Flexologic

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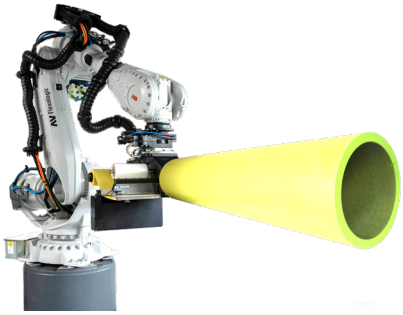
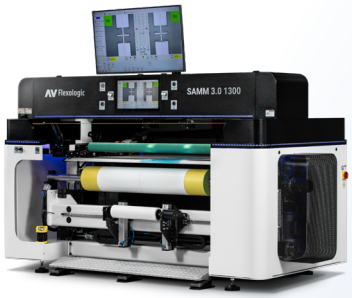
FLEXO WIDE WEB PORTFOLIO



ROBOTIC TAPING & MOUNTING ROBOCELL

FULLY AUTOMATIC FAMM 3.0



AUTOMATIC SAMM 3.0

SEMI-AUTOMATIC MOM DD+ PRO

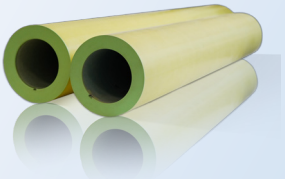
MOTORIZED MOM DD S

SUPPORTING EQUIPMENT

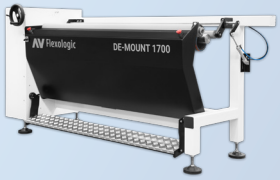
TIR

SLEEVE STORAGE SYSTEM

TECH SLEEVES
THE FUTURE IS NOW



PRINTING SLEEVES

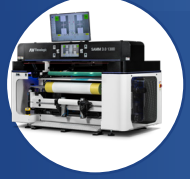
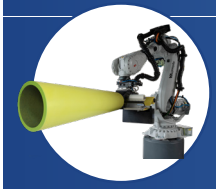


DEMOUNTER

COMPLETE FLEXO SOLUTIONS FOR EVERY FLEXOGRAPHIC PRINTER

AV Flexologic is the global leader in automatic mounting and pre-press solutions. With **1,500+ automatic mounters** installed all-over the world the last 20 years, AV Flexologic offers the most accurate, most reliable and fastest mounting machines for the flexo industry. AV Flexologic offers solutions from motorized to every level of automation, depending on your needs.

Levels of automation

Mounting Machine	Operator Interaction	Mounting Automation	Mounting Capacity	Positioning Accuracy & Time/plate
Level 1  MOM DDS 3.0	The operator positions the plate manually	Manual mounting with automatic cameras and a mounting table	1 sleeve and 1 plate mounted at a time	Depends on the operator
Level 2  MOM DD+ PRO	The operator positions the plate manually	Semi-auto mounting with automatic cameras, mounting table, pressure roller	1 sleeve and 1 plate mounted at a time	Depends on the operator. Optional image recognition
Level 3  SAMM 3.0	The operator only roughly pre-positions the plate on the mounting table	Automatic mounting of each plate without operator interaction	1 sleeve and 1 plate mounted at a time	5 µm accuracy 30 seconds/plate
Level 4  FAMM 3.0	The operator only places the plates on the conveyor belt	Fully automatic mounting of multiple plates	1 sleeve and multiple plates mounted one after another	2 µm accuracy 29 seconds/plate
Level 5  ROBOCELL	The operator only places the plates on the conveyor belt	Fully automatic sleeve handling, taping, and mounting of multiple plates	Multiple sleeves and multiple plates mounted one after another	2 µm accuracy 29 seconds/plate

FAMM 3.0

FULLY AUTOMATIC FLEXO PLATE MOUNTING MACHINE

Product Video

Widths

Width [mm]	≤ 1300, 1700, 2200
Width [inch]	52”, 67”, 87”
Max repeat [mm/inch]	1350 / 53”

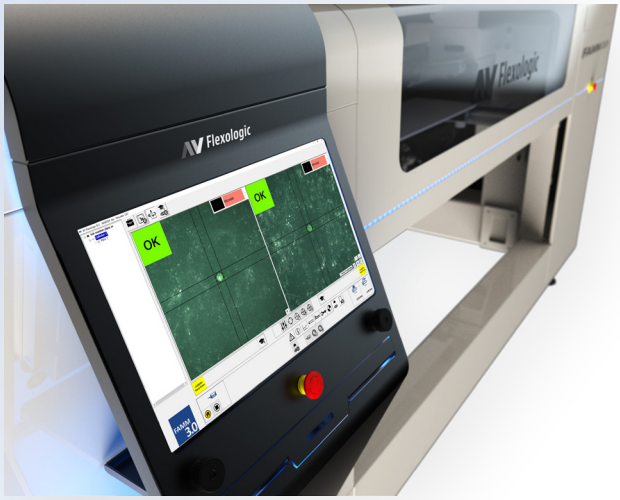
Description

The **FAMM 3.0** represents the next generation in fully automatic mounting technology, continuing the transformative impact initiated by the ground-breaking original FAMM in 2005. FAMM 3.0 can **revolutionize mounting departments** with its advanced features and capabilities. This machine is the **most advanced automatic mounting solution** that provides incomparable speed, repeatability, and accuracy.

We developed FAMM 3.0 for our customers who demand the highest standards and aim for an optimized and highly efficient prepress workflow. FAMM 3.0 allows an enormous **increase** in their **capacity** and a higher overall **print quality** with fast changeovers. The patented FAMM 3.0 is the ideal solution for **short and frequent job runs**.

In recent years, our engineers have undertaken a complete redesign of FAMM 3.0, integrating an **updated software** which allows more synchronous movements. This intelligent system efficiently controls interactive cameras, utilizing AV Flexologic patented **Image Recognition** technology to read digital positions of mounting marks. Additionally, a **robotic manipulator** ensures precise plate positioning with **accuracy down to 2µm**.

FAMM 3.0 Unique Features



Accuracy of 2 microns

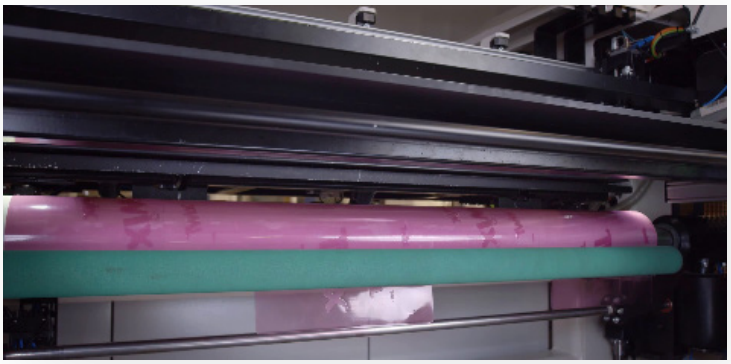
The FAMM 3.0 uses the patented **Image Recognition** System that measures the exact position of the mounting marks. The robotic manipulator uses these measurements to position the flexo plate with an unmatched accuracy of 2 microns. The latest software allows more synchronous movements, and comes with an intuitive user interface.

Updated software

The updated software allows more synchronous movements, and comes with an intuitive user interface.

Automatic mandrel rotation

When the printing plate is positioned accurately and within the chosen tolerance, the cylinder moves up and the pressure roller fixates the plate. The cylinder rotates automatically and the plate is mounted within seconds. When the plate is mounted, the cylinder moves vertically down allowing a fully automatic operation.

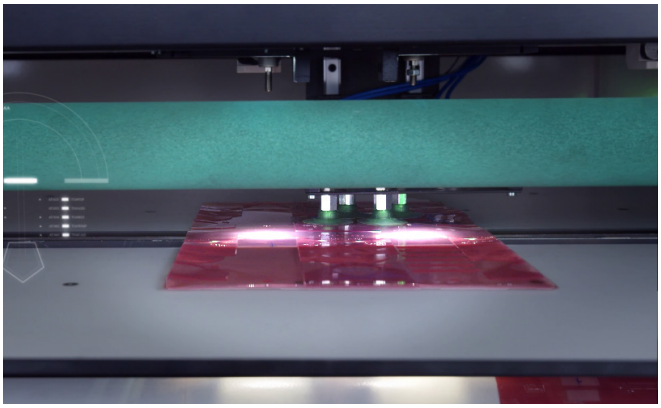


Status LEDs

Depending on the status of the mounting process, the LED lights indicate whether an action needs to be taken.

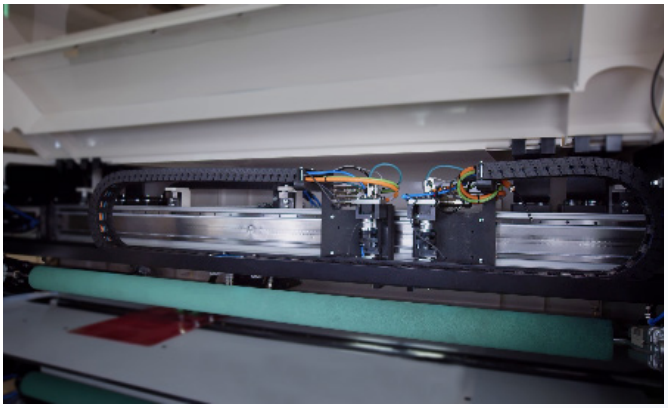
Default | Operating | Advisory | Error

Unique Features



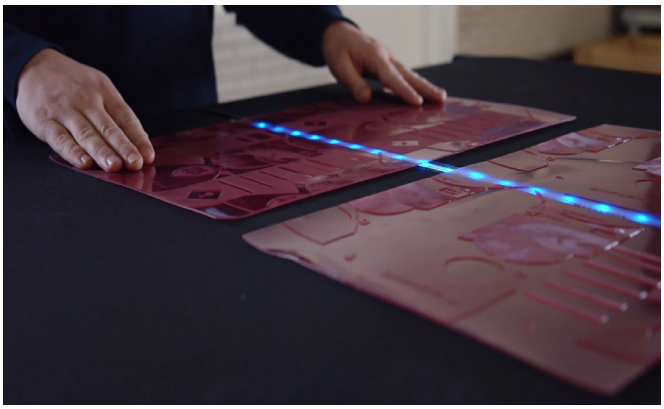
Robotic pick-up unit

The pick-up unit is used to **transfer the plate** from the conveyor belt **to the mounting position**. Using robotics, the flexo plate is automatically positioned with an accuracy of 2 microns.



Linear motors

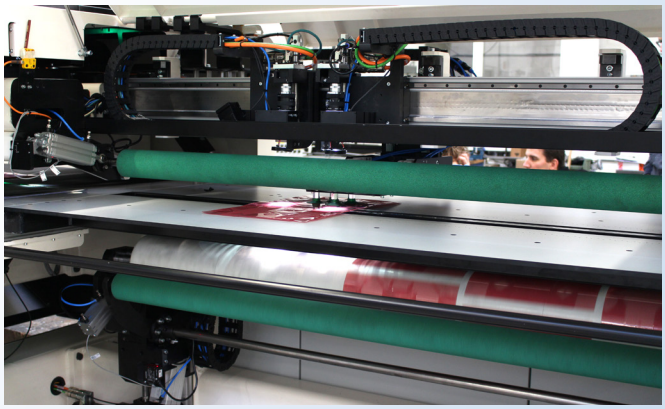
The Ultra HD cameras move automatically into position using the linear motors which provide **phenomenal speed and accuracy**. The linear motors allow a considerate reduction of mounting and quality checking time.



