

FLEXO WIDE WEB PORTFOLIO



AUTOMATIC FAMM 2.0



AUTOMATIC SMM 2.0



MOTORIZED MOM DD+ Pro



MOTORIZED MOM DD S



SLEEVE MOUNTER



SUPPORTING EQUIPMENT



TIR



SLEEVE STORAGE SYSTEM



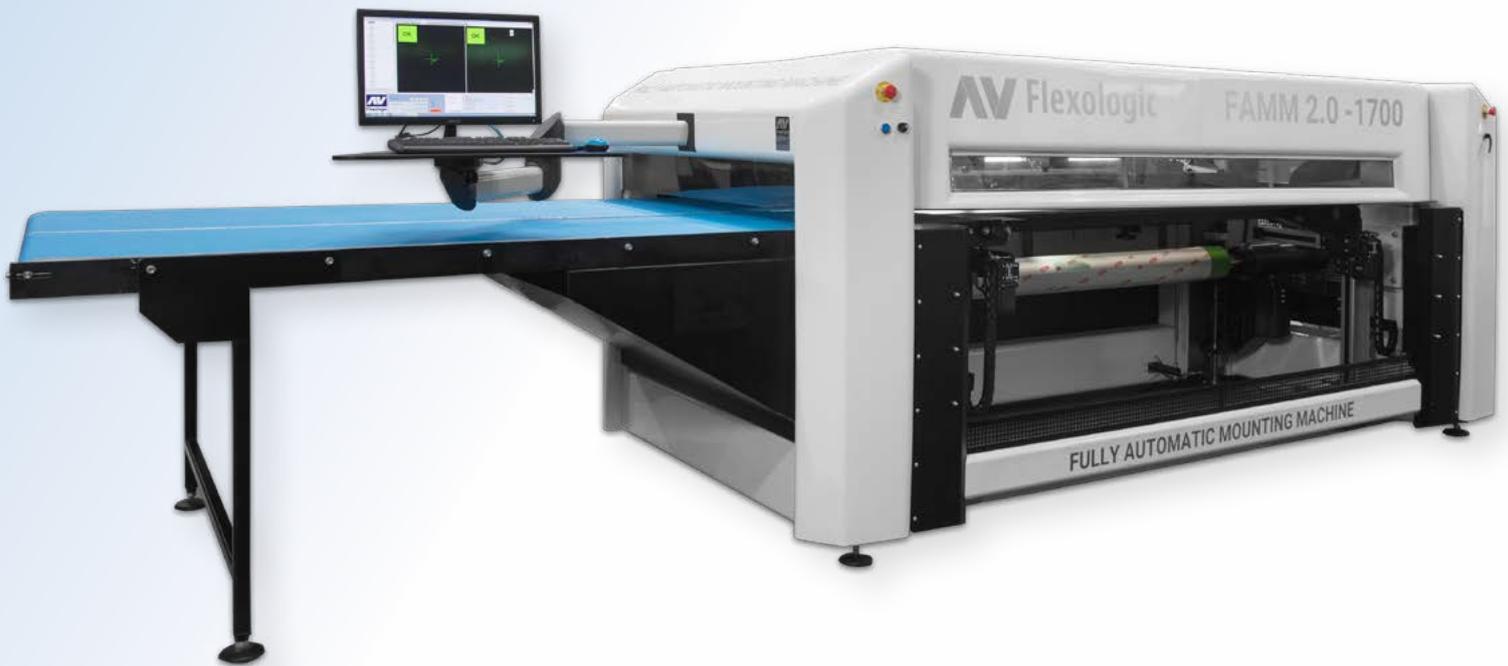
PRINTING SLEEVES



DE-MOUNTER

FAMM 2.0

FULLY AUTOMATIC FLEXPLO PLATE MOUNTING MACHINE



Widths

Width [mm]	≤ 1500, 1700, 2500
Width [inch]	59", 67", 98"
Max repeat [mm/inch]	1350 / 53"

Description

The FAMM 2.0 is the second generation Fully Automatic Mounting Machine. The FAMM 2.0 automatically mounts multiple plates after one another, and will mount a plate extremely accurately every 45 seconds without operator interaction. The only action left to the operator is to load a sleeve and lay the plates on the conveyor belt.

Workflow

The operator presses start, after which the machine takes over. During the time the machine is mounting, the operator has time available to perform other offline tasks, such as applying tape, preparing plates, finishing sleeves, etc. The overall efficiency of the mounting and complete prepress department is boosted tremendously by introduction of a FAMM 2.0.

Being able to measure the positions of mounting marks using ground-breaking image recognition technology down to 1µm (0.001mm or 0.4*10⁻⁴ Inch) during the plate mounting process provides a phenomenal print quality to printers end customers. This image recognition technology on the FAMM 2.0 enables Flexo printers to take total control of total process and improves traceability, while removing operator dependency.

Unique Features

Speed and high accuracy

Due to the patented **Image Recognition Technology** and **Automatic positioning**, the machine automatically and extremely accurately mounts multiple plates with a precision of 5 microns. A **Stationary Third Camera** helps recognize the mounting marks faster to begin the mounting process, while a **Light Beam** executes the sleeve change in 10 seconds. All these features allow the machine to mount with an "Average" Maximum Capacity up to 700 sleeves per day.

