AV Flexologic

We innovate!

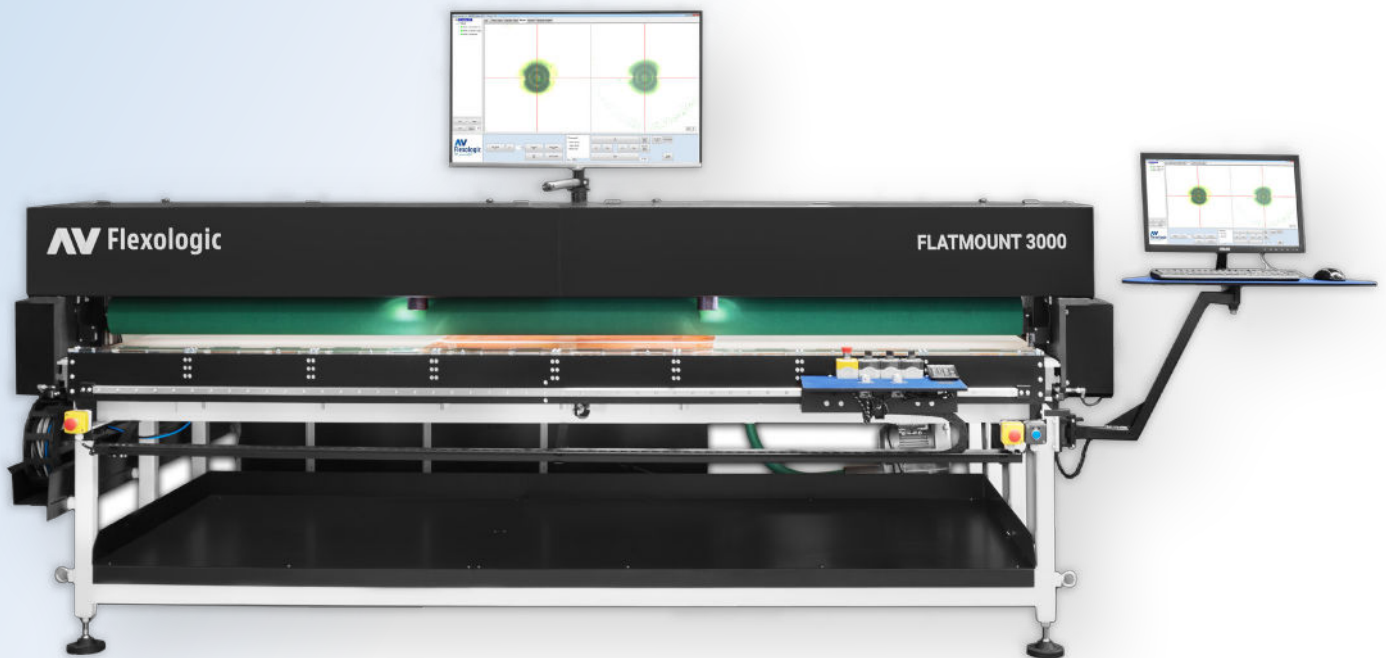FLATMOUNT

OPTIMOUNT

SAMM POSTPRINT

TAPE LAMINATOR

CORRUGATED POSTPRINT PORTFOLIO

FLATMOUNT

MOTORIZED FLAT MOUNTING MACHINE

Widths

|	
Width [mm]	≤ 3000, 3500
Width [inch]	≤ 118, 137,8"

Description

The Flatmount is a premier flat flexo plate mounting machine for mounting on mylars. Mounting with the Flatmount is **very fast and maximizes efficiency** while the related costs are decreasing. Flat mounting is the **upcoming trend** in the corrugated postprint industry and the Flatmount is offering **unique patented options** for a quick and accurate flat mounting.

Workflow

The operator places the mylar onto the large table and can **lock the mylar** with the **optional vacuum system.** After selecting the job, the cameras come forward to the position of the registered mounting marks. The cameras are easily controlled by encoders and all the commands can be given by the keypad.

The operator positions the flexo plate manually or with the help of the optional Image Recognition system, which will give the indication when the plate is positioned within the selected tolerance by showing the "OK" signs. Following, the operator removes the double-sided tape and the plate sticks on the mylar. After, the operator can apply pressure on the plate with the optional pressure roller, which eliminates any air inclusions. Otherwise, the operator should use a roller to apply pressure and complete the mounting process.

Unique Features
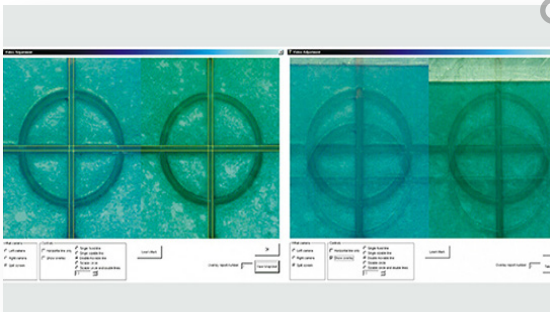
Overlay system (patented)

Once the first plate is in the right position, the overlay module enables the operator to take snapshots of the mounting marks, which are then shown semi-transparently when mounting the other plates. This feature is extremely helpful for the operator who can position accurately the plates more easily and in less time.
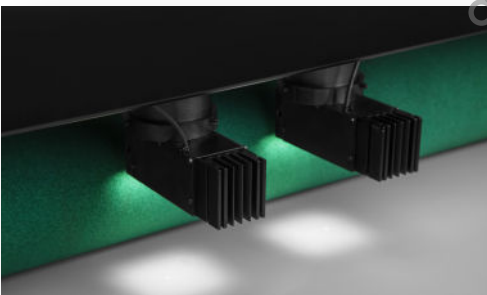
HD Ethernet cameras