Conveyor backlight System

The new split conveyor belt is able to identify the plate from the bottom and to read **QR codes.** The conveyor backlight advanced system is designed to provide optimal illumination for the FAMM 3.0 ultra-high-definition monochrome cameras.

Together with the laser line, the backlight system allows plates to be aligned easier.



Second pressure roller

The top pressure roller mounts half of the plate, then the mandrel lowers down so that the second pressure roller can mount the rest of the plate. During this process, the pick-up unit has already placed the next plate for mounting, **optimizing** the mounting time with **synchronous movements.**

Flexologic
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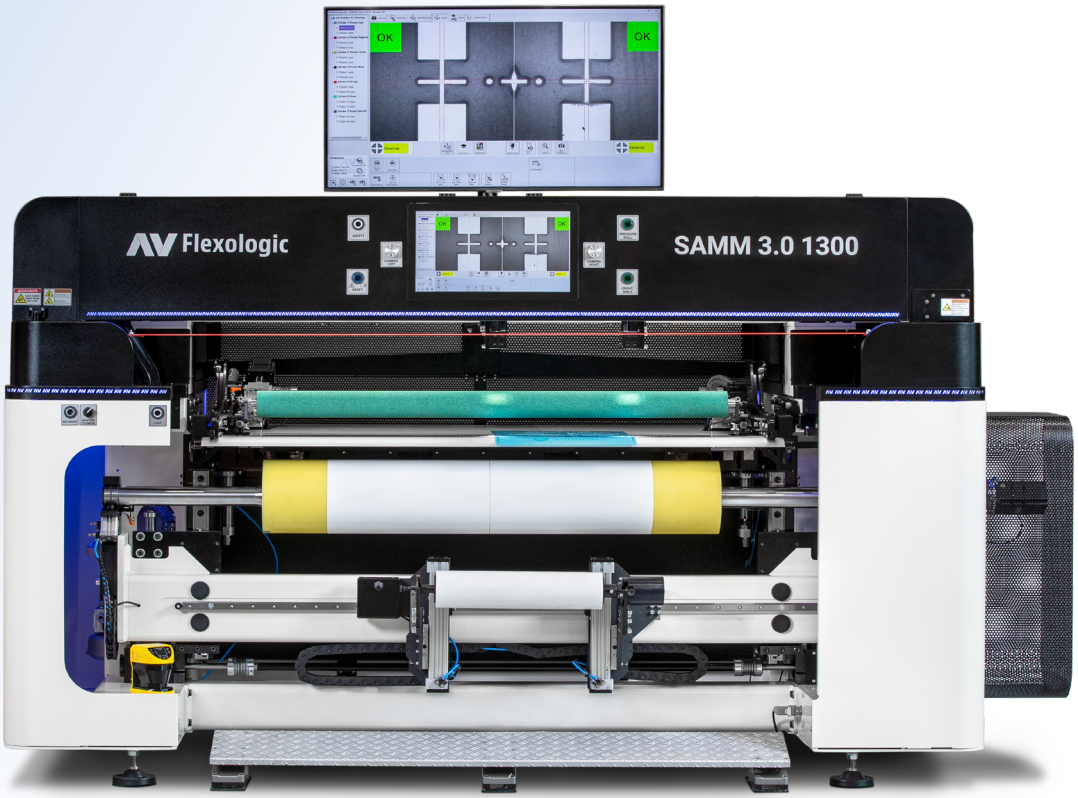
NEW MOUNTER

SAMM 3.0

THIRD GENERATION AUTOMATIC FLEXO PLATE MOUNTING MACHINE



Product Video

Widths

Width [mm]	≤ 1300, 1700, 2200
Width [inch]	52", 67", 87"
Max repeat [mm/inch]	1350 / 53"

Description

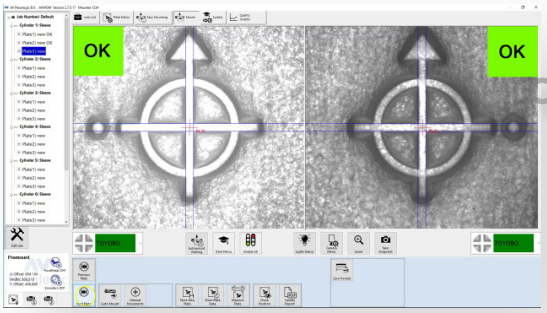
The **SAMM 3.0** brings ground-breaking advancements to the flexographic industry. The third generation automatic mounter comes with a **completely new mechanical, visual, and user interaction design**. The accuracy of the SAMM is operator independent. It always mounts plates in the most **accurate** way, down to **5 microns**, while enhancing **operator safety** and enabling a **rapid mounting speed** of **30 seconds** per plate.

As the world's **most reliable mounter series**, the SAMM guarantees unmatched accuracy, repeatability, and speed. We have **installed 1,500+ SAMM** automatic plate mounters all over the world.

Workflow

The operator initiates the process by roughly positioning the flexo plate in the field of view of the cameras using laser pointers. **SAMM 3.0** seamlessly takes over, employing **robotics** and **Image Recognition System** for precise placement. With automated mounting, the operator can focus on other tasks, while SAMM 3.0 achieves a rapid 30-second process, ensuring **enhanced quality** and **minimizing downtime.**

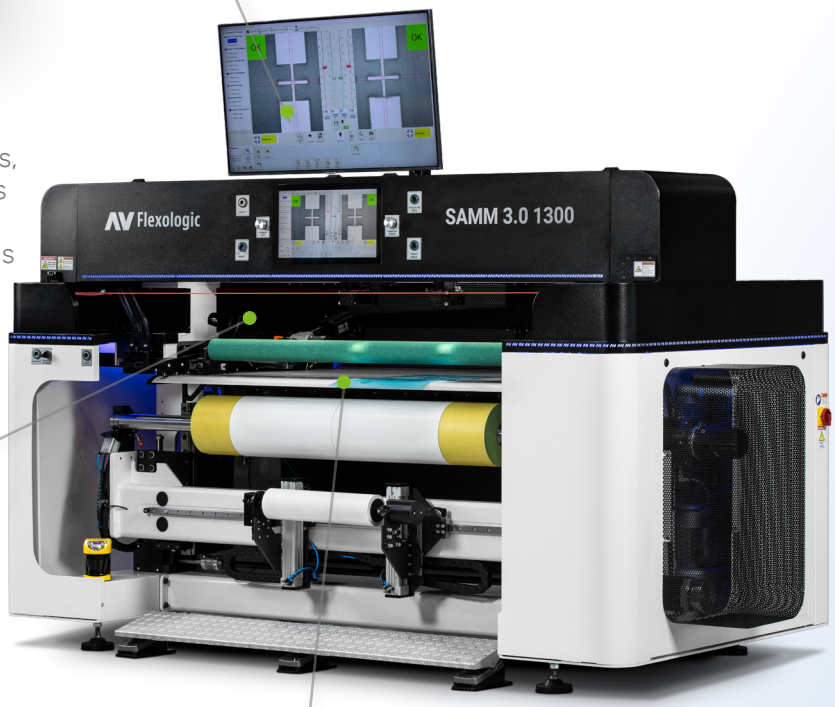
Unique Features

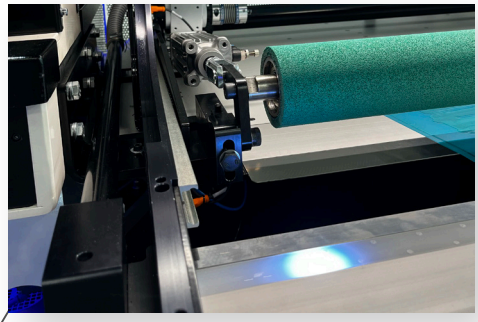


Patented Image Recognition

The Image Recognition System measures the exact positions of the mounting marks, and thus, determines 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'.

If the plate is not mounted within the set tolerance, the machine **will not proceed** to the next plate. Thus, immediately identifying mounting mistakes, and **eliminating the possibility of sending incorrectly mounted plates** to the press.

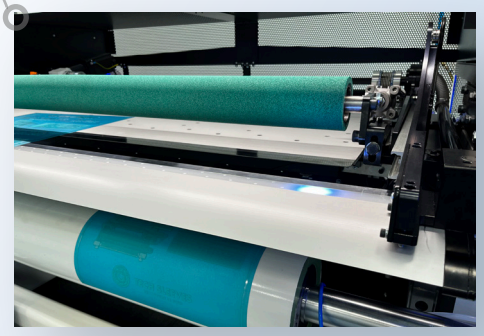




Patented Backlight System

The third generation of SAMM introduces **backlight technology** to enhance image recognition of mounting marks. This advanced system is designed to provide **optimal illumination** for the ultra-high-definition monochrome cameras on the SAMM 3.0.

By **easily detecting mounting marks** across a wide range of plates, the system facilitates **higher accuracy in plate positioning**, contributing to the SAMM 3.0's unparalleled precision and efficiency.



Automatic vacuum table

An added advantage of the SAMM 3.0 is the improved motorized front table, which enables the machine to **fully automatically mount** individual printing plates without operator interaction, keeping the performance of the mounting job with an **accuracy of 5 microns**.

Discover all SAMM 3.0 features & Options

AV Flexologic
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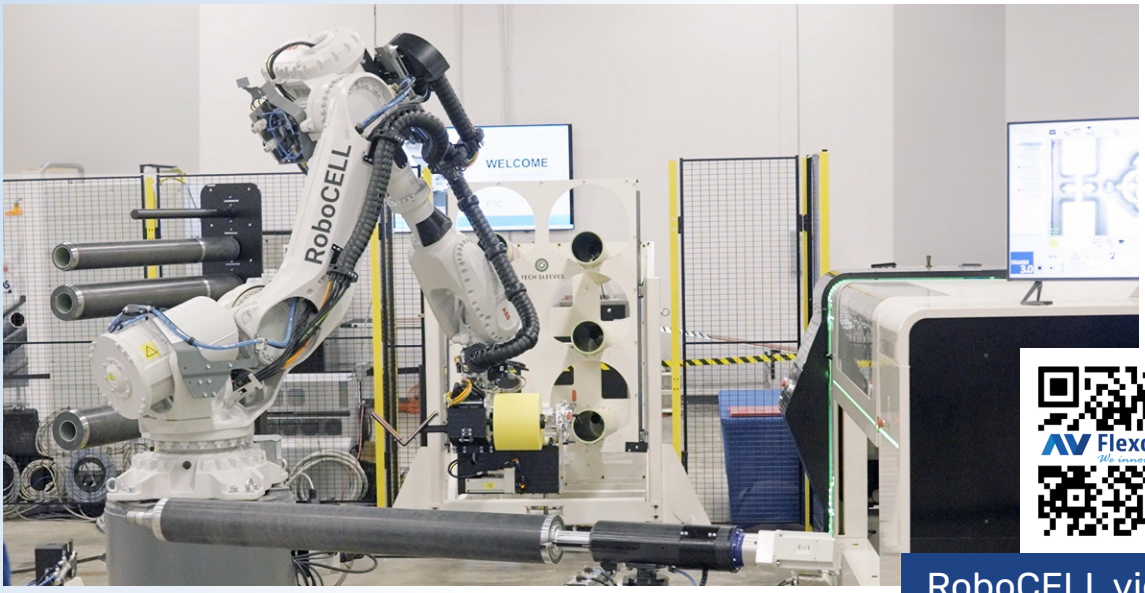
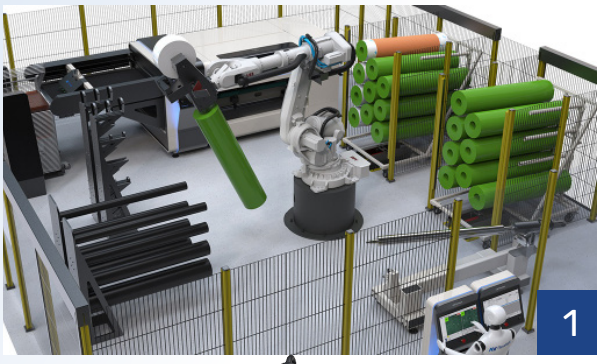
ROBOCELL