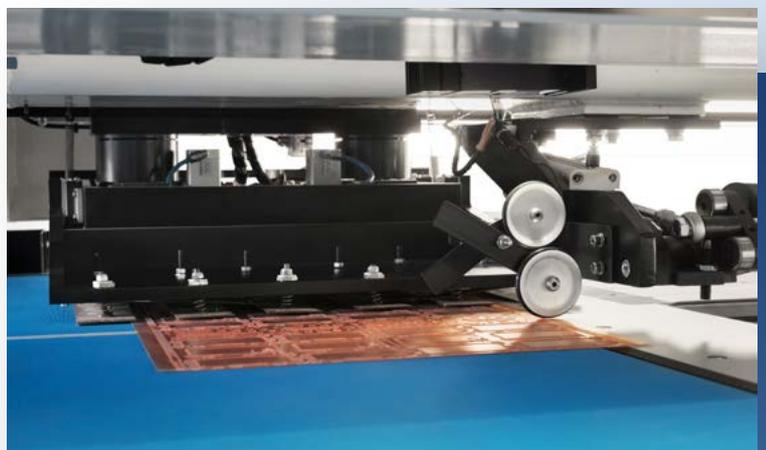


Fully Automatic and no operator interaction

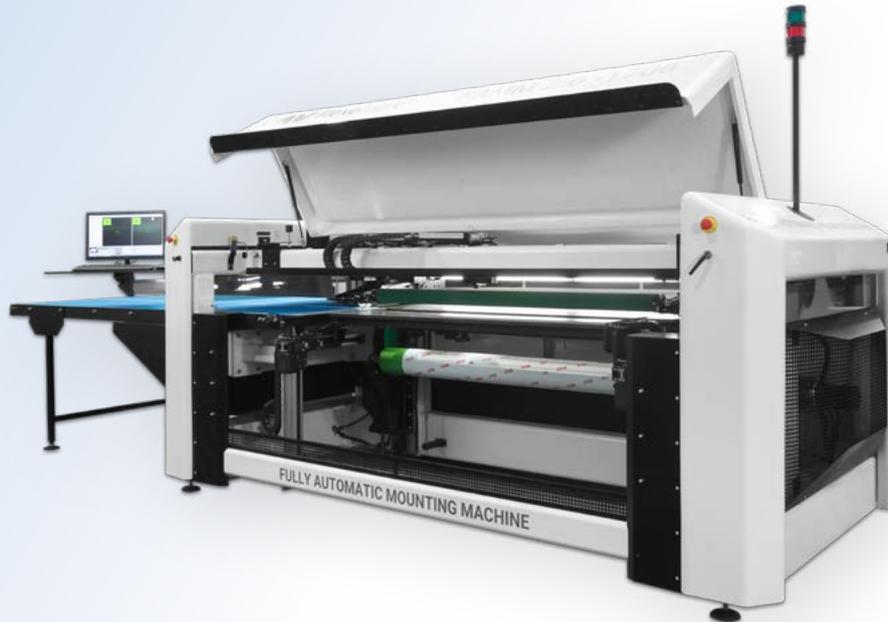
While the plates are automatically mounted onto the sleeves, the only action needed from the operator is to load a sleeve and place the plates on the conveyor belt, thus, the operator can attend other tasks while the machine is mounting plates.

Robotic manipulator

Once the operator places the plates on the conveyor belt and selects a job, the robotic manipulator will handle the first plate and position it accurately. Following, the machine will mount the plate fully automatically. In the meantime, the robotic manipulator is back in zero position and it's ready to pick up the second plate and follow the same mounting process. The robotic manipulator enables a fully automatic mounting process.



FAMM 2.0 Unique Features



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. After the plate is mounted, the cylinder moves vertically down.



Mounted in Tolerance

Plate Nr: 1	Left X [mm]	Left Y [mm]	Right X [mm]	Right Y [mm]
Plate Name:	-471.700	400.000	790.820	400.000
Top	-471.699	399.999	-790.820	400.000
Actual - Top	0.001	-0.001	-1.581.640	0.000
Plate Nr: 2	Left X [mm]	Left Y [mm]	Right X [mm]	Right Y [mm]
Plate Name:	-471.700	400.000	790.820	400.000
Top	-471.699	400.000	-790.820	400.000
Actual - Top	0.001	0.000	-1.581.640	0.000
Plate Nr: 2	Left X [mm]	Left Y [mm]	Right X [mm]	Right Y [mm]
Plate Name:	-471.700	400.000	790.820	400.000
Top	-471.698	400.000	-790.820	400.000
Actual - Top	0.002	0.000	-1.581.640	0.000

Motorized table movement

The table opens and moves automatically, allowing the printing plate to be mounted on the sleeve. The table makes a synchronized movement with the cylinder in order to assist the plate.

Quality reporting after mounting

After the mounting process the FAMM automatically checks the tolerance of mounted plates using Image Recognition. The tolerance of the report settings determines whether a plate is judged as mounted 'OK' or 'NOT OK'. A pdf quality report is generated on-the-fly with ability to check top and bottom. The report includes all the measurements from the Image Recognition system.

Mounting Marks Specifications

The Automatic SAMM and Fully Automatic FAMM use 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	1mm	Flat no image		
	Correlation	Processed	0.6mm	0.6-1mm	Square				
Positive non-dot shapes	Correlation	Processed	2mm	2-4mm	Square			1mm	Flat no image
		Thermal	2mm	2-4mm	Square				
W&H register mark	Easyreg®	-	-	-	-	-	-		
Damaged targets*	Semi Auto	See specs of the original target							

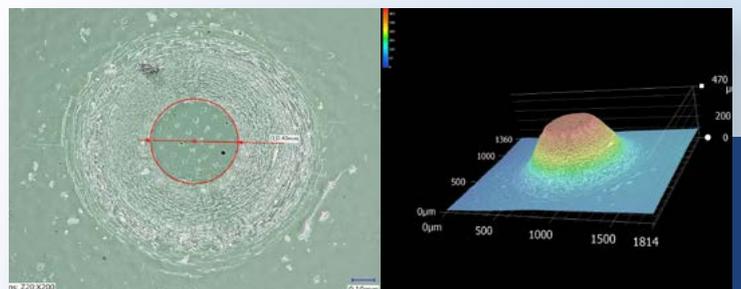
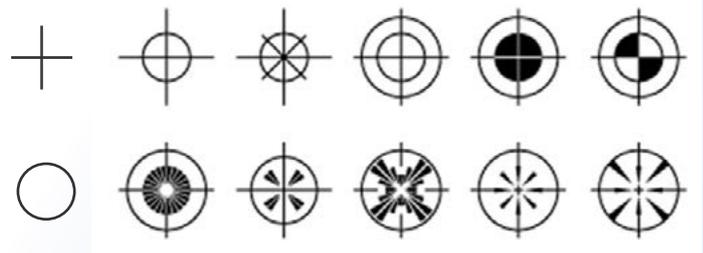
* It is possible to mount damaged targets using the Semi-Automatic mode. The operator will have to locate the target once, after that the SAMM will mount these plates automatically. Also the quality check after mounting is available.

