhesive coating equipment for the worldwide label printing industry. Equipment that makes an unmistakable difference, resulting in high-quality end products, and contributing to the distinctiveness and productivity of label producers.

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