RoboCELL video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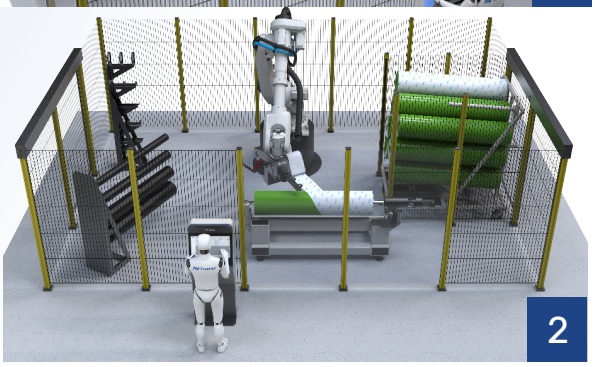
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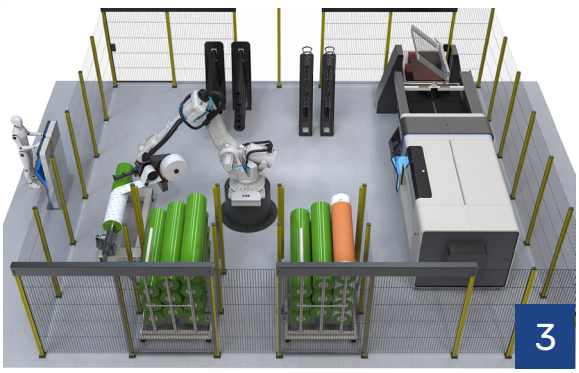

3

Description

The **RoboCELL** is the industry-changing solution that **fully robotizes all prepress operations** - applying tape, sleeve handling, and plate mounting. The entire taping and mounting process can now be completed in **record time**, with almost no operator interaction, eliminating upstream process wastes.

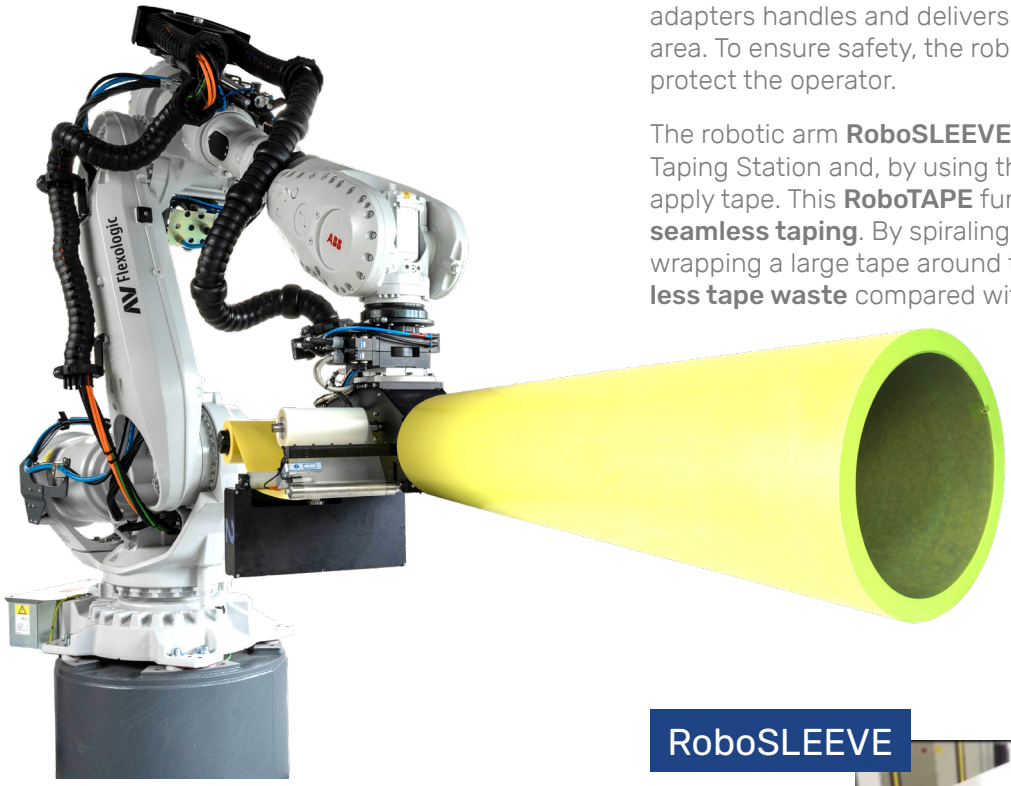
RoboCELL has three functions:

- RoboSLEEVE for robotic sleeve handling
- RoboTAPE for robotic tape application
- FAMM 3.0 for a fully automatic mounting

Advantages of robotic prepress

Robotic sleeve handling prevents damage and operator injury risk
Eliminate operator related press downtime
Highest plate mounting accuracy for the best printing quality
The mounting and taping process takes just 1/3 of the traditional time
No more air bubbles and overlaps on sleeves
Significant labor savings
3x output capacity and fast response to quick and short job runs
Eliminate tape waste due to spiral taping

ROBOCELL: FULLY AUTOMATED PREPRESS DEPARTMENT

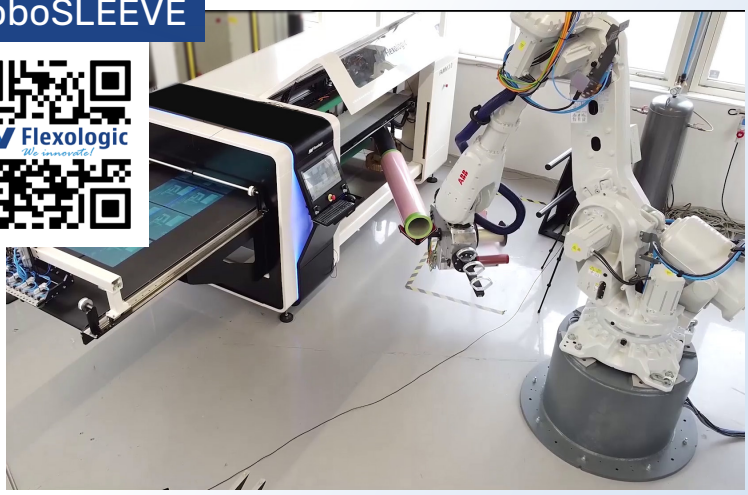


The operator places the Tech Cart inside the **RoboCELL** and selects a job from the HMI console. A gripping tool with different adapters handles and delivers the sleeves in the RoboCELL work area. To ensure safety, the robot is surrounded by a fence to protect the operator.

The robotic arm **RoboSLEEVE** will then take the first sleeve to the Taping Station and, by using the taping function, automatically apply tape. This **RoboTAPE** functionality allows for an **effort-free seamless taping**. By spiraling tape onto the sleeve - rather than wrapping a large tape around the cylinder– there is substantially **less tape waste** compared with manual taping.

Winner of the Technical Innovation Award 2023

RoboSLEEVE



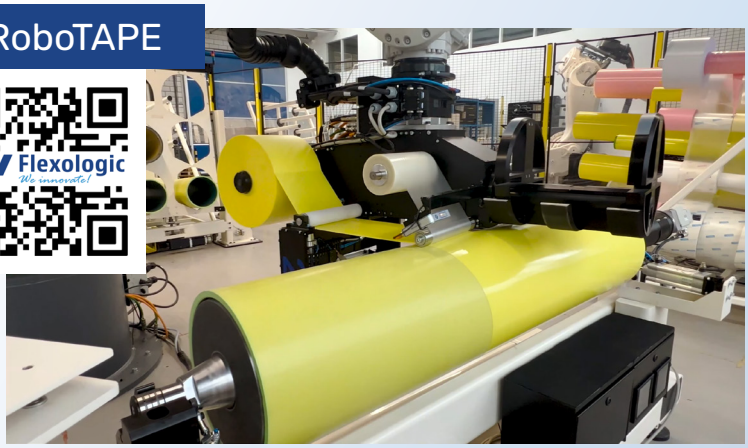
Following, RoboSLEEVE will load the taped sleeve on the FAMM 3.0. The **RoboSLEEVE** function helps the robot not only to apply the tape but also to **safely handle the sleeves and load/unload** them from the mounting machine.

The robotic manipulator of the **FAMM 3.0** will take the first **plate** and **position** it with an **accuracy of 2 microns**. When the mounting process is completed, RoboSLEEVE will unload the mounted sleeve and place it back on the Tech Cart. The same process is repeated until the plate mounting job is completed.

As a reference, the sleeves of a **10-color job** can be taped and **mounted fully automatically in around 30 minutes** beginning to end.

The different components of RoboCELL can be installed together, or as stand-alone units.

RoboTAPE



SAMM 2.0 smartGPS

Product Video

Description

The integration of **BOBST's SmartGPS** technology with **AV Flexologic's range of mounting systems**, including the **SAMM 2.0**, represents a significant advancement in flexographic printing. This collaboration combines BOBST's innovative SmartGPS, which has been instrumental in **automating the start-up process and eliminating waste** by generating **registration and impression** settings off-press at the **plate mounting stage**, with AV Flexologic's expertise in automatic mounting and prepress optimization.

Unmatched accuracy, repeatability and mounting speed is then combined with the smartGPS technology, for an **optimized printing workflow**.

The SAMM 2.0 integration with smartGPS is ideal for all **Central Impression flexo printers** that want to benefit from a significant cost and time reduction:

- The system **streamlines impression and register setup** during mounting, **reducing waste** of ink, solvent, energy, and labor costs while minimizing changeover time and press downtime.
- The **offline and fully automated** graphic positioning process ensures **consistent print quality** and press productivity across all shifts, independent of operator skill level.
- The impression and register setting procedure generate a **substrate waste of 15 m**.

The combination of the SAMM 2.0 and the smartGPS technology allows further development in the **digitalization** and **automation** of packaging and label printing.