** 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 2.0 detects all common mounting marks and microdots within the above specifications.



SAMM 2.0

AUTOMATIC FLEXO PLATE MOUNTING MACHINE



Widths

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

Description

The patented **SAMM 2.0** is AV Flexologic's solution to common industry trends. Building on 15+ years of experience with automatic mounting machines using vision technology, the SAMM and FAMM are the most accurate and fastest mounting machines in the world. The Automatic SAMM 2.0 mounts flexo plates onto sleeves with unmatched accuracy, repeatability and speed.

Workflow

The operator only needs to preposition roughly the flexo plate with the help of the laser pointers. Then the machine takes over and positions the flexo plate using **robotics**. Additionally, with the help of motorized cameras and the patented **Image Recognition** software, the flexo plate is placed with an accuracy of **5 microns**. Following, the motorized front table automatically moves and the flexo plate is mounted onto the sleeve without **any operator interaction**. During the mounting process, the operator can focus on other preparatory tasks. The SAMM 2.0 features a staggering **30-second** mounting speed, attending to higher quality demands and reducing press downtime.

Unique Features

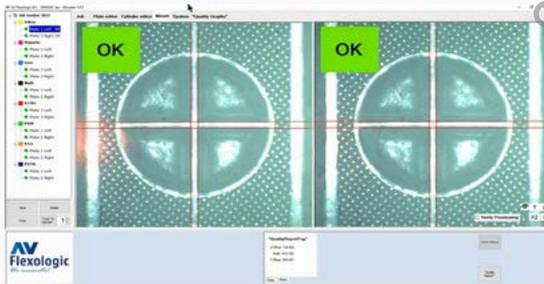
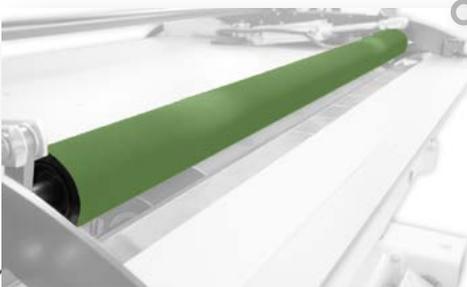


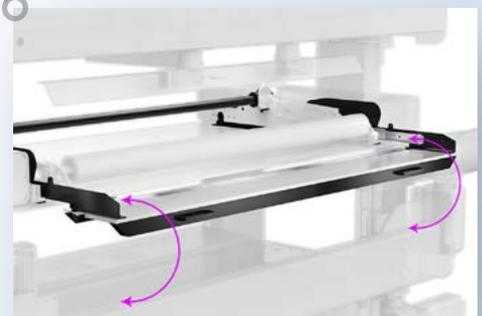
Image Recognition (patented)

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



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 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.

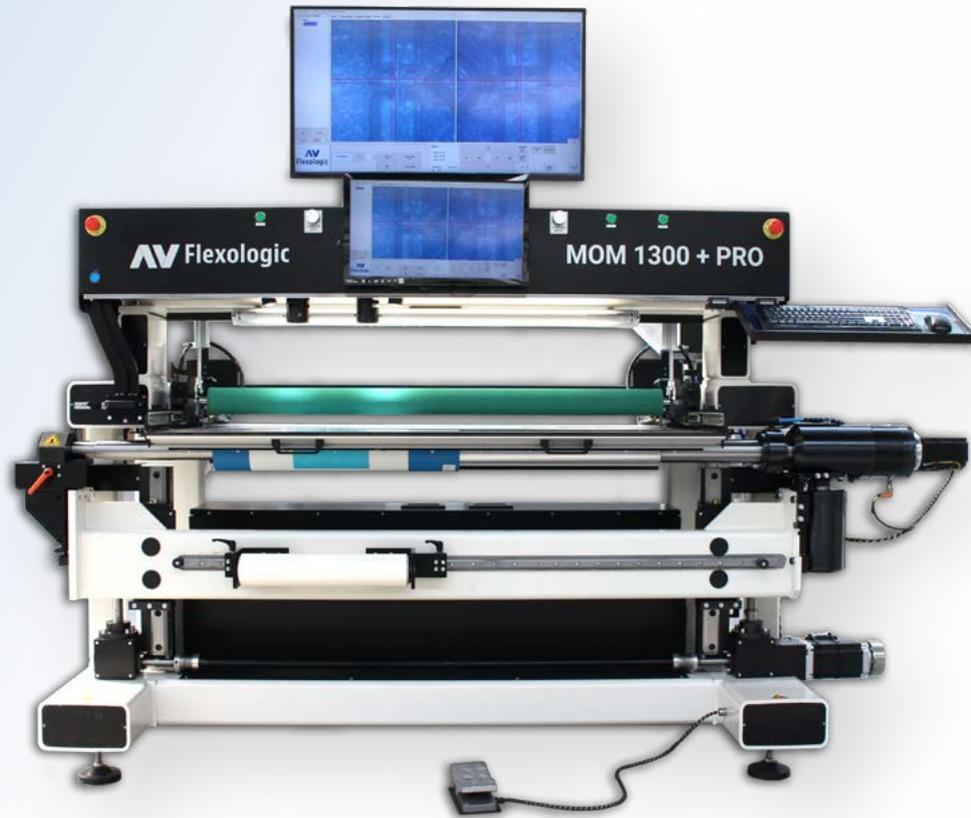


Motorized front table

An added advantage of the SAMA 2.0 is the 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**. During the time the machine is mounting each plate, the operator can prepare the next plate or perform another preparatory or finishing operation.