Using the latest technology in high-speed Ethernet cameras, AV Flexologic ensures crisp and sharp ultra-high-resolution images, enabling an efficient and accurate mounting process.
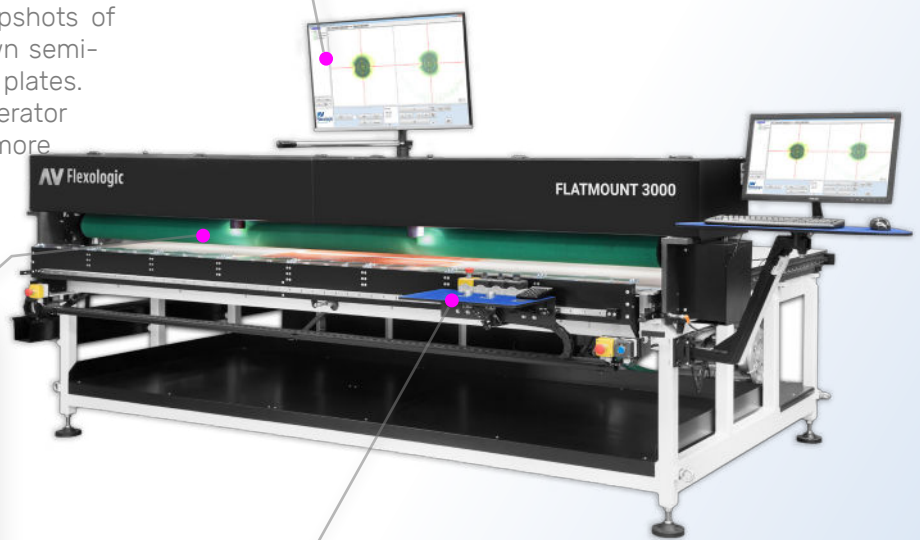
Camera encoders and keypad

Operating the Flatmount is very easy since the cameras are easily controlled by encoders and the operator can insert all the commands through the keypad. In addition, when the plate is fixed on the desired position the operator uses the switches to use the (optional) pressure roller back and forth.

Unique options

Image Recognition System

Unique to the Flatmount is the optional Image Recognition system, which is also included in the Automatic SAMM Postprint. AV Flexologic has developed image recognition based **Quality Control** and intelligent **positioning assistant** on the Flatmount. With the positioning assistant the workflow remains the same, however the image recognition system constantly measures the position of the mounting marks. When the operator has positioned the plate by hand within a user-set tolerance, the machine gives the 'OK' and an accurate mounting is ensured.

In addition, after mounting, the machine performs a **quality check** and creates a **PDF Quality Report** on the fly. The PDF contains the measurements of the quality check and thus, how accurately the plates were mounted.
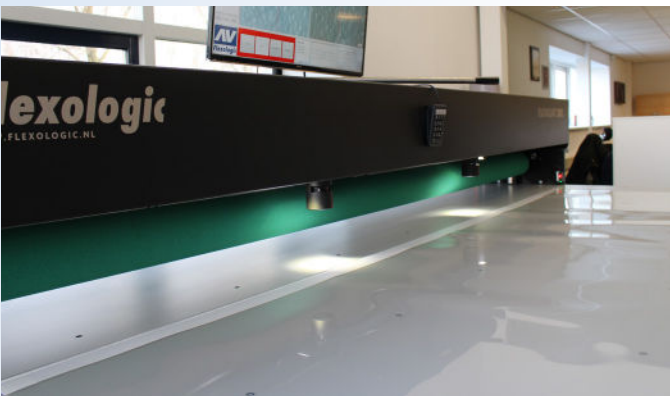

Clamping system and vacuum table

When the mylar is centered in the zero position, it can be fixed on the table using the vacuum system. Also, the vacuum is used to remove all the air from the mylar to ensure high-quality mounting.
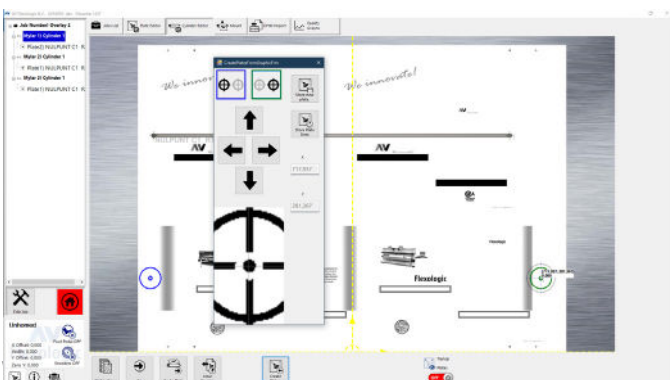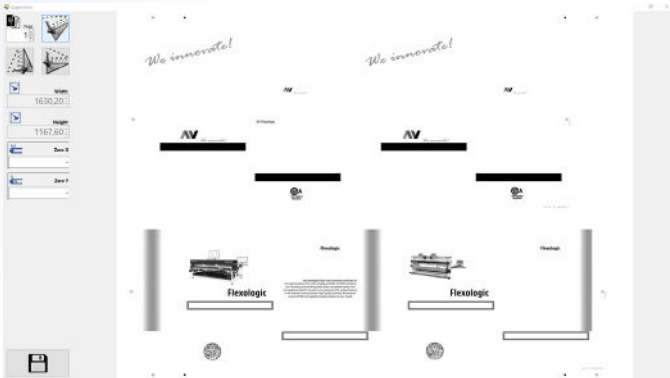
Pressure roller