INTEGRATION

Automatic W&H Easyreg detection

The **W&H Easyreg detection** function uses advanced technology to **automatically detect** the special W&H Easyreg **sticker on the sleeve**, and adjust registration during machine setup.

Using our patented Image Recognition System, a **visual mark** on the edge of a sleeve such as the W&H Easyreg strip can be automatically **'set to zero' on the MOM, SAMM and FAMM** mounting machines by simply pushing a button. The camera automatically homes in on the Easyreg mark and also automatically 'sets zero' in X and Y direction with **1 µm accuracy**.

This helps the operator to achieve **accurate registration** quickly and efficiently, reducing setup time.

Feature Video

Mounting Marks Specifications

The Automatic SAMM and the Fully Automatic FAMM use the patented Image Recognition to identify the mounting mark, 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	0.4 mm	0.5-0.6 mm	Circle	1 mm	Flat no image
		Thermal	0.45 mm	0.5-0.6 mm			
	Correlation	Processed	0.4 mm	0.5-0.6 mm	Square		
		Thermal	0.45 mm	0.5-0.6 mm			
Negative dot	Blob	Processed	0.6 mm	0.6-1 mm	Circle		
	Correlation	Processed	0.6 mm	0.6-1 mm	Square		
Positive non-dot shapes	Correlation	Processed	2 mm	2-4 mm	Square		
		Thermal	2 mm	2-4 mm	Square		
W&H register mark	Easyreg®	-	-	-	-	-	-
Damaged targets*	Semi Auto	See specs of the original target					

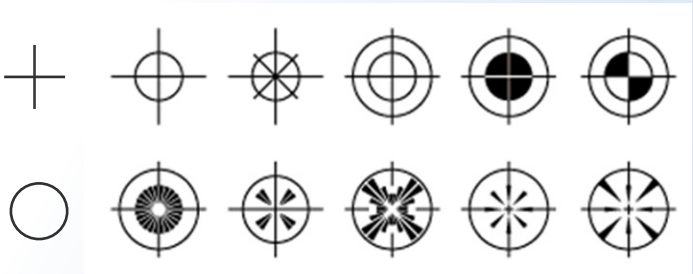
* It is possible to mount damaged targets using the Semi-Automatic mode. The operator will have to locate the target once, after that the FAMM and SAMM systems will mount these plates automatically. Also, the quality check after mounting is available.

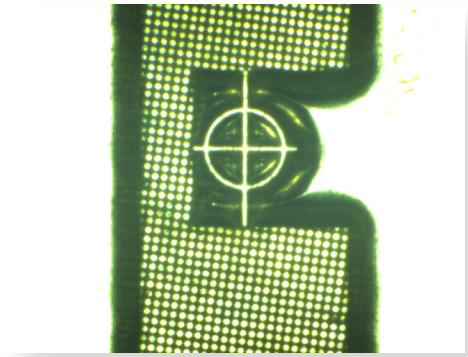
** Microdots with a smaller diameter than 0.4mm can become unstable and can deteriorate following printing

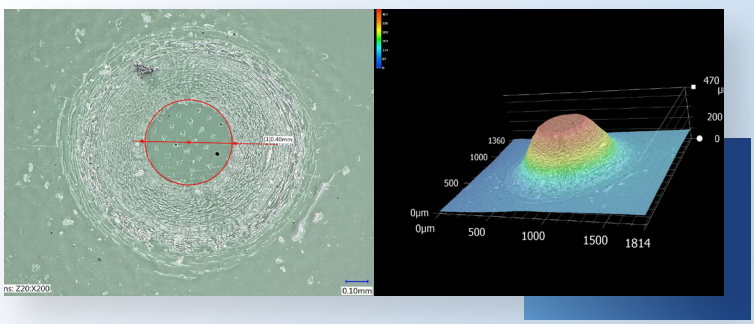
***When possible, it is recommended to avoid screening such as pixel+ on the mounting mark for optimal recognition. When using a laser to apply the screening, the screening can be avoided using object-based selective screening in the prepress software.

Mounting marks types

The FAMM and the SAMM systems detect all common mounting marks and microdots within the above specifications. The minimum target size is 0.4 mm.







MOM DD+ Pro

SEMI-AUTOMATIC FLEXO PLATE MOUNTING MACHINE

Product Video

Widths

Width [mm]	≤ 1300, 1700, 2200
Width [inch]	52”, 67”, 87”
Max repeat [mm/inch]	1350 / 53”

Description

The **MOM DD+ Pro** is our semi-automatic mounting system, which has advanced features for easy and accurate plate mounting. Key options are available such as Image Recognition System, vacuum table, tape holder, and a digital TIR measuring system, which can also map the full surface of the sleeve. **MOM DD+ Pro** is very intuitive to use, and the operator can create and store jobs quickly thanks to the standard user-friendly features.

Workflow

Plate positioning: The operator selects the plate from the job menu, then the motorized cameras move automatically to the mounting position. The operator positions the plate manually with the help of laser pointers. After positioning, the operator selects to move the cylinder up vertically, lowers the pressure roller, and rotates the cylinder using the foot pedal.

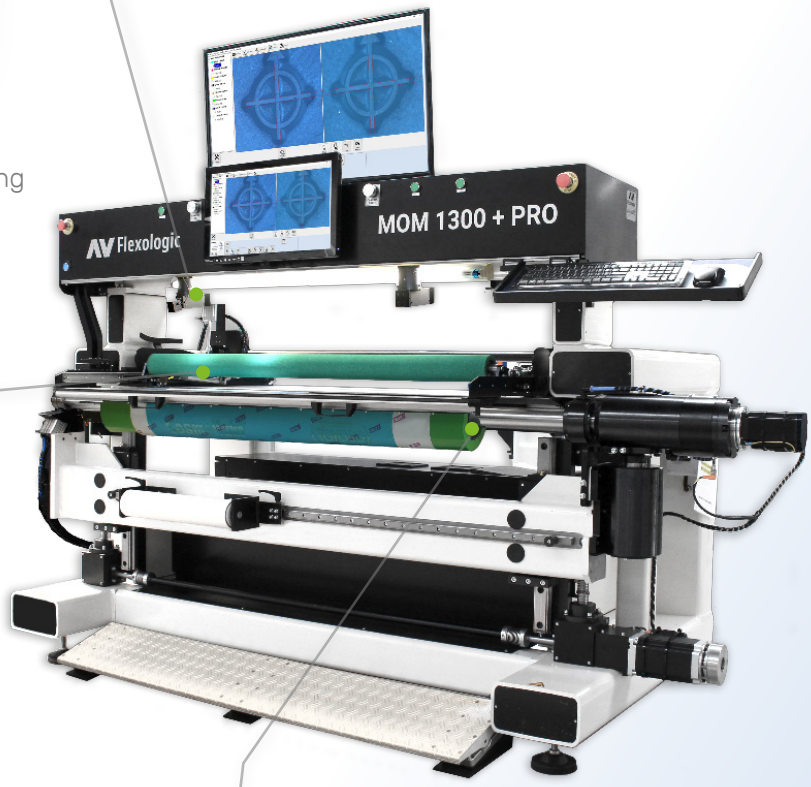
After mounting: The operator has the option to verify the positioning of the mounting marks. Instantly, the machine captures a snapshot and generates a PDF report.

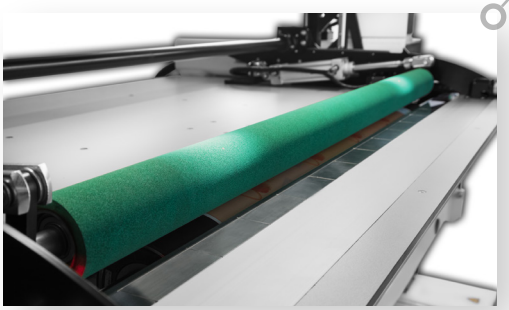
The machine offers numerous **benefits** to the operator. With motorization, the flexo plate mounting process significantly **reduces** the need for **operator intervention**. Additionally, the MOM DD+ Pro’s vertically moving cylinder eliminates the necessity to refocus cameras when mounting plates onto sleeves with varying repeats, enhancing **operational efficiency**.

Unique Features

Automatic moving HD cameras

The MOM DD+ Pro is equipped with **HD Ethernet cameras that move automatically** to the mounting position. The operator only needs to create the job and select the plate to mount.

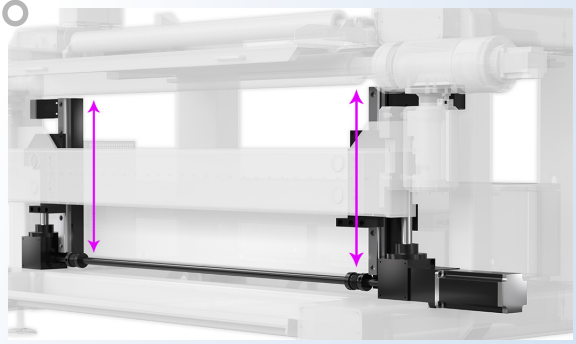




Pressure Roller

The pressure roller guarantees **smooth and air-bubble-free mounting**, saving time and promoting ergonomic workflow.

The pressure roller can also be used for an **efficient and fast tape application**. By simply attaching tape to the sleeve or utilizing the tape holder, the operator enables the pressure roller and rotates the sleeve to apply tape evenly. The tape overlap can be cut with the optional cutting knife.



Vertically moving cylinder

Advantages of a vertically moving cylinder towards a fixed-height table include **maintaining a consistent lens-to-plate distance**, eliminating the need for camera lens focusing. This approach also **mitigates the parallax effect**, where changes in focus distance distort camera calibration. To ensure a fixed distance from the camera to the printing plate, instead of focusing the cameras to compensate diameter variations of the sleeve, the height of the cylinder is adjusted depending on the outer diameter of the sleeve.

Unique options MOM DD+ Pro

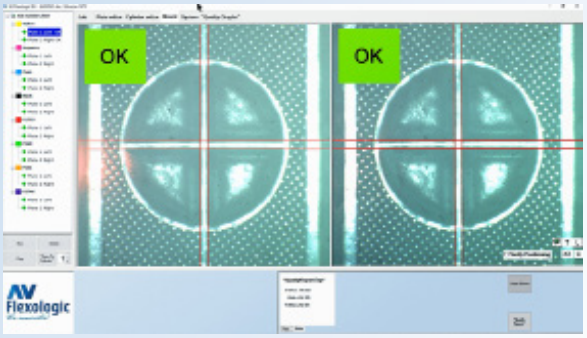
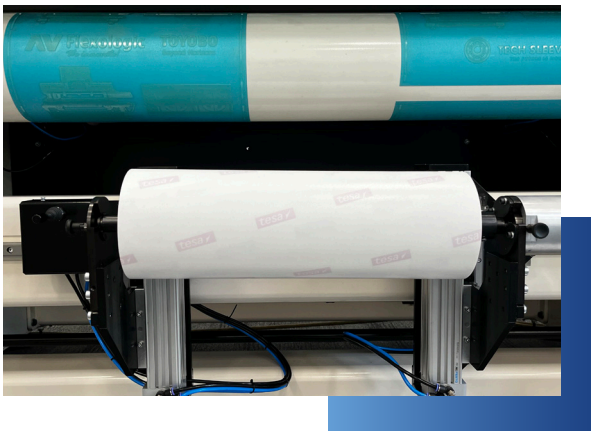


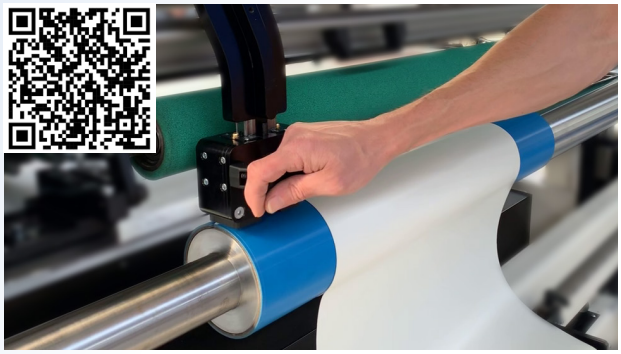
Image Recognition System

The **optional Image Recognition system** for MOM DD+ Pro is a standard feature in the SAMM and FAMM automatic mounting machines by AV Flexologic. This innovative system integrates **image recognition for quality control and intelligent positioning assistance.** Without the need to alter the MOM DD+ Pro's workflow, the Image Recognition System constantly **measures the position of the mounting marks**. When the operator has positioned the plate by hand to within a user-set tolerance, the MOM gives the 'OK' and the **cylinder automatically moves up** to fix the plate to the adhesive on the sleeve.