MOM DD+ Pro

MOTORIZED FLEXO PLATE MOUNTING MACHINE



Widths

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

Description

The **MOM DD+ Pro** is our high-end motorized mounting machine, which is the flexo industry standard for manual positioning of plates. Key options are available such as image recognition, a tape applicator, automatic W&H Easyreg detection, and a digital TIR measuring system, which can also map the full surface of the sleeve. The MOM DD+ Pro comes standard with an open-cell pressure roller.

Workflow

The operator places the flexo plate onto the table which has an initial position indicated by laser pointers. After positioning the flexo plate, the operator elevates the vertically moving cylinder, lowers the pressure roller and rotates the cylinder using the foot pedal. With the first sleeve mounted, the operator can select the next mounting job in the machine.

The machine provides benefits to an operator in multiple ways. Through motorization, the flexo plate mounting process requires a lot less operator interference. The Image Recognition ensures mistake-free processes which saves time and money, while the pressure roller prevents any air inclusions, ensuring the best print results.

Unique Features



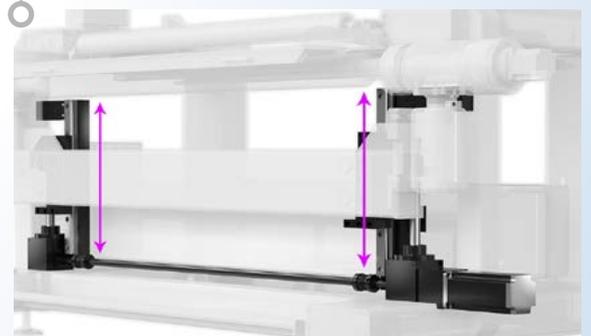
Automatic moving HD cameras

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



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 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.

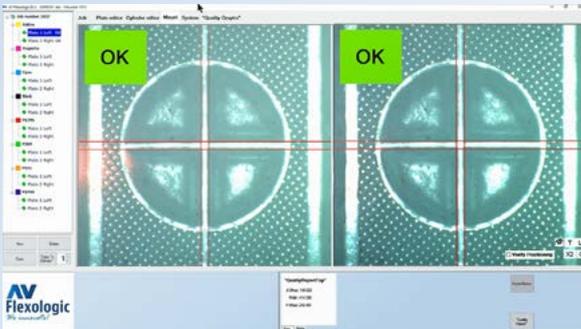


Vertically moving cylinder

There are several advantages of having the cylinder move vertically towards a fixed-height mounting table. For one this ensures a **fixed distance from the lens to the plate**, eliminating the need to focus the camera lenses. Avoiding focusing the lenses also means avoiding the parallax effect common to most plate mounting machines on the market since when changing the focus distance the 'focal point' also varies which distorts the calibration of the cameras. 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



Unique to the MOM DD+ Pro is the optional Image Recognition system, which is also included in the SAMP and FAMP automatic mounting machines. AV Flexologic has developed image recognition based **Quality Control** and intelligent **positioning assistant** on the MOM DD+ Pro. 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 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 on precision rail

A tape holder can optionally be added 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.



Cutting knife for tape and plates

A special cutting knife with precise depth adjustment can be added on the camera beam. The cutting knife can be easily slid through the beam and cut the tape effortlessly and without damaging the printing sleeve.

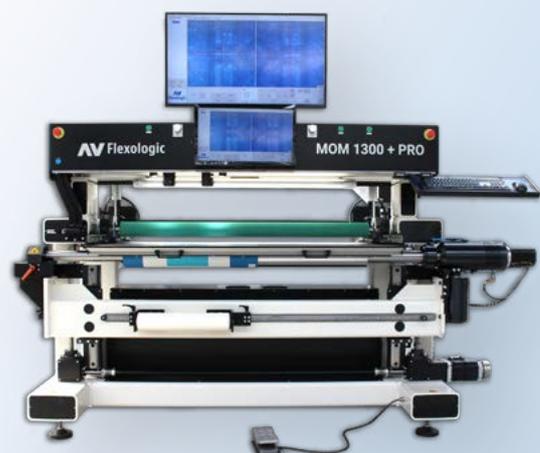
Automatic Easyreg detection

Another feature which uses image recognition is the automatic zero-setting feature for detecting a visual mark on the edge of the sleeve. The machine automatically scans the edge of the sleeve to look for the visual mark. Once this mark is recognized, the sleeve is centered and set to zero on this visual mark, to which the plates are mounted. The printing press picks up this mark (such as the W&H Easyreg mark) and the registration of the decks is done automatically. It is also possible to detect the precise location of a magnet in the edge of the sleeve for printing presses such as BOBST, SOMA and Allstein.



Features & Options	MOM DD S	MOM DD+ Pro
Max Repeat size	1500 mm / 60"	1350 mm / 53"
HD Ethernet Cameras	✓	✓
Air mandrel	✓	✓
Windows 10 mounting software	✓	✓
Overlay	✓	✓
Digital Zoom capability	✓	✓
40" HD Monitor	✓	✓
Laser pointers	✓	✓
Quality Report	✓	✓
Motorized cameras	✓	✓
Digital Calibration System	✓	✓
Motorized rotation of cylinder	✓	✓
Pressure roller	0	✓
Synchronized front table	0	✓
Fixed distance from lens to plate		✓
Vertical Movement of Cylinder		✓
Image Recognition Software		0
Quality check w/ image recognition		0
Critical Spare Parts Package	0	0
Tape holder on precision rail	0	0
Barcode Scanner	0	0
Automatic Easyreg detection	0	0
Shaft Coupling for cylinders		0
Tape applicator		0
TIR Sleeve measurement		0
Cutting knife for tape		0
Sleeve Tracking System*		0

= Included 0 = Optional
*only in combination with TIR



MOM DD S

MOTORIZED FLEXPLO PLATE MOUNTING MACHINE



Widths

Width [mm]	1500
Width [inch]	59"
Max repeat [mm/inch]	1350 / 53"

Description

The MOM DD S is the industry-wide standard in mounting machines for mounting flexographic printing plates onto sleeves with manual positioning of printing plates. The MOM DD S is a cost efficient alternative to the MOM DD+ Pro series up to 1500mm printing width.