The pressure roller provides high-quality mounting without any air inclusions and therefore the print quality is phenomenal. The pressure roller's movements are easily controlled by the switches next to the camera encoders. It is also an ergonomic solution for the operator since with less effort, high-quality results are guaranteed.
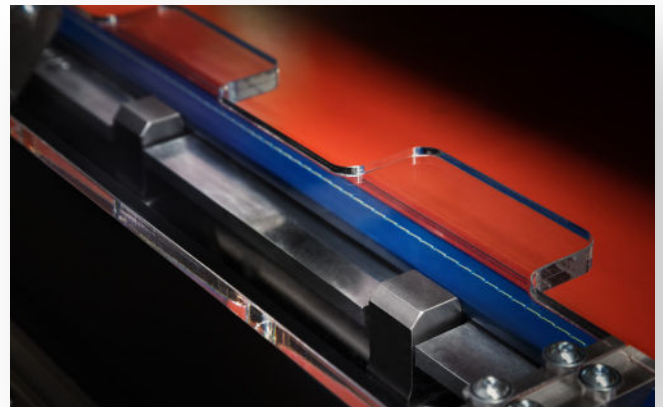
PDF Import

With the PDF Import it is possible to build the job directly from the graphic of the mylar. By importing the PDF with the graphic, the operator can create a job by clicking on the targets.

The PDF Import allows a **faster job creatio without mistakes.**

It is also possible to mount the plates using the overlay system to project the image semi-transparently to assist the operator in the mounting process.

Patented options

Inkjet - Digital Printing Technology

The Inkjet print head is AV Flexologic's latest innovation in the corrugated post-print industry. The revolutionary inkjet technology is used to apply individual print job information directly on to the mylar before mounting plates.

This feature allows an easier, faster and more accurate mounting. The inkjet uses a PDF file with the design that will be printed on the mylar. Some print option examples are:

• Labels
• Box outline
• Mounting marks
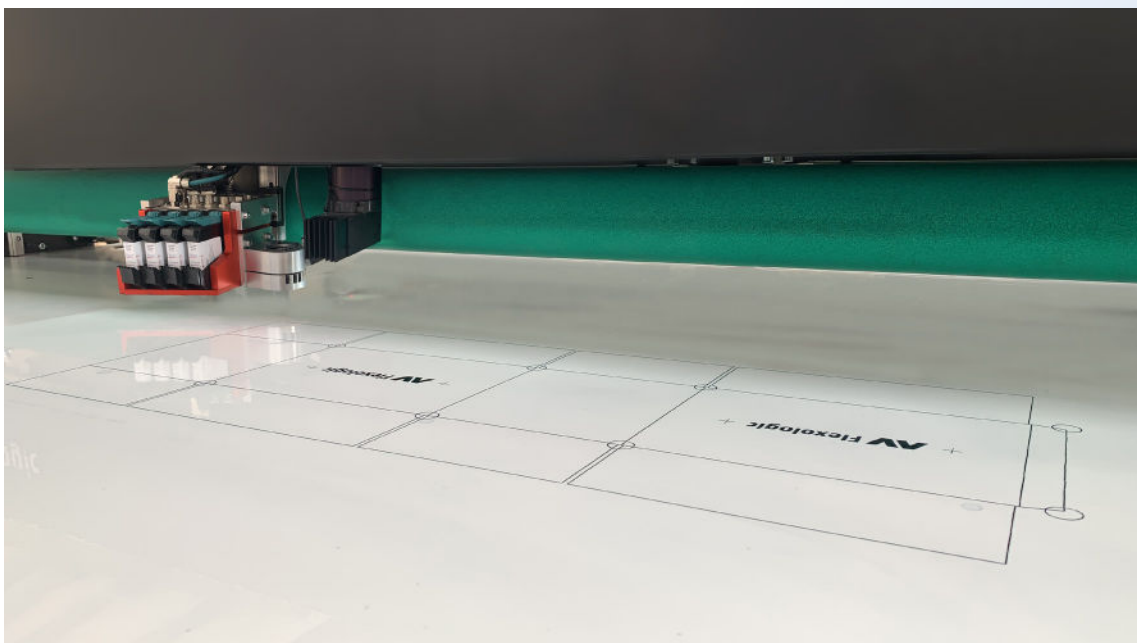• Plate information
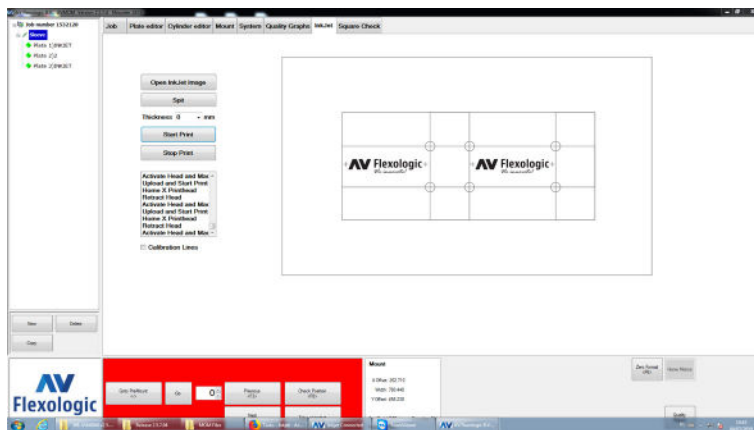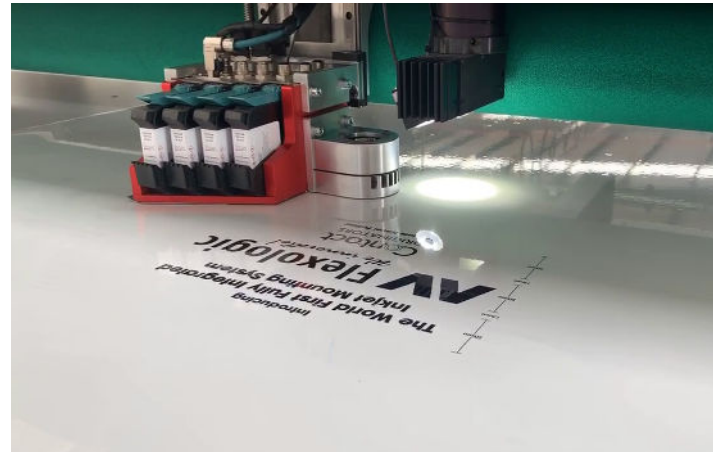
Advantages

Provides individual print job information directly onto the mylar before mounting

Saves time and removes the need for labelling

Reduces human interaction and mistakes

Improves standardization and eliminates duplication of information

Patented options

VPP - Virtual Proof Print

The VPP is the new option available for the **Flatmount.** The VPP provides a virtual proof of the mounted plates by scanning each plate after mounting. The extra camera (42,8 megapixels) provides a **digital visualization** of the image of the mounted plate, which can be exported as a PDF to send to the customer.