Tape holder 2.0 on precision rail

An optional tape holder can be installed on precision linear guides. These guides ensure that the tape roll remains perfectly parallel to the sleeve during application, **facilitating smooth movement** for the operator as they **apply the tape** along the sleeve's side. The tape holder 2.0 can move vertically, allowing an easier and more ergonomic tape application.





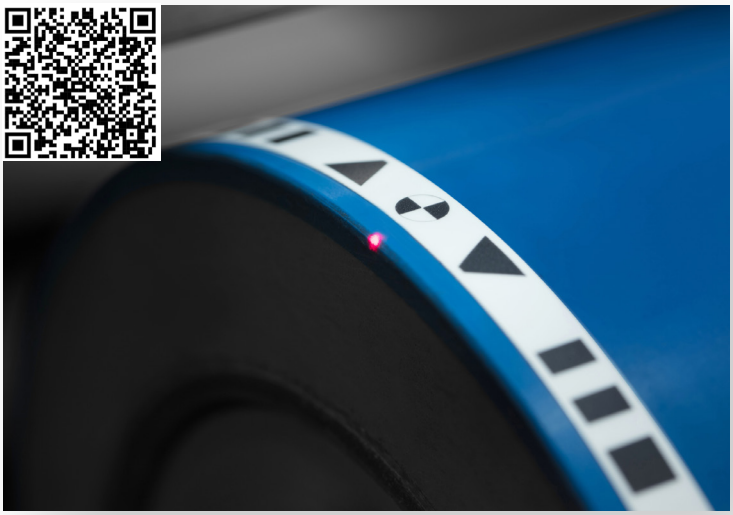
Cutting knife for tape and plates

A special unit that features **two cutting knives** with precise depth adjustment can be added to the camera beam. The cutting knife can easily slide through the beam and **cut the tape effortlessly** and **without damaging** the printing sleeve. The new plate cutting knife allows to **precisely cut the excessive plate** without damaging it.

Automatic Easyreg detection

An additional feature using Image Recognition System is the **automatic zero-setting** function, designed to **detect a visual mark on the sleeve's edge**. The machine scans the sleeve's edge to locate the visual mark, ensuring precise alignment. Once identified, the sleeve is centered and set to zero, serving as the reference point for plate mounting. The printing press then captures this mark, such as the **W&H Easyreg mark**, enabling **automatic deck registration**.

Moreover, the system can pinpoint the **exact location of a magnet** on the sleeve's edge for compatibility with printing presses like BOBST, SOMA, and Allstein.

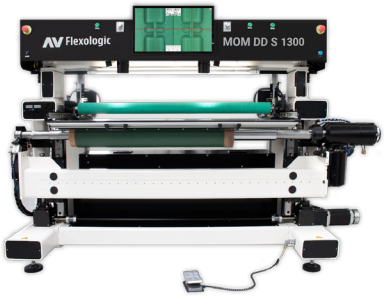


MOM DD+ Pro vs. MOM DDS

Both mounters have a vertical moving cylinder, which means the cameras are always on focus due to the fixed distance between the cameras and the table. The main difference between these two mounters is the **level of automation** and their optional features. The **MOM DDS** has a basic PC to enter the repeat size of the sleeve and the positions of the mounting marks.

The **MOM DD+ Pro** comes standard with a **mounting table and a pressure roller.** It is equipped with a PC and a **Windows 10** based AV MOM **software**, which allows easy job creation and storage. Additionally, the MOM DD+ Pro has many optional features that ensure accurate and consistent mounting each time.

MOM DDS



MOM DD+ Pro

Features & Options	MOM DDS	MOM DD+ Pro
Max printing width	**1300/1700 mm**	**1300/1700/2200mm**
Automatic Cameras	✓	✓
Air mandrel	✓	✓
Motorized rotation of cylinder	✓	✓
Fixed distance from lens to plate	✓	✓
Vertical Movement of Cylinder	✓	✓
Mounting table	✓	✓
Laser pointers	✓	✓
Touchscreen	✓	✓
Camera encoders	✓	✓
Pressure roller	O	✓
Tape holder on precision rail	O	O
Cutting knife for tape and plates	O	O
Windows 10 mounting software		✓
Easymount software	✓	✓
Easymount Color Scheme		✓
Overlay		✓
Digital Zoom capability		✓
Quality Report		✓
Digital Calibration System		✓
Image Recognition Software		O
Quality check w/ image recognition		O
Barcode Scanner		O
Automatic Easyreg detection	O	O
Shaft Coupling for cylinders		O
TIR Sleeve measurement		O
Sleeve Tracking System*		O

✓ = *Included* **O** = *Optional* **only in combination with TIR*

MOM DDS 3.0

MOTORIZED FLEXO PLATE MOUNTING MACHINE

Product Video

Widths

Width [mm]	≤ 1300, 1700
Width [inch]	52”, 67”
Max repeat [mm/inch]	1350 / 53”

Description

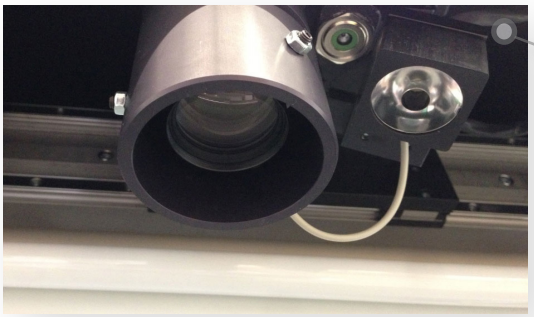
The **MOM DDS 3.0** stands as the **industry’s standard for mounting** flexographic printing plates onto sleeves, offering manual plate positioning. Serving as a **value-driven** motorized mounting system, MOM DDS 3.0 provides a **user-friendly experience**. Mounting with the MOM DDS 3.0 is **highly intuitive**, allowing operators to start working with **minimal training**.

Workflow

The operator creates a job by entering the X and Y coordinates and the repeat size. Upon selecting the mounting start option, the **cameras automatically move** to the first plate’s position. With the fixed-height mounting table, camera focus is unnecessary.

The **operator manually positions the plate** using a large screen, then rotates the motorized cylinder with a foot pedal to mount the plate. An **optional pressure roller** enhances mounting quality by avoiding air inclusion. After completion, the sleeve can be removed by unlocking the air chrome mandrel.

Unique Features

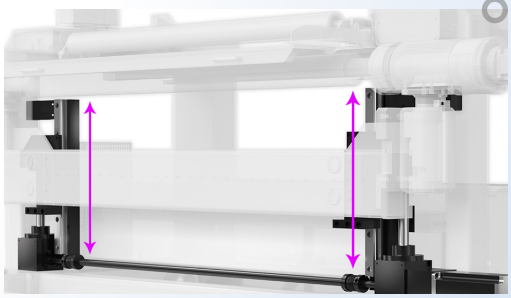


Automatic moving HD cameras

The MOM DD S is equipped with HD cameras that move automatically onto the mounting position. The operator only needs to enter the X and Y positions of the marks in the system.

Mounting table

The mounting table helps in positioning the plate easier as it provides more stability.It also fixates the distance between the plate and the camera lense, meaning that the cameras are always in focus, and eliminating the need for any manual adjustment.



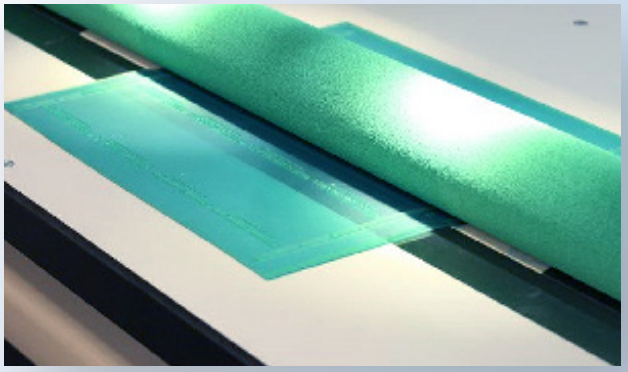
Vertically moving cylinder

The cylinder moves vertically up depending on the repeat size of the sleeve. In combination with the mounting table, these features eliminate the need to focus the cameras. Therefore, a high-quality image of the mounting marks is consistently ensured.

Pressure roller (optional)

Combining a fixed-height mounting table with a full-width and open-cell **pressure roller** is the ideal combination for a motorized mounting machine.

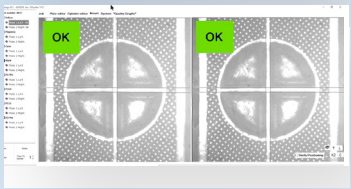
When the plate is in position, the pressure roller is lowered to fix the plate firmly onto the adhesive without air inclusions. Compared to traditional mounting machines, the pressure roller saves enormous operator time and reduces press downtime due to the elimination of air enclosures.



Features Overview

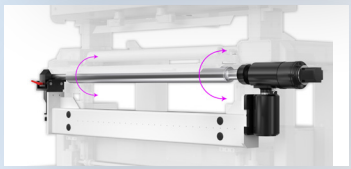
Robotic positioning

Powered by AV Flexologic software, the robotic table consistently positions the mounting plate with an exceptional accuracy of 5 microns. After positioning, the vertically moving cylinder automatically comes up.



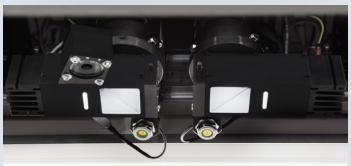
Quality check with image recognition

The Image Recognition System measures the positions of the mounting marks to determine the accuracy of the printing plate placement on the sleeve. The tolerance of the report settings determines whether a plate is judged as mounted 'OK' or 'NOT OK'.



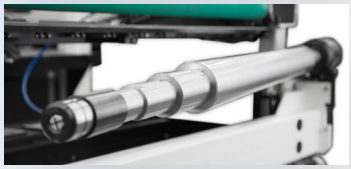
Motorized rotation cylinder

The chromed cylinder is driven by a high quality electric motor which is connected 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.



