AV Flexologic
We innovate!

AUTOMATIC SAMM 2.0

AUTOMATIC SAMM USD

MOTORIZED MOM USD

TABLETOP

LABEL & NARROW WEB PORTFOLIO

AV Flexologic
We innovate!
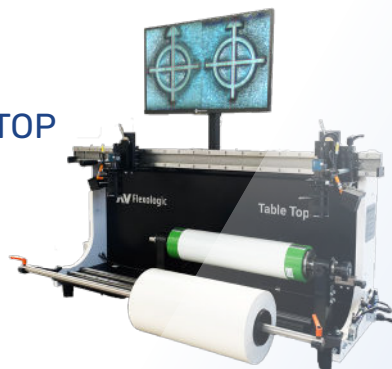