Workflow

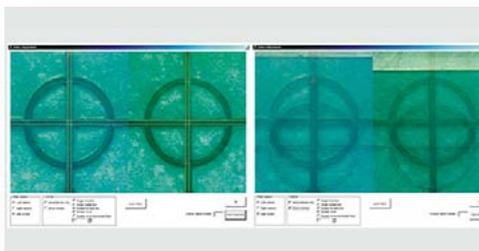
The operator creates a job including the mounting coordinates in the system. By selecting to start the job, the cameras move automatically into the mounting position of the first plate. The operator positions the plate manually with the help of a large screen. When the plate is positioned, the operator rotates the cylinder using the foot pedal and the plate is mounted. An optional pressure roller can be added to the machine for better quality mounting without air inclusions. When the mounting process is completed, the machine generates automatically a quality report with snapshots of the mounting marks.

Unique Features

Motorized Cameras

The MOM DD S has HD Ethernet Cameras like the automatic and fully automatic mounting machines SAMM and FAMM. AV Flexologic ensures crisp and sharp ultra-high-resolution images, enabling an efficient and accurate mounting process. The added advantage of these cameras is that they move automatically into the mounting position, saving valuable time from calibration and ensuring high quality mounting. The operator just needs to enter the coordinates of the printing plate and select the job to start mounting.

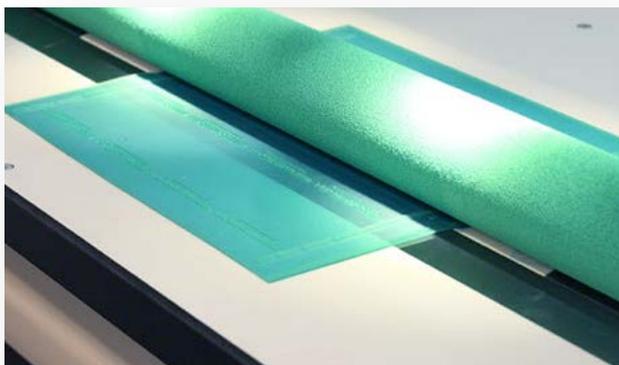
Since the positioning of the printing plate is done manually from the operator, high resolution cameras are necessary for an effective and accurate mounting.



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.

Unique Options



Pressure roller

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. The sleeve is rotated both ways to finalize the mounting process. Compared to traditional mounting machines, the pressure roller saves enormous operator time and reduces press downtime due to the elimination of air enclosures in between adhesive (tape or twinlock) and the printing plate.

Mounting table

An optional mounting table can be added on the MOM DD S for an easier mounting process. With the mounting table the positioning of the printing plates is faster and more efficient.



SLEEVE MOUNTER



Widths

Width [mm]	≤ 1300
Width [inch]	52"
Max repeat [mm/inch]	1350 / 53"

Description

The AV Flexologic Sleeve Mounter is our entry-level flexo plate mounting machine with a chromed custom-made air mandrel. The Sleeve Mounter is ideal for flexo printers who mount mainly 1 plate per color and print mainly long job runs.

Workflow

The operator manually sets the cameras to a fixed position to which he/she mounts 1 plate per color. The HD cameras with optical lenses and digital zoom function are mounted on precision grinded and temperature treated camera beam to ensure the best calibration for high quality results. The camera beam is parallel to the air mandrel, and is fitted with high precision linear guides. The Sleeve Mounter is equipped with a bracket on the right-hand side that can be opened by hand for exchanging printing sleeves on the air mandrel or on an adapter mounted on the mandrel.

The images of the cameras are displayed on a split screen 22" touchscreen monitor. Encoders fixed to the cameras track the physical position of the cameras and positioning coordinates are displayed real-time on the monitor. Through the touchscreen monitor the operator has a choice of hairlines, e.g. single crosses, double movable lines, sizable circles and combinations. Using the Overlay system, snapshots of the mounting position can be taken and displayed faded on the monitor to mount image on image.

Features

HD Ethernet Cameras
Mounting Table
22" Touchscreen interface
Custom-made chromed air mandrel
Windows 10 mounting software
Overlay feature
Digital Zoom capability
Networking capability
Teamviewer support
Temperature-treated high accuracy milled camera beam
Digital readout of position of cameras
Sectoring system for staggered mounting



Options

- Additional set of cameras
- Motorized rotation of cylinder
- Barcode Scanner for job entry
- Tape roll holder
- Critical Spare Parts Package

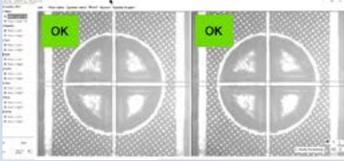


Features Overview



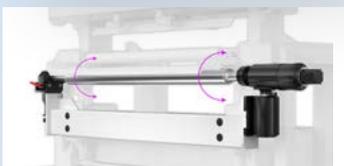
Robotic positioning

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.



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.



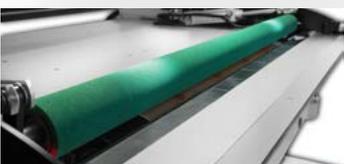
Laser pointers

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 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.



Digital zoom capability

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



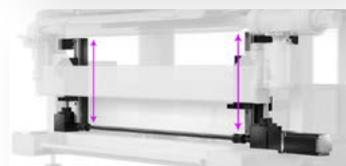
Windows 10 mounting software

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



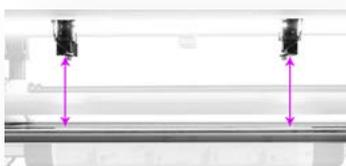
Quality report

After each plate is mounted, the MOM, SAMM and FAMM mounting 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.