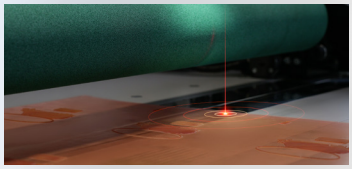
HD Ethernet cameras

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.



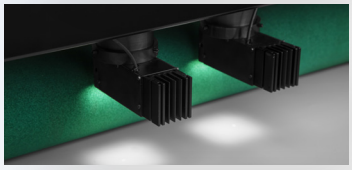
Custom made Air Cylinder

All sleeve-dedicated AV Flexologic mounting equipment is equipped with a high-precision chromed mounting mandrel. The cylinders are produced in Germany by a specialist company under the strictest tolerances. The cylinder is custom-made to fit press requirements.



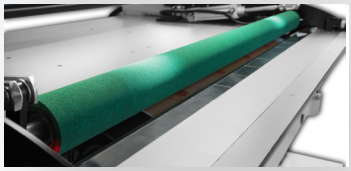
Laser pointers

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.



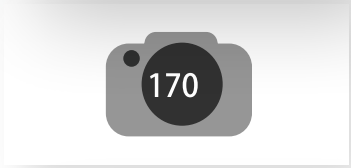
DOAL lights

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.



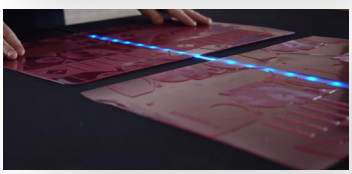
Pressure roller

The pressure roller has become a standard feature in AV Flexologic flexo plate mounting systems. 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 inconsistencies and potential faults of hand-rolling. This feature saves time and avoids un-ergonomic working procedures.



Digital zoom capability

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



Backlight Table

The third generation of SAMM and FAMM introduce **backlight technology** to enhance image recognition of mounting marks. This advanced system is designed to provide **optimal illumination** for ultra-high-definition monochrome cameras.

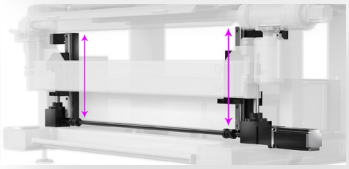
Features Overview

Windows 10 mounting software

Striving for the latest up-to-date technology, MOM DD+ Pro, SAMM and FAMM are equipped with Windows 10, which is fully compatible with our software.

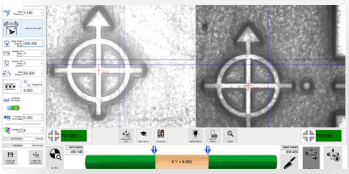
Quality report

After each plate is mounted, the MOM, SAMM and FAMM mounting machines can automatically check the tolerance of mounted plates using image recognition. A pdf quality report is generated on-the-fly with the ability to check top and bottom.



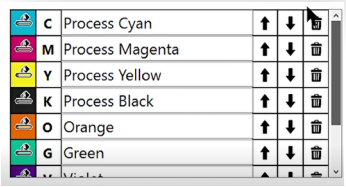
Vertically moving cylinder

The cylinder moves vertically on high-precision linear guides. The advantages are that by moving the cylinder towards the plate, the plate is not disturbed in the final stage of the mounting process, meaning the 'fixation' accuracy of the plate to the sleeve is very high. Additionally, a vertically moving cylinder allows the distance between the cameras and the table to be fixated, enabling constant camera focus, and ensuring the highest level of accuracy and user-friendliness.



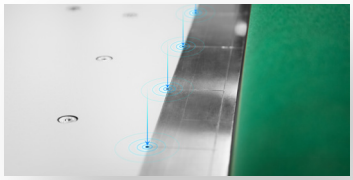
Easymount - Job creation software

An intuitive software that allows you to create a job from scratch using the cameras of the machine and a drop-down menu. Using the encoders to move the cameras to the mounting marks position, the software recognizes the targets and calculates the distance between them.



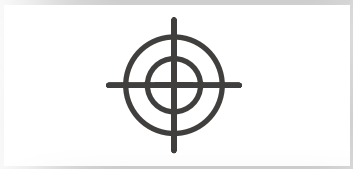
Easymount - Color Scheme

As part of the Easymount software, the Color Scheme allows the user to choose the type of color models for the printing job. With Color Scheme, the user can select the different colors, order them, and also create a recipe. The selected colors are visible in the job overview, simplifying the process for the operator.



Vacuum table

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



Digital calibration system

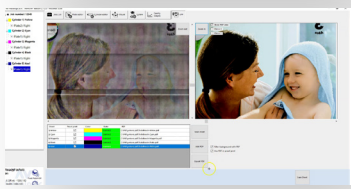
Camera images undergo calibration to generate a lookup table, digitally correcting any deviations in the camera beam down to 10 microns across its width. Each camera position recalls Y-deviation, digitally adjusting images for 100x more accurate mounting. Y-deviation data is also stored in a lookup table.

PDF Import

You can easily upload the PDF of the plate and select the targets on the graphic to create the job. The software also separates the colors of the job.

Excel Import

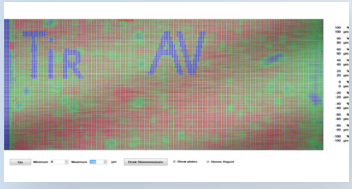
You can create jobs offline and store them as Excel files. Then, you can upload the excel file on the AV software and create the job automatically within seconds.



Virtual Proof Print

The VPP (Visual Printing Proof) system scans mounted plates, comparing them with uploaded PDFs for inspection. It swiftly identifies issues, with results displayed alongside the original PDF on the screen. Options to export PDFs for different colors and save reports are available, meeting customer demands for efficient plate scanning.

Options Overview



TIR Sleeve Measurement

The TIR Measurement System analyses the quality of the printing sleeve or cylinder by measuring the "3D landscape "of its surfaces. Employing the TIR system helps prevent press downtime caused by out-of-spec or damaged sleeves, ensuring smoother operations. Moreover, it enhances control over the printing process and minimizes the necessity to adjust sleeve pressure during press setup.

Tape holder 2.0 on precision rail

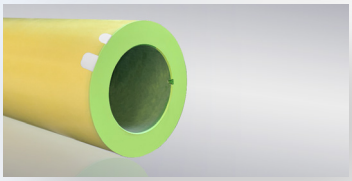
A tape holder can optionally be added to MOM and SAMM machines on precision linear guides. The linear guides make sure the tape roll is completely parallel to the sleeve when applying tape and assist the operator to easily move the tape along the side of the sleeve. The tape holder 2.0 can move vertically, allowing an easier and more ergonomic tape application.

Cutting knives for plates and/or tape

Two special cutting knives can be slid around the whole length of the machine and cut the tape and/or the plate seamlessly. They are adjustable to a very precise level, therefore the sleeve is not damaged from cutting.

Shaft coupling for cylinders

Shaft coupling for cylinders is driven by a harmonic drive. The shaft coupling is mounted on precision rails and can slide onto the cylinder shaft using a hand wheel that actuates the horizontal movement. The coupling is manually fastened by a locking mechanism that tightens a collar around the shaft, preventing any play. The shaft diameter should be the same for all cylinders.



Sleeve tracking system

Feature on the TIR. A database tracks sleeves using the sleeve ID, which can be read using a barcode or RFID chip. The TIR sleeve measurement is then stored in this central database. Things such as run length and run times can also be added.

Barcode scanner

A barcode scanner can be optionally added to the MOM, SAMM, or FAMM for automatic loading of jobs. The jobs are usually made offline in prepress to optimize the machine Operation Equipment Effectiveness (OEE).

Critical spare parts package

It is recommended to opt for a critical spare parts package, which is available for all equipment. AV Flexologic has spare parts warehouses in Western Europe: Alphen aan den Rijn, The Netherlands (HQ), North America: New Hudson, Michigan, USA, and Eastern Europe: Cluj-Napoca, Romania.

Flexo Wide-Web Product Summary

Specifications	MOM DDS	MOM DD+ PRO	SAMM 3.0	FAMM 3.0
Max Width (mm)	1300, 1700	1300, 1700, 2200	1300, 1700, 2200	1300, 1700, 2500
Max Width (inch)	52", 67"	52", 67", 87"	52", 67", 87"	52", 67", 87"
Max Repeat (mm/inch)	1350/ 53"	1350 / 53"	1350 / 53"	1350 / 53"
Features & Options	**MOM DDS**	**MOM DD+ PRO**	**SAMM 3.0**	**FAMM 3.0**
Automatic HD cameras	✓	✓	✓	✓
Customized Air mandrel	✓	✓	✓	✓
Motorized rotation of cylinder	✓	✓	✓	✓
Fixed distance from lens to plate	✓	✓	✓	✓
Vertical Movement of Cylinder	✓	✓	✓	✓
Mounting table	✓	✓	✓	✓
Laser pointers	✓	✓	✓	✓
Touchscreen	✓	✓	✓	✓
Camera encoders	✓	✓	✓	✓
Pressure roller	O	✓	✓	✓
Easymount job creation software	✓	✓	✓	✓
Easymount color scheme		O	✓	✓
BOBST smartGPS			O	
Digital Zoom capability		✓	✓	✓
Quality Report		✓	✓	✓
Digital Calibration System		✓	✓	✓
DOAL Lights		✓	✓	✓
Windows 10 mounting software		✓	✓	✓
Image Recognition Software		O	✓	✓
Quality check w/ image recognition		O	✓	✓
Motorized mounting table		O	✓	✓
Robotic table			✓	✓
Robotic positioning			✓	✓
Automatic repeat detection		O	O	✓
Automatic mandrel rotation			✓	✓
Robotic manipulator				✓
Conveyor belt for loading multiple plates				✓
Linear motors				✓
Second automatic pressure roller				✓
Barcode Scanner		O	O	O
Automatic Easyreg detection	O	O	O	O
Tape holder on precision rail	O	O	O	
Cutting knives for tape and plates	O	O	O	
TIR Sleeve measurement		O	O	
Sleeve Tracking System*		O	O	
Shaft Coupling for cylinders		O	O	
Automatic plate ID detection				O
Robotic tape application				O
Robotic sleeve loading/unloading				O

✓ = Included **O** *= Optional*
**only in combination with TIR*

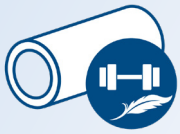
TECH SLEEVES
THE FUTURE IS NOW

FLEXO PRINTING SLEEVES AND BRIDGES

Tech Sleeves® manufactures light weight composite sleeves and bridges for the global flexographic printing industry. By using the highest quality grade of materials, Tech Sleeves® is able to outperform any sleeve on the market in terms of durability, consistency and dimensional accuracy.

Tech Sleeves® and Tech Bridges® are qualified for high printing speeds of up to 800 m/min, or 2,624 ft/min and within the industry they are recognised as one of the lightest, stiffest and stable sleeve and bridges on the market with weight savings of up to 40%.

LIGHTWEIGHT **TECHNOLOGY**

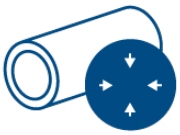


LIGHTWEIGHT SLEEVES & BRIDGES

Advanced lightweight technology reduces the weight of the sleeve and minimises overall press bounce for outstanding printing results

RUBBER-SEALED EDGES

The highest protection against dropping and damaging the sleeve. Protects the inner core from tear and damage.