The plate can be from 20mm to 2,800mm wide (X) and up to 1500mm long(Y).
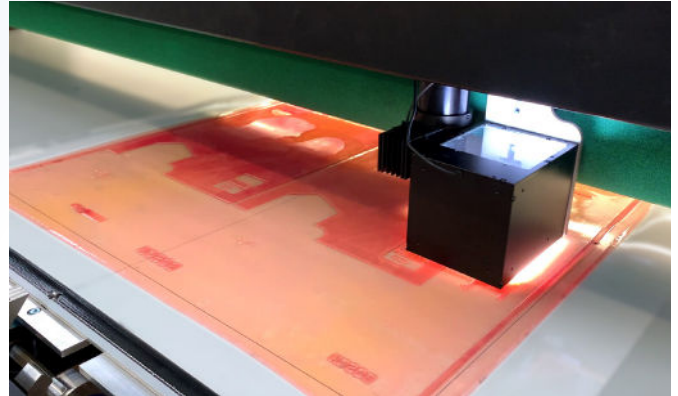

Within the VPP tab in the system, the scan results appear in the left side, while on the right side it's the accompanied PDF image. Each color can be compared individually with the actual color of the image.

You can select to see one or more colors on top of each other any time.

After all the plates are mounted and scanned, there is an image of the final result that can be compared to the PDF file.

The VPP scan can be **exported as a PDF** file and be used as a **proof of mounting.** The pdf of the VPP scan is not a substitute of the Quality Report as it doesn't contain the measurements of the mounting accuracy of the marks. However, it ensures that the plates sent to the press are **not mounted upside-down.**
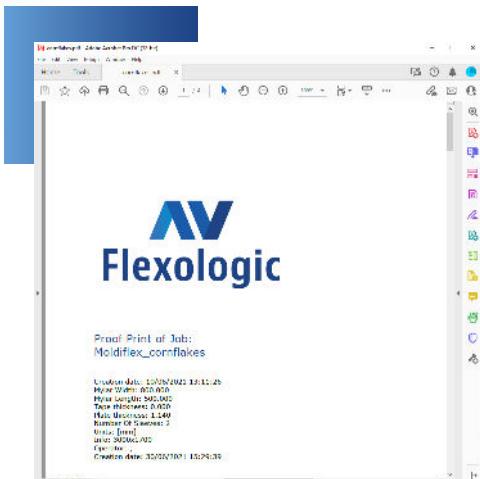
Advantages

Provides digital proof of the mounting
No need for manual inking of plates
Prevents mistakes before sending plates to the press
Better control over the printing process
The PDF is stored for later use

Virtual Proof Print advantages

1. Prevents mounting a plate Upside-Down
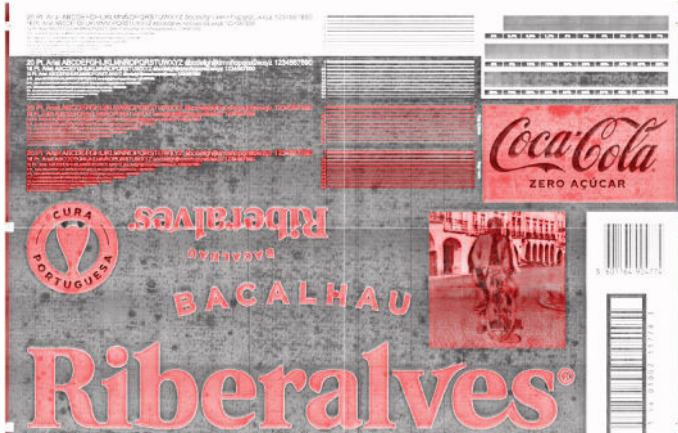
PDF scan of 2 colors mounted **correctly**

PDF scan of 2 colors mounted **upside-down**

2. Find misalignments before sending the mylars to the press

PDF scan of 2 colors mounted **correctly**

PDF scan of 2 colors mounted **not correctly**

3. High 5K resolution scan results

Scan

PDF

The VPP software gives also the possibility to mirror the image to make the text readable and comparable.

SAMM POSTPRINT

AUTOMATIC MOUNTING MACHINE

Widths

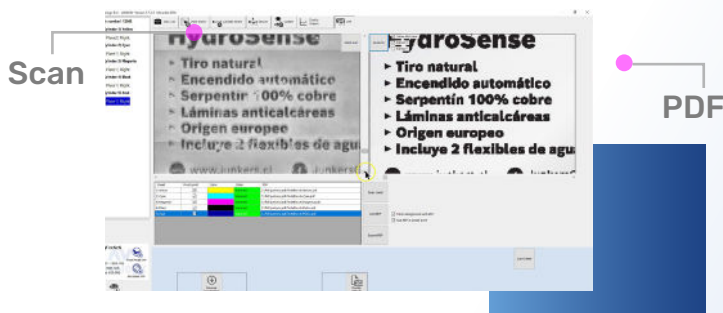|	
Width [mm]	≤ 3000, 3500
Width [inch]	≤ 118, 137,8"
Max repeat [mm/inch]	1700mm / 66.9"

Description

The Automatic SAMM Postprint is the most advanced corrugated mounting machine for mounting flexo plates onto mylars. This machine is **unique** in the corrugated postprint industry as it offers **robotic plate positioning** and proofs the flexo plates with extreme accuracy and consistency.