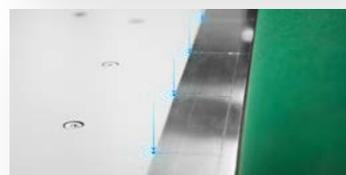
Vertical movement of cylinder

The cylinder moves vertically on high-precision linear guides. 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. Also, fixed distance from lens to plate means that there is no need to focus the lenses, ensuring the highest accuracy and user-friendliness.



Fixed distances from the lens to plate

The table is in a fixed height, so the cylinder moves up vertically when the plate is in position to fix the plate to the sleeve's adhesive layer (tape or twinlock). One of the advantages is that a fixed working height ensures best operator ergonomics.



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.



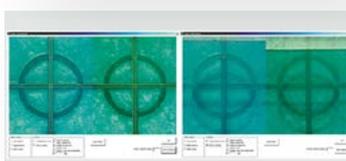
40" HD Monitor

To be able to optimally view the mounting marks during the mounting process, the MOM and SAMM machines have a large-format HD Mounting monitor mounted on top of the machine. In combination with the HD Ethernet cameras. The magnified images are viewed with a high level of detail, making the machine more accurate and user-friendly.



Automatic repeat detection

With this feature the machine automatically detects the repeat size of the sleeve.



Overlay System (patented)

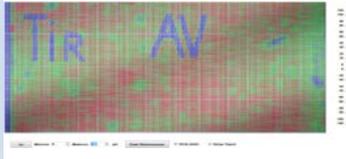
Once the first plate is in the right position, the overlay module enables the operator to take snapshots of the mounting marks, which are then shown semi-transparently when mounting the other plates.

Options Overview



Automatic easyreg detection

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 0.001mm (1µm) accuracy.



TIR Sleeve Measurement

Our patented im The TIR Measurement System analyses the quality of the printing sleeve or cylinder by measuring the "3D landscape" of the surface. By using the TIR system, press downtime due to out-of-spec and damaged sleeves is prevented. Better control over the printing process is gained, while the need to adjust the pressure of a sleeve during the set-up of the press is reduced.



Tape holder 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.



Cutting knife for plates and tape

A special cutting knife can be slid around the whole length of the machine and cut the tape seamlessly. It is made with a precise depth adjustment, 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.



Tape applicator

The tape applicator assists the tape application and adds speed to the workflow by allowing a fast and accurate tape application and minimum waste of materials.



Sleeve tracking system

Feature on the TIR. A database that 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, 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 the jobs. The jobs are then 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

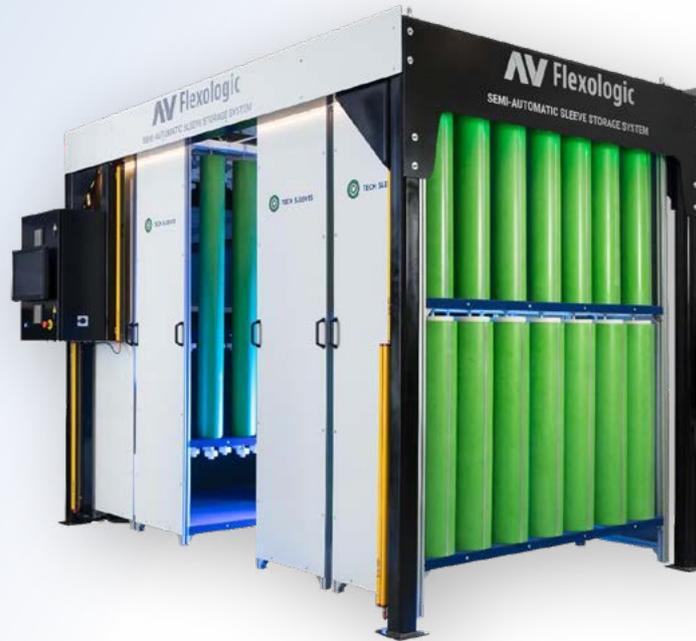
Specifications	Sleeve-mounter	MOM DD S	MOM DD+ PRO	SAMM 2.0	FAMM 2.0
Max Width (mm)	≤ 1300	1500	1300, 1700, 2200	1300, 1700, 2200	1500, 1700, 2500
Max Width (inch)	52"	59"	52", 67", 87"	52", 67", 87"	59", 67", 98"
Max Repeat (mm/inch)	1350 / 53"	1350 / 53"	1350 / 53"	1350 / 53"	1350 / 53"

Features & Options	Sleeve-mounter	MOM DD S	MOM DD+ Pro	SAMM 2.0	FAMM 2.0
HD Ethernet Cameras	✓	✓	✓	✓	✓
Air mandrel	✓	✓	✓	✓	✓
Windows 10 mounting software	✓	✓	✓	✓	✓
Overlay	✓	✓	✓	✓	✓
Digital Zoom capability		✓	✓	✓	✓
40" HD Monitor		✓	✓	✓	✓
Laser pointers		✓	✓	✓	✓
Quality Report		✓	✓	✓	✓
Motorized cameras		✓	✓	✓	✓
Digital Calibration System		✓	✓	✓	✓
Motorized rotation of cylinder	0	✓	✓	✓	✓
Pressure roller		0	✓	✓	✓
Synchronized front table		0	✓	✓	✓
Vertical Movement of Cylinder			✓	✓	✓
Fixed distance from lens to plate			✓	✓	✓
Image Recognition Software			0	✓	✓
Quality check w/ image recognition			0	✓	✓
Vacuum table				✓	✓
DOAL Lights				✓	✓
Robotic positioning				✓	✓
Automatic repeat detection				✓	✓
Automatic mandrel rotation				✓	✓
Automatic pressure roller				✓	✓
Motorized table movement				✓	✓
Robotic manipulator					✓
Conveyor belt for automatic positioning of multiple plates					✓
Barcode Scanner		0	0	0	0
Automatic Easyreg detection		0	0	0	0
TIR Sleeve measurement			0	0	0
Tape holder on precision rail		0	0	0	
Cutting knife for tape			0	0	
Tape applicator			0	0	
Shaft Coupling for cylinders			0	0	
Sleeve Tracking System*			0	0	0

✓ = Included 0 = Optional
*only in combination with TIR

Supporting Equipment

Sleeve Storage System



Description

This customized **Sleeve Storage** system allows easy access, storage and retrieval of sleeves with an optional Semi-automatic feature. The Semi-Automatic feature entails that the horizontal movement of the racks is motorized by use of electric motors. This feature allows the user to input a repeat number or job on a touchscreen interface, through which the racks automatically "open" to the specific rack where the sleeves are stored.