STIFFEST AND MOST DURABLE SLEEVES

The hardened UV cured Vinyl Ester Resin outer layer **(82 ShoreD)** makes our sleeves the hardest and the stiffest in the flexo print market

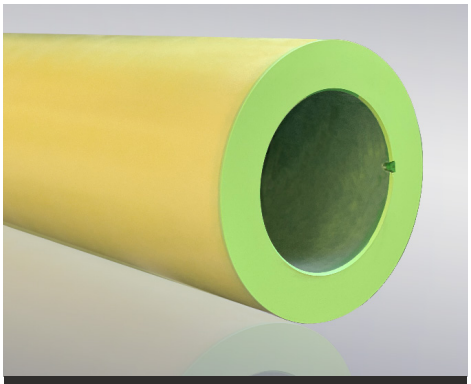
CONFIGURATIONS

FEATURE	ADVANTAGE	TECH LIGHT®	TECH PRO LIGHT®
Axial zero line	Helps in defining the zero position	●	●
Milled slot	A durable slot solution	●	○
Sealed edges	Ensures chemical and moisture protection providing dimensional stability	●	●
Rubber edges	Provides maximum durability		●
Metal Reinforced Slot	Great notch durability, bonded in the rubber for maximum durability, so not possible to come loose		●

“O”: Optional

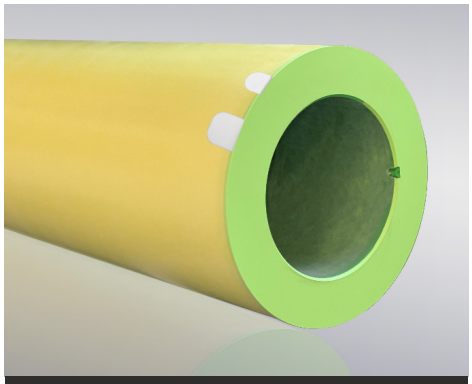
TECH SLEEVES
THE FUTURE IS NOW

Sleeve Options



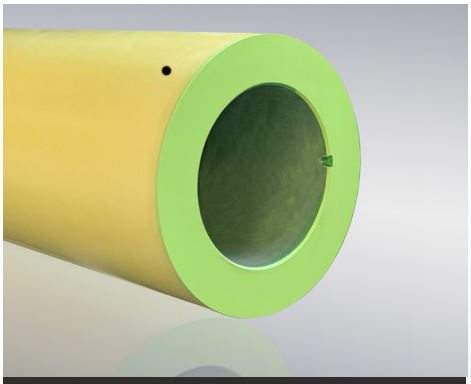
RUBBER SEALED EDGES WITH REINFORCED SLOT

Increases the lifetime of a sleeve by making the end of the sleeve resistant to impact. Prevents damages to the positioning pins in the press and mounting machines without weakening the registration slot.



SMART SLEEVE (RFID CHIP & MAGNET)

RFID embedded sleeve which allows reading and writing for the purpose of identification. Works with the new and our existing systems. It improves the printing process and prevents mistakes from using the wrong sleeves in the press.



CONDUCTIVE SLEEVE

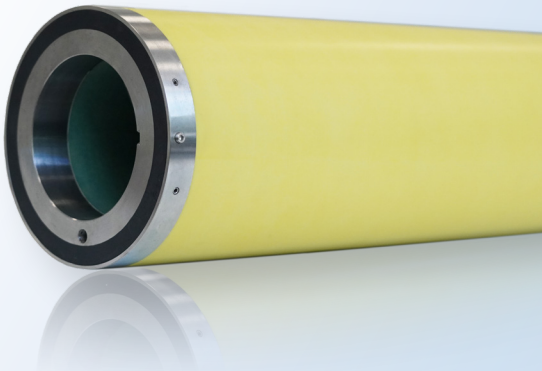
All the sleeves from Tech Sleeves can become conductive sleeves with the use of carbon. Conductive sleeves conduct electrostatic charges, which can occur in the printing area and go into the grounded printing press. Many companies choose this type of sleeves for printing.

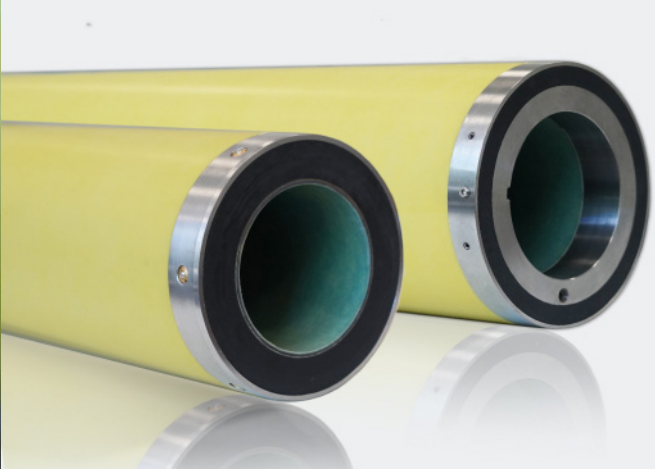
Tech Bridge®

Description

Tech Bridge® has an ultra high strength composite core complemented by a fiber-reinforced outer shell, which makes it suitable for high speed printing. It is available with a separate air connection or as air-through. Miller valves are standard for Separate Air Tech Bridges® that have a minimum wall thickness of more than 25mm. This high quality Hard Coated Bridge Sleeve is suitable for all plate sleeves.

The Tech Bridge comes standard with an outer metal ring protecting the edges of the bridge on both sides.





Features & Options

- ✓ Sealed edges
- ✓ Full inner metal ring
- ✓ Outer metal ring incl. pin
- ✓ Miller valves
- ✓ Air Through or Separate Air
- ✓ Conductive by use of carbon

Discover

TECH SLEEVES
THE FUTURE IS NOW

Supporting Equipment

Sleeve Storage System

Description

The **customizable Sleeve Storage System** offers convenient access, storage, and retrieval of sleeves. This system is highly adaptable, designed to accommodate varying numbers of sleeves. The Sleeve Storage System can be **extended by adding more racks**. Furthermore, the **shelves are adjustable**, and the pins are customized according to the sleeve repeats.

The Sleeve Storage System is designed to be **space-saving**, making sure it does not take up too much room. Its **modular design** facilitates the easy addition of new racks, and its lightweight construction enables effortless mobility to **suit individual preferences**. Crafted from high-quality materials, this storage solution ensures **long-lasting durability**.

Advantages of the Sleeve Storage System

- ✓ Fully customized system
- ✓ Save time and effort with easy and fast retrieval of sleeves
- ✓ Save space by storing sleeves in a practical way
- ✓ Prevents sleeve swelling due to the vertical storage
- ✓ Prevents sleeve damage thanks to the protective mat

Automatic Sleeve Storage System

Description

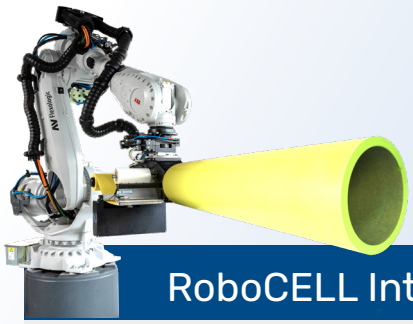
The **Automatic Sleeve Storage System** by **Enviroxi 2.0** is engineered to optimize storage space, achieving **maximum capacity in minimal area**. This organization of storage minimizes the surface area needed for production, enhancing plant efficiency.

The **Automatic System**, integrated into the storage setup, **handles the loading and unloading of sleeves automatically.** When the storage has an elevated structures, a sleeve cart automatically enters an integrated elevation system within the automatic storage.

The storage has a **touch screen** that controls all the system parameters. The system seamlessly conducts all operations automatically, and saves and loads previous settings. The **intuitive interface** and 3D planning program enable the operator to **effortlessly plan space distribution** for different jobs.

Advantages

Automatic inventory and recovery system
Saves on labor costs, and its accurate manipulation avoids damaging sleeves
Cabin capacity for 8, 10 and 12 sleeves
Adaptable to any space and can even be raised on a platform
Jobs can be completely stored



RoboCELL Integration

The **Automatic Sleeve Storage System** by Enviroxi seamlessly integrates with AV Flexologic's award winning, groundbreaking **RoboCELL**, offering a **fully automatic workflow from sleeve retrival to plate mounting**. This integration optimizes storage space and maximizes capacity, allowing for **increased efficiency and productivity** in your production plant.

Flexologic
We innovate!

Supporting Equipment

TIR Sleeve Measurement System

Description

The **Total Indicator Reading Sleeve Measurement System** (TIR) analyses the **quality** of the printing **sleeve/cylinder** by measuring the 3D landscape of the surface with a **5 microns accuracy**. This analysis offers comprehensive insights into the condition of the printing sleeve/cylinder.

The TIR system **records the precise condition** of every printing sleeve/cylinder in stock, allowing for accurate pre-settings when placing them in the press. **Worn out or damaged sleeves are easily detected**, which prevents press downtime due to bad quality sleeves. The TIR also helps to create an inventory of sleeves that are fit for use.

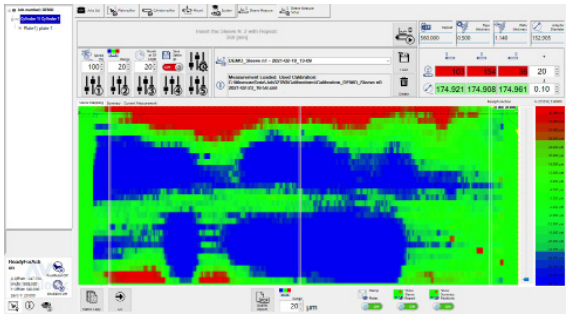
Being able to check the exact condition of each sleeve is crucial for **maintaining high-speed production** on the press while using the minimum necessary pressure settings.