Workflow

The operator fixes the mylar on the mounting cylinder and selects a job to start. He only needs to preposition the plate on the **robotic mounting table** which will move automatically and position the plate accurately using the **patented Image Recognition.** After, the operator removes the cover of the double-sided tape and selects the pressure roller to move down to apply pressure on the plate. He only needs to rotate the cylinder using the foot pedal to finish the mounting.

When the mounting process is completed, it is possible to proof the mounting marks. After applying ink on mounting marks of the plate, the operator selects the proofing option from the touchscreen and the **proofing cylinder automatically moves** closer to the mounting cylinder. The proofing cylinder **rotates automatically** and the mounting marks are visible on the proofing paper.

Unique Features

Image Recognition (patented)

The image recognition system measures the exact positions of the mounting marks and thus how **accurately** the printing plate is fixed on the mylar. The tolerance of the report settings determines whether a plate is mounted within tolerance and thus a "OK"sign will appear on the screen. The Image Recognition system provides a positioning accuracy down to 5 microns.
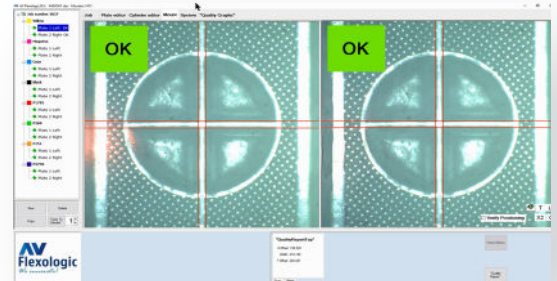

Pressure roller

The pressure roller ensures even mounting, without **any air inclusions** and bubbles. The roller is used to apply the plates evenly over the mylar and without damaging them. The use of the pressure roller eliminates the typical 'hand-rolling'. The feature saves time and avoids un-ergonomic working procedures.

Robotic table

Using the measurements of the Image Recognition system, the machine **automatically positions the flexo plate** with an accuracy of 5 microns, using the robotic vacuum table. In addition, the vacuum table provides and ergonomic and more stable mounting workflow.
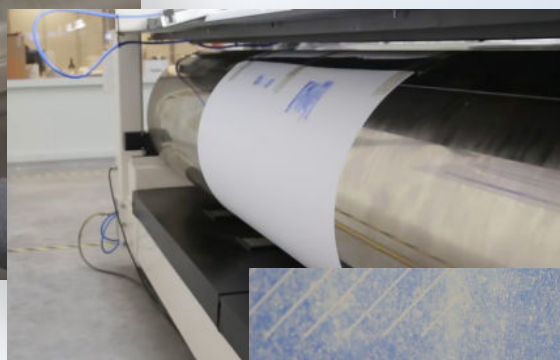
Proofing cylinder

The SAMM Postprint comes standard with a proofing cylinder for proofing the mounting marks of the corrugated plates. After mounting, the operator applies ink on the mounting marks and selects proofing. Then, the proofing cylinder is automatically brought to the correct position and rotates automatically. The proofing cylinder has the correct distance from the mounting cylinder , therefore the plate is not damaged.

![AV Flexologic - We innovate!]
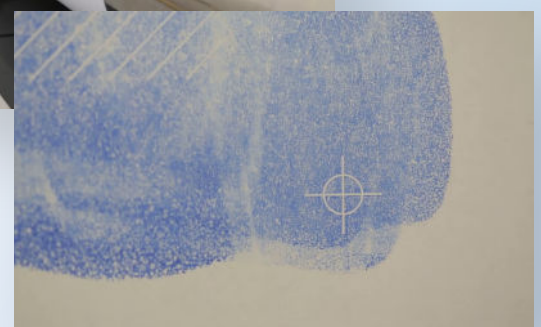
SAMM POSTPRINT Unique Options

ESKO/HYBRID Compatibility

Both Esko and Hybrid offer a software for patching corrugated plates. All the information about the flexo plates and the coordinates of the mounting marks can be transferred directly to the corrugated mounting machine which recognized MOM files that include the complete jobs ready to be mounted.

Mylar automatic drawing pen

This pen is used to draw automatically the outline of the corrugated printed package on the mylar where the plate is going to be mounted. After the first plate is mounted and proofed, using the draw lines of the pen as reference, the operator mounts the next plates accurately using mirror mounting.

Proof paper automatic drawing pen

The proof paper pen draws automatically the outline of the printed package on the proofing paper. After proofing the mounting marks of the corrugated plates, the operator will be able to see whether the plate is mounted accurately and if it will be printed at the correct position on the package.
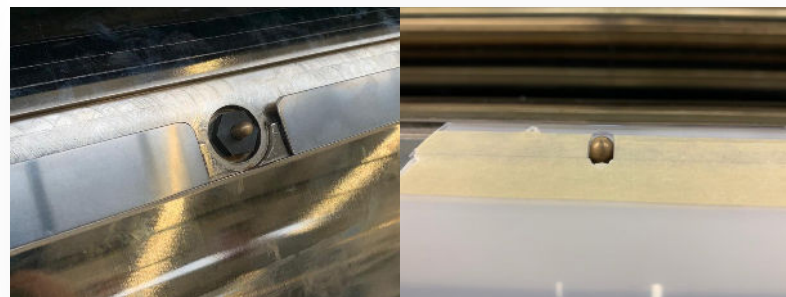
Mylar centering pin

This is a centering pin which makes the alignment of the carrier sheet/mylar very easy and consistent to the zero position of the machine.

Camera for lining up Proof Paper

This extra camera helps the operator to line up the proof paper easier.