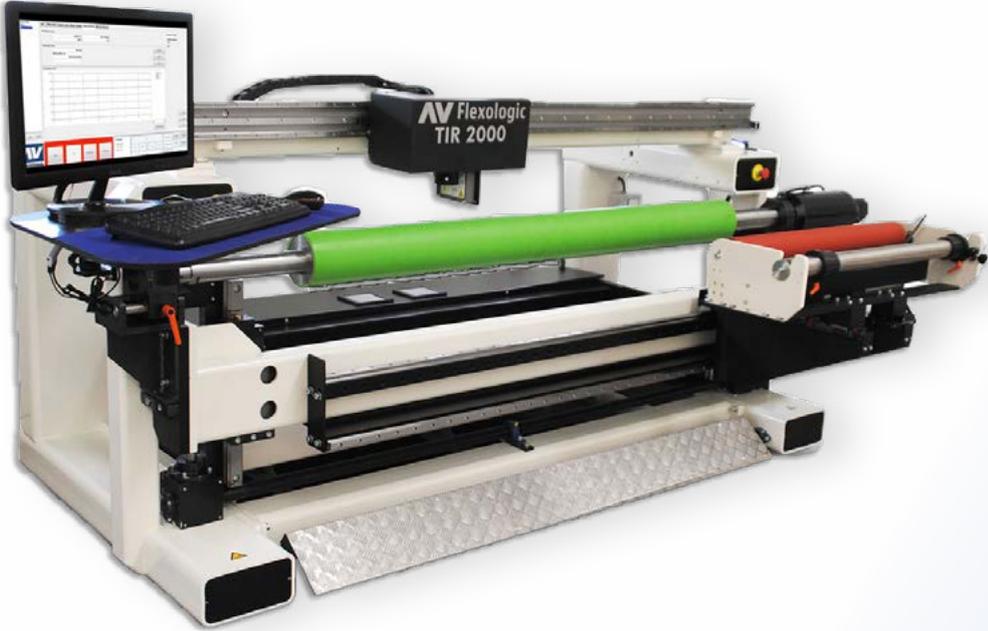
Advantage of Semi-automatic Sleeve Storage

- ✓ Easy and fast retrieval of sleeves
- ✓ No manual labor required to move sleeve racks
- ✓ Possibility to connect to ERP system for further automation
- ✓ Automatic security system
- ✓ Fully customized project



Supporting Equipment

TIR Measurement System



Description

The **TIR** measurement system is the winner of the International print & innovation award 2015. It analyses the quality of the printing sleeve or cylinder by measuring the '3D landscape' of the surface. This information gives a thorough insight on the condition of the printing sleeve or the cylinder. With that, the TIR builds up a record of the exact condition of each printing sleeve or cylinder in stock. Subsequently the printing sleeves can be placed in the press with the right pre-settings.

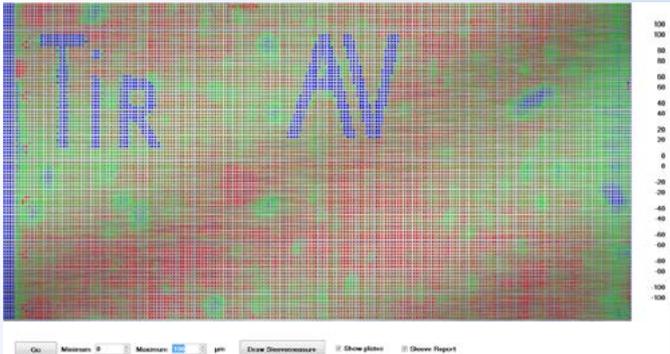
The ability to check the exact condition of each sleeve is essential for high-speed production with minimum pressure settings on the press. Worn out or damaged sleeves are easily detected, which prevents bad quality sleeve related downtime in the printing presses. It also helps to create an inventory of sleeves that are fit for use.

Advantages

- Reduction in press downtime due to worn out printing sleeves which end up in the flexographic printing press
- Quick and easy usage
- Rigid steel construction
- Prevent press downtime
- Identify out-of-spec. sleeves
- Allows better control over the printing process
- Stores the measurement report

Options

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

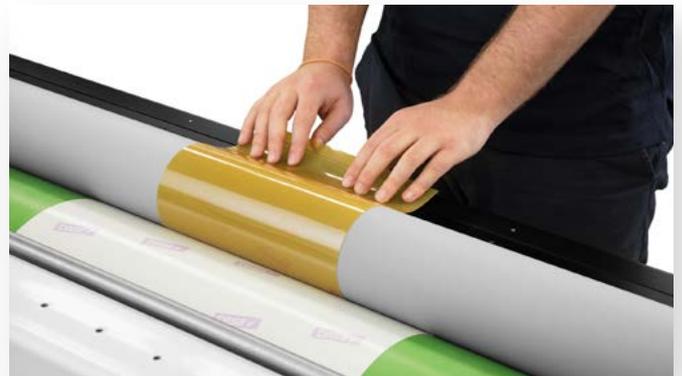


Demounter



Description

The **Demounter** is a machine designed to prevent damaging the printing plates. The Demounter efficiently removes the flexographic printing plates and mounting tape from sleeves, without any damage. Along with saving plates, the machine will also save time and allow the operator to focus on other activities in the prepress department. A motor driven silicon roller generates friction to pull the printing plates and mounting tape off the printing sleeve or cylinder. 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