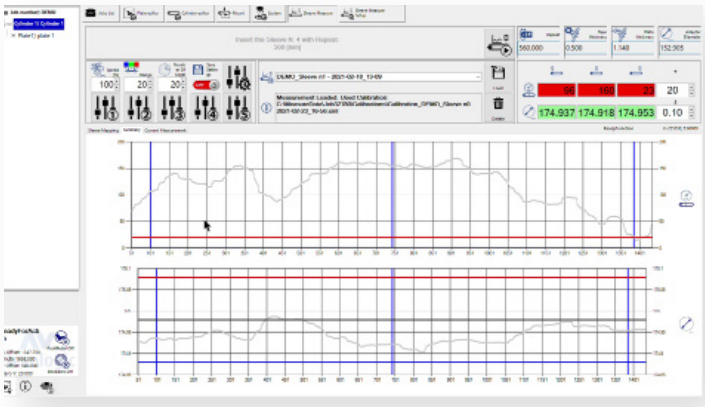
Advantages

- Save time by avoiding using worn out sleeves in the flexographic printing press
- Highly accurate sleeve measurements with a quick scan
- Prevent press downtime
- Easily identify damaged sleeves
- Stores the measurement report
- Rigid steel construction for long durability

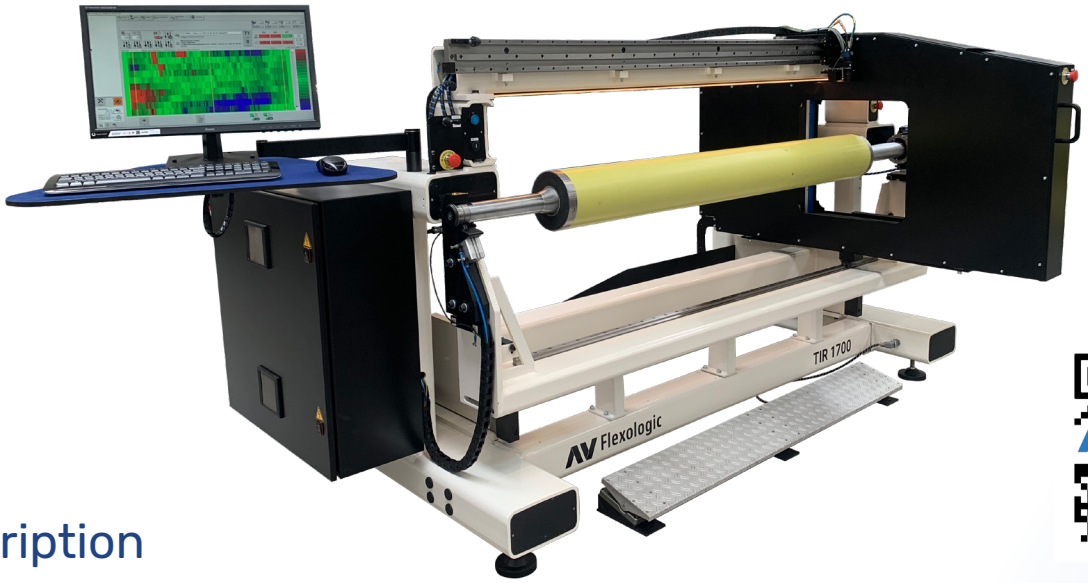
Options

- Tape holder for applying double-sided adhesive mounting tape
- Cutting knife with an adjustable depth to prevent sleeve damage while cutting tape
- Pressure roller for tape application





Sleeve Quality Inspection System



Description

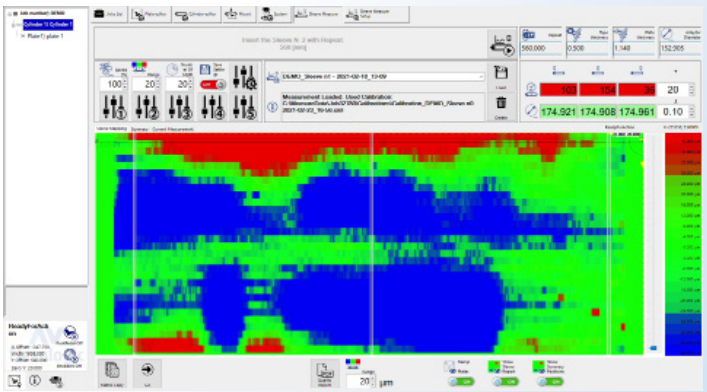
The **Sleeve Quality Inspection System** (SQIS), equipped with **Zumbach laser technology**, allows for comprehensive inspection of flexographic print sleeves, **identifying any potential issues** before they become critical problems.

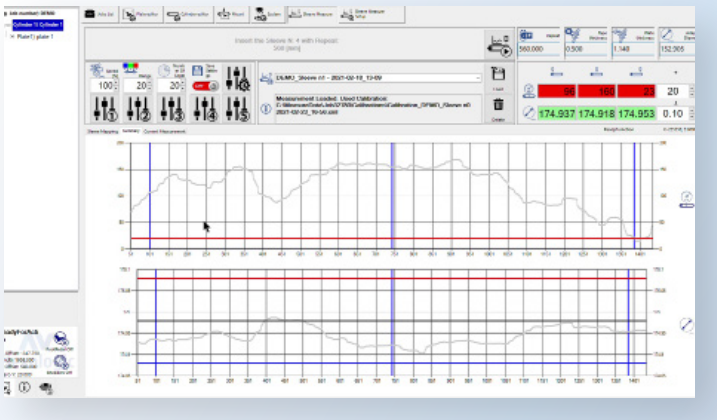
The Zumbach laser **scans sleeves, including self-adhesive sleeves** (Tesa Twinlock or Polymount) with an impressive **accuracy of 1 micron**. Additionally, the SQIS is able to measure the **absolute diameter** of the sleeve/adapter with **± 0.005 mm** measurement accuracy.

The software provides a comprehensive overview of the sleeve, presenting **TIR values and diameter measurements** obtained from the laser scanning. The **user-friendly interface** makes it easy for the operators to integrate it into the printing workflow. The Sleeve Quality Inspection System has also an **optional RFID reader/writer**.

Advantages

- Automated ultra-accurate quality measurement of sleeves
- Significant reduction on press downtime
- Ability to generate detailed measurement report
- Complete inspection of flexographic print sleeves
- Absolute diameter measurement
- User-friendly interface for easy inspection





Demounter

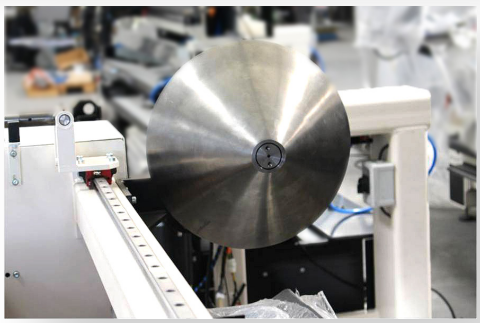
Description

The **Demounter** is a machine designed to **avoid any damage** occurring to printing plates by allowing the operator to **easily and ergonomically remove tape from plates and sleeves**. Thanks to the motor and two pressure rollers, the Demounter allows the operator to t**ake off the tape and plate with little effort, and in a safe way**. The roller divides equal force along the entire width of the printing plate, as opposed to the edges, which protects the printing plates from any damage.

Advantages

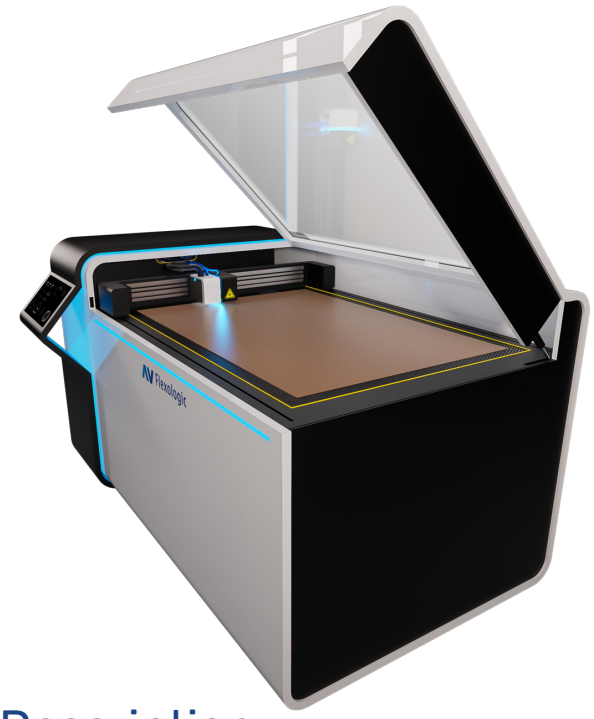
- Easy and safe method to remove tapes and plates from sleeves
- Reduces costs due to damaged printing plates, allowing a quick return on investment
- Saves time in prepress department
- Minimal force required
- Plug-and-play

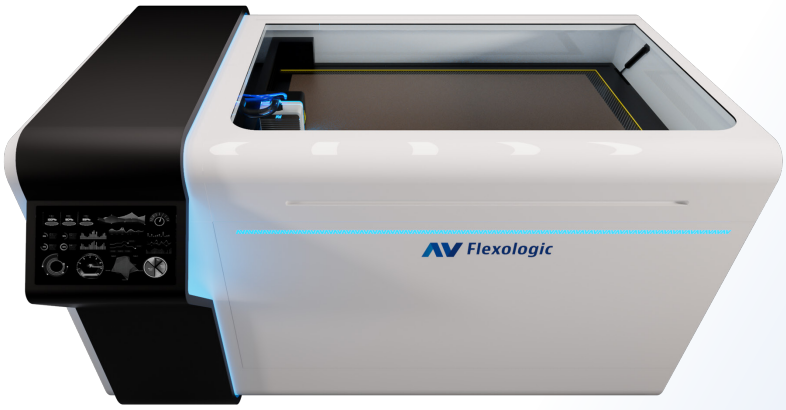
Options



- Pneumatic cones for applying tape
- Cutting knife

EXACT Laser Cutting System



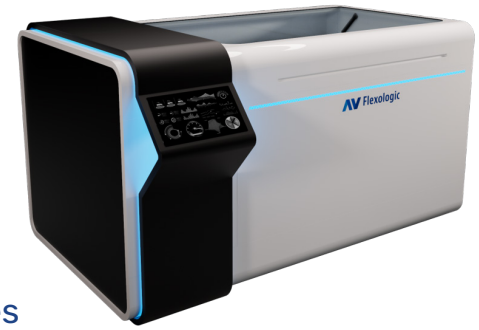


Description

The **flexo EXACT Laser Cutting System** is the new **automatic cutting table** specifically designed for cutting flexo printing plates. With its automated cutting capabilities, the EXACT offers unparalleled **precision, speed, and repeatability** in cutting plates.

The EXACT uses cutting lasers to provide precise cuts with a **high level of accuracy**, ensuring consistent cutting quality. The EXACT will cut flexo plates exactly to size and eliminate the need for post-trimming. The lasers also have **engraving capabilities**, enhancing plate identification and traceability.

EXACT Laser Cutting System **avoids any risk** of operator **injury** since it does not use blades. This machine ensures consistent cutting quality with almost no operator interaction.



Advantages

EXACT Laser Cutting System delivers consistent **high quality results** by employing lasers, ensuring **precise edges** without the presence of burrs or residual cuttings from knives or plates in the printing process.

Laser technology enables **faster cutting speeds** than knife-based devices, overcoming blade breakage limitations and eliminating the need for vertical movements to change direction.

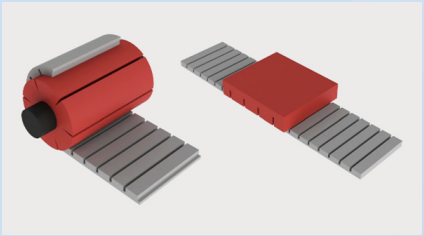
- Fully enclosed design for the utmost safety
- Engraving capabilities
- No additional equipment needed
- Workflow automation (ESKO, Hybrid, and Kodak systems)

Engraving option

The EXACT engraving option provides a versatile and advanced method for **adding detailed markings to flexo plates**. It's ideal for unique identifiers, intricate patterns, or specific text, **aiding in tracking, quality control, and alignment** during printing.

Linear motors option

The EXACT can be upgraded with a linear motor system, offering **smoother control** for **high-precision applications** compared to standard belt drives.



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freshdesk

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