Digital mirror camera for proofing paper

The digital mirror camera is positioned on the back of the machine and moves to the point of proofing. The camera transfers the image to the front screen, therefore, the operator doesn't need to go to the back of the machine to check the proofing.

Mounting Marks Specifications

The Automatic SAMM Postprint uses the patented Image Recognition to identify the mounting marks and based on them, position the flexo plate accurately.

| Type of target	Compatible mode	Plate type	Target top size**		Free space around target		Top of target
			Minimal	Advised	Shape	Size	
Positive dot	Blob	Processed	0.4mm	0.5-0.6mm	Circle	1mm	Flat no image
		Thermal	0.45mm	0.5-0.6mm			
	Correlation	Processed	0.4mm	0.5-0.6mm	Square		
		Thermal	0.45mm	0.5-0.6mm			
Negative dot	Blob	Processed	0.6mm	0.6-1mm	Circle		
	Correlation	Processed	0.6mm	0.6-1mm	Square		
Positive non-dot shapes	Correlation	Processed	2mm	2-4mm	Square		
		Thermal	2mm	2-4mm	Square		
Damaged targets*	Semi Auto	See specs of the original target					

* It is possible to mount damaged targets using the Semi-Automatic mode. The operator will have to locate the target once, after that the SAMM will mount these plates automatically. Also the quality check after mounting is available.

** Microdots with a smaller diameter than 0.4mm can become unstable and can deteriorate following printing

***When possible, it is recommended to avoid screening such as pixel+ on the mounting mark for optimal recognition. When using a laser to apply the screening, the screening can be avoided using object-based selective screening in the prepress software.

Mounting marks types

The Automatic SAMM Postprint detects all common mounting marks and microdots within the above specifications.
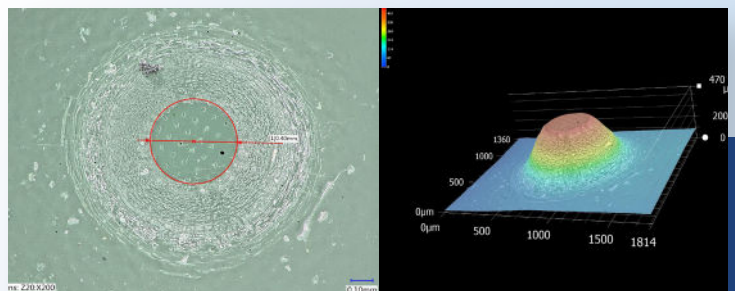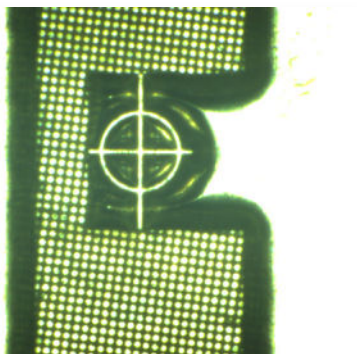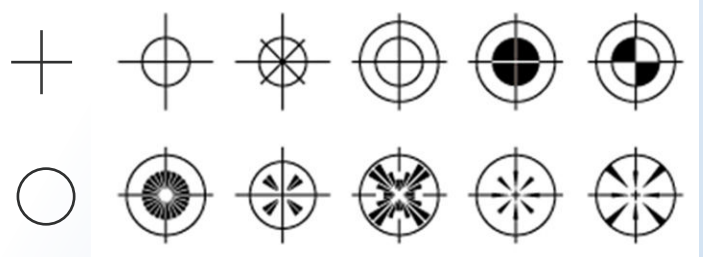
MOTORIZED MOUNTING MACHINE

Widths

Width [mm]	≤ 3000, 3500
Width [inch]	≤ 118, 137,8"
Max repeat [mm/inch]	1700mm / 66.9"

Description

The Optimount is a high-end motorized mounting machine for mounting flexo plates onto mylars. This highly efficient flexo plate mounter for the corrugated postprint industry is suitable **not only for mounting but also for proofing the flexo plates.** It is ideal for mounting **small patches** of corrugated plates in various positions.

Workflow

The operator fixes the mylar on the mounting cylinder and selects a job. The motorized **cameras move automatically** into the position of the first plate. By watching the mounting marks on the large touchscreen on top of the cameras, the operator **positions the plate manually** and removes the cover of the double-sided tape to stick the plate onto the mylar. The plate is mounted using a hand roller or with the help of the **optional pressure roller.** For larger plates, the operator can rotate the cylinder using the foot pedal. By selecting the second plate on the touchscreen, the cameras move to the indicated position for mounting the next plate.

When the mounting process is over, the cameras move automatically to the position of the mounting marks of each plate for checking. After this, the operator can apply ink on the mounting marks and proof the plates.

Unique Features

Automatic moving HD cameras

The Optimount is equipped with HD Ethernet cameras that move automatically into the mounting position. The operator only needs to create or import a job from ESKO/HYBRID plate patcher software and then select the job to start mounting.
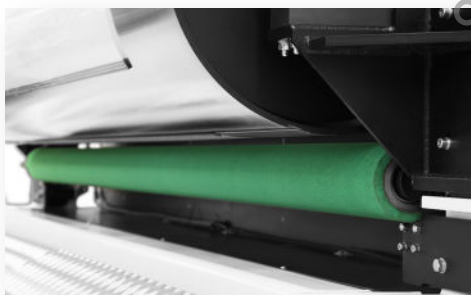
Pressure Roller (optional)

The pressure roller ensures even mounting, without **any air inclusions** and bubbles. This roller is located on the bottom of the mounting cylinder which rotates and the roller applies enough pressure on the plate so that it sticks on the mylar without damage.