Reduces costs due to damaged printing plates allowing a quick return on investment

Saves time in prepress department

Easy to use and minimal force required

Rigid steel construction

Plug-and-play



Options

Pneumatic cones for applying tape

Cutting knife

Tape Applicator/Demounter

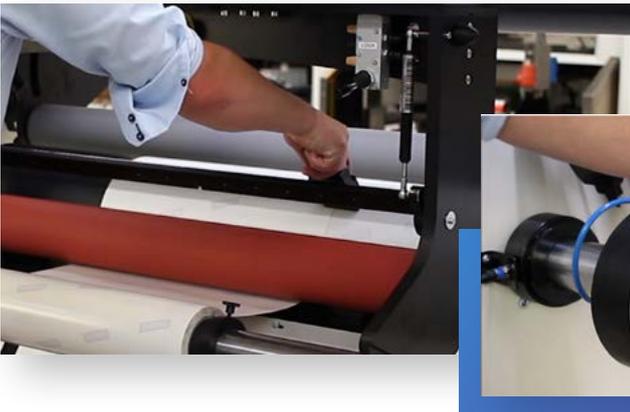


Description

The **TAD** (Tape Applicator/Demounter) offers safe, fast and consistent tape application, while it can also be used as a Demounter to safely demount flexo plates and tape from sleeves, without damaging them.

Features

- Light and sturdy tape roller
- Cutting knife with an adjustable depth to prevent sleeve damage while cutting tape
- Motorized rubber roller, which distributes the force equally over the entire width of the sleeve
- Teflon knife for detaching the plate from the sleeve easily and without damaging the plate



Advantages

- Perfectly aligned tape without air bubbles
- Minimal tape waste
- Easy to use and minimal force required
- Rigid steel construction
- Prevents plate and sleeve damage

Worldwide Customized Flexo Sleeve Solutions

Tech Sleeves® manufactures composite printing sleeves and bridges (adapters) for the global flexographic industry. By using the highest quality of materials, durability, consistency and dimensional stability is guaranteed. The core of the sleeves and bridges are built using 2-component vinyl-ester epoxy resin combined with Spherecore and Dyneema®. This leads to an ultra-high strength composite core that guarantees form stability and ensures resistance to bouncing. **Tech Sleeves®** and **Tech Bridges®** are qualified for high printing speed of up to 800m/min, or 2,624 ft/min.

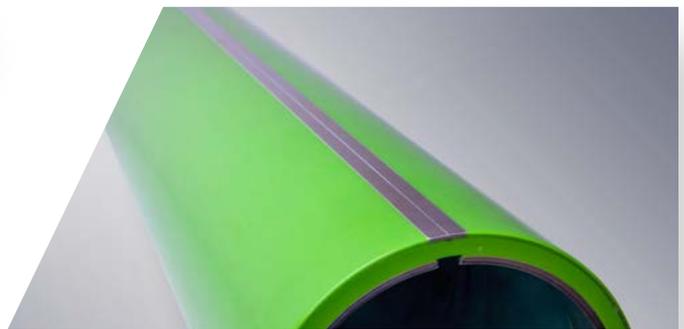
In addition to these high quality materials, Tech Sleeves® also offers additional features like **sealed ends**, the **full inner metal ring**, the **metal cutting line** and an **outer metal ring** to increase the sleeve and bridge lifetime. RFID chips and magnets can be added to both sleeves and bridges on request.

Unique Options



Rubber edges with metal insert

Rubber edges are used to decrease wear and tear of the sleeve and therefore increase its durability. This unique option ensures the longevity of the sleeves.



Metal cutting line

Helps the operator with cutting. Prevents damage to the sleeve using a metal plate of 0.5 mm thickness. Finishing with diamond grinder for smooth sleeve surface.



Smart Sleeve

The Smart Sleeve includes a RFID chip and magnet to store identification numbers and repeat sizes to simplify the identification process.



Full inner metal ring

The full inner metal ring provides a strong and durable slot solution, but it also saves cost on buying new printing sleeves.

Tech Sleeve Versions	Tech®	Tech® Pro	Tech® Pro+
Zero line axial	•	•	•
Rubber Sealed edges both sides		•	•
Inner metal ring incl. registration slot			•

Tech Sleeve®

Layers cross-section



- 1 Innermost Core**
 - Flexible and expandable innermost core. (1 mm)
 - Contains Dyneema® that offers maximum strength with minimum weight.
 - Dyneema® doesn't fray and is up to 40% stronger than aramid fibers such as Kevlar®.
 - Prevents slipping of the sleeve on the mandrel.
 - Extremely durable and resistant to moisture, UV light and chemicals.
- 2 Foam Layer**
 - Compressible Foam Layer. (1 mm)
 - The compressible Foam Layer has high rebound resilience and is up to 50% compressible without bulging.
 - Reduces bouncing and enables the sleeve to have a perfect fit on the mandrel.
 - Resistant to permanent deformation, good abrasion resistance from aging, weathering and cleaning solvents used for polymer plate cleaning.
- 3 Techcore**
 - Stitched, Bonded and Compressed Techcore material in various thicknesses.
 - Contains a filament fiber base which is volumized by fiberglass infused with Epoxy Vinyl-Ester-Resin.
 - Light weight with extreme high flexural strength and form stability.
 - Ultra-high-strength composite core reduces bouncing at high speed.
- 4 Outer surface layer**
 - The Outer Surface Layer contains Epoxy Vinyl-ester-resin reinforced with technical filaments and polyester fleece. (2 mm.)
 - High chemical and temperature resistance with excellent tape mount and demount properties.

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.

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



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- Software updates
- 15% Discount on spare parts
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We create an account for you at our Support Portal in Freshdesk. You can always raise a ticket when you log into your account.



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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?

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