Proofing cylinder

The Optimount comes standard with a proofing cylinder for proofing the mounting marks of the corrugated plates just like the SAMM Postprint. After mounting, the operator applies ink on the mounting marks and selects proofing. Then, the proofing cylinder is automatically brought to the correct position and rotates automatically. The proofing cylinder has the correct distance from the mounting cylinder , therefore the plate is not damaged.

Tape Laminator 1700

Description

The **Tape Laminator 1700** is designed to apply double-sided adhesive tape onto flexographic printing plates evenly and without air bubbles. With the **Tape Laminator 1700** you can achieve the highest level of laminating automation, for the best safety of the operator. The laminator measures the position of the plating and the amount of pressure required for each work. You can always check the quality of the lamination thanks to settings for thickness of the plate, and reports that can be visioned whenever you want. The **Tape Laminator 1700** can also be easily used by less experienced operators.

Features

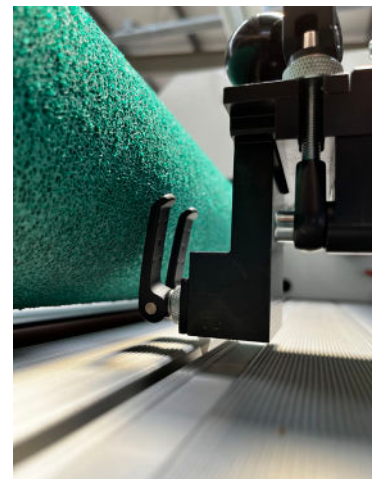| |
|---|
| Rubber roller for safe plate taping without air inclusions |
| Friendly user interface |
| Automated cutting knife |
| Two tape spools |

Options

Front and back table
Tape length measurement

Advantages

| |
|---|
| Perfect tape lamination without air bubbles. Insert the job setting and press one pedal, the rest is automated |
| Different preselect settings to save time |
| Easy to use for minimal force required and highest safety |
| Quality assurance and track of every lamination with the advanced model |

Corrugated Postprint Product Summary

Specifications	FLATMOUNT	OPTIMOUNT	SAMM POSTPRINT
Max Width (mm)	3000, 3500	3000, 3500	3000, 3500
Max Width (inch)	118, 137,8"	118, 137,8"	118, 137,8"
Max Repeat (mm/inch)	1700mm / 66.9"	1700mm / 66.9"	n/a
Proofing cylinder	NO	YES	YES

| Features & Options	FLATMOUNT	OPTIMOUNT	SAMM POSTPRINT
HD Ethernet Cameras	✓	✓	✓
Windows 10 mounting software	✓	✓	✓
Overlay	✓	✓	✓
Digital Zoom capability	✓	✓	✓
Camera encoders	✓	o	✓
Laser pointers	✓	✓	✓
Quality Report	✓	✓	✓
Motorized cameras	✓	✓	✓
Digital Calibration System	✓	✓	✓
Keypad for commands	✓		
Touchscreen		✓	✓
Motorized rotation of cylinder	n/a	✓	✓
Pressure roller	o	o	✓
Image Recognition Software	o		✓
Quality check w/ image recognition	o		✓
Vacuum table	o		✓
DOAL Lights	o		✓
Overlay 2.0	o	o	o
Tape holder	o	o	o
14ESKO Platepatcher Compatibility	o	o	o
Hybrid Patchplanner Compatibility	o	o	o
Mylar centralizing pin	o	o	o
Mylar automatic drawing pen	o	o	o
Proof Paper Automatic Drawing Pen		o	o
Digital mirror camera for proofing paper			o
Camera for lining up proof paper			o
Inkjet - Digital Printing Technology	o		
VPP - Virtual Printing Proof	o		

✓ = Included   **o** = Optional
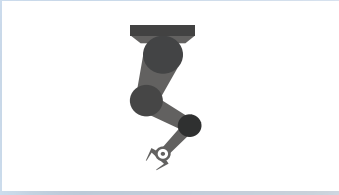
Robotic positioning

Driven by the AV Flexologic software, the robotic table positions the mounting plate with high accuracy, each and every time. After positioning the vertically moving cylinder automatically comes up.
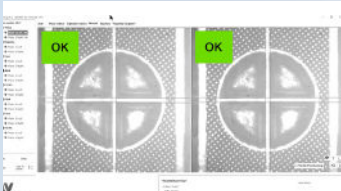
Quality check with image recognition

The image recognition system measures the exact positions of the mounting marks and thus how accurately the printing plate is fixed on the sleeve. The tolerance of the report settings determines whether a plate is judged as mounted 'OK' or 'NOT OK'.
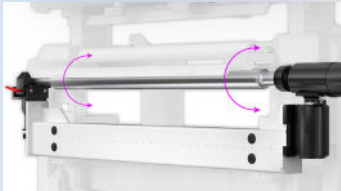
Motorized rotation cylinder

The chromed cylinder is driven by a high quality electric motor which is joined to a high-precision, zero backlash gear reducer called a 'harmonic drive'. This ensures maximum possible precision in the rotational (Y) direction of the mounting process. Starting or recalling a job and moving to the right mounting position for each plate is done within seconds.

HD Ethernet cameras

Using the latest technology in high-speed Ethernet cameras on all of the mounting equipment, AV Flexologic ensures crisp and sharp ultra-high-resolution images, enabling an efficient and accurate mounting process.

Quality report

After each plate is mounted, the machines have the ability to automatically check the tolerance of mounted plates using image recognition. A pdf quality report is generated on-the-fly with ability to check top and bottom.
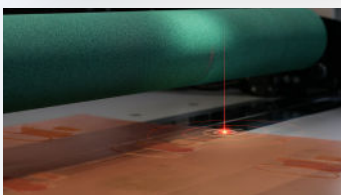
Laser pointers

Laser pointers are mounted next to the cameras to indicate where the field of view of the cameras is. The mounting marks can be easily positioned in a fraction of time, instead of having to search for the mounting marks in the camera image each time.

DOAL lights

The image recognition system includes special DOAL lights with a half-transparent mirror which provide the best recognition conditions for automatic mounting. The light comes from the side and is reflected down in the same direction the camera is looking. When the light hits the plate surface it reflects straight back up into the lens.
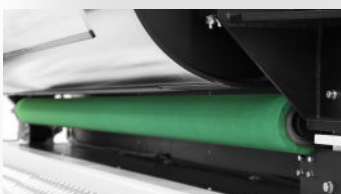
Pressure roller

The pressure roller has become a standard feature in AV Flexologic flexo plate mounting machines over recent years. The roller is used to apply the plates evenly over the carrier such as a sleeve, cylinder or Mylar. The use of the pressure roller eliminates the typical 'hand-rolling'. The feature saves time and avoids un-ergonomic working procedures.

Windows 10 mounting software

Striving for the latest up to date technology, the SAMM 2.0 is equipped with Windows 10, which is fully compatible with our software.
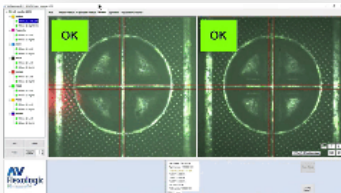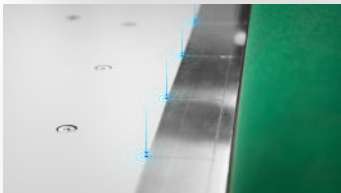

Image Recognition (patented)

The image recognition system measures the exact positions of the mounting marks and thus how **accurately** the printing plate is fixed on the sleeve. The tolerance of the report settings determines whether a plate is mounted within tolerance and thus a "OK"sign will appear on the screen.


Vacuum table

To ensure highly accurate positioning, the vacuum system fixates the plate to the robotic table before positioning.
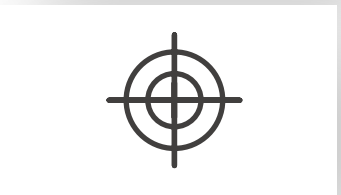

Digital calibration system

Digital Y-calibration of the camera beam: the camera images are used in a calibration procedure to create a lookup table and digitally 'straighten' any deviations in the camera beam, down to 10 μm over the entire width of the camera beam / sleeve. For every x-position of the camera the y-deviation is recalled, the image is automatically digitally adjusted, ensuring 100x more accurate mounting. Additionally, the measured Y-deviation is stored in a lookup table.
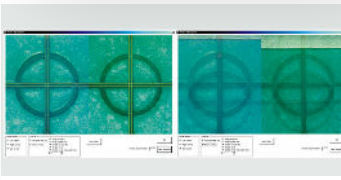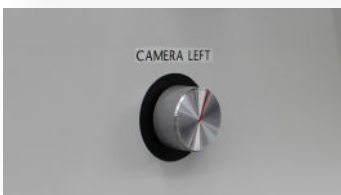

Overlay System (patented)

Once the first plate is in the right position, the overlay module enables the operator to take snapshots of the mounting marks, which are then shown semi-transparently when mounting the other plates.
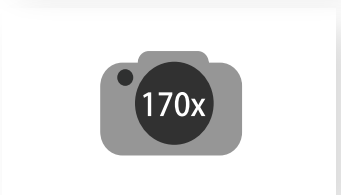
Digital zoom capability

Combining HD cameras with HD flatscreen monitors enables mounting equipment to zoom digitally up to 170x.

Camera encoders

The encoders are used to change the position of the motorized cameras easily. By rotating the encoders, the cameras are moving right or left.

Proofing cylinder

After mounting, the proofing cylinder is automatically brought to the correct position for pulling a proof. The operator applies ink on the mounting marks and rotates the mounting cylinder through the foot pedal.

AV Flexologic
We innovate!

Global Support Network

24/7 assistance 📞 +31 (0) 172 503 621

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Headquarters
The Netherlands
Eastern Europe
Turkey

Russia (CIS)

Thailand

South Africa

○ Warehouses   ○ Service Engineers   ○ Sales Managers   ○ Agents

Do you need urgent support? Call us at any time!

Our team is consisted of 24 exprienced engineers who can help you with any problem you might face. We provide support in: English, German, Spanish, French, Italian, Dutch, Romanian, Arabic and Thai.

AV Flexologic Care

We are happy to introduce the new AV Flexologic Care Packages
that provides you support even after the warranty expires.

Level 1

- 24/7 Support
- Remote Support

Level 2

- 24/7 Support
- Remote Support
- Software updates
- 15% discount on spare parts

Level 3

- 24/7 Support
- Remote Support
- Software updates
- 15% discount on spare parts
- Warranty extension *

Request your own AVF Care package at av@flexologic.nl or call us at +31 (0) 172 503 621

You can contact us easily in many ways:

Call us at **+31 (0) 172 503 621** or **+1-800-467-1746** for USA

We create an account for you at our Support Portal in Freshdesk. You can always raise a ticket when you log into your account.

Send an email to **support@flexologic.nl**

By sending your email, a ticket is automatically created in our system and we will support you in a short time

Visit our website at **www.flexologic.nl/support** and fill in the contact form.

By sending the form, a ticket is automatically created in our system and we will support you in a short time

What happens next?

Once we receive your ticket or email, we will support you in the following ways:

| Ticket received! Our service team will contact you soon | A. Remote support via telephone | No Solution? | B. Remote assistance via TeamViewer | C. We will send an engineer to repair your machine |

Do you want to easily find information about your machine?

Our support portal is designed to provide you instant help. By logging in to Freshdesk, you will be able to find information about your machine and answers to frequently asked questions

For additional information about Support & Service, visit our website: www.flexologic.nl/support

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FOR EVERY FLEXOGRAPHIC PRINTER

www.flexologic.nl

sales@flexologic.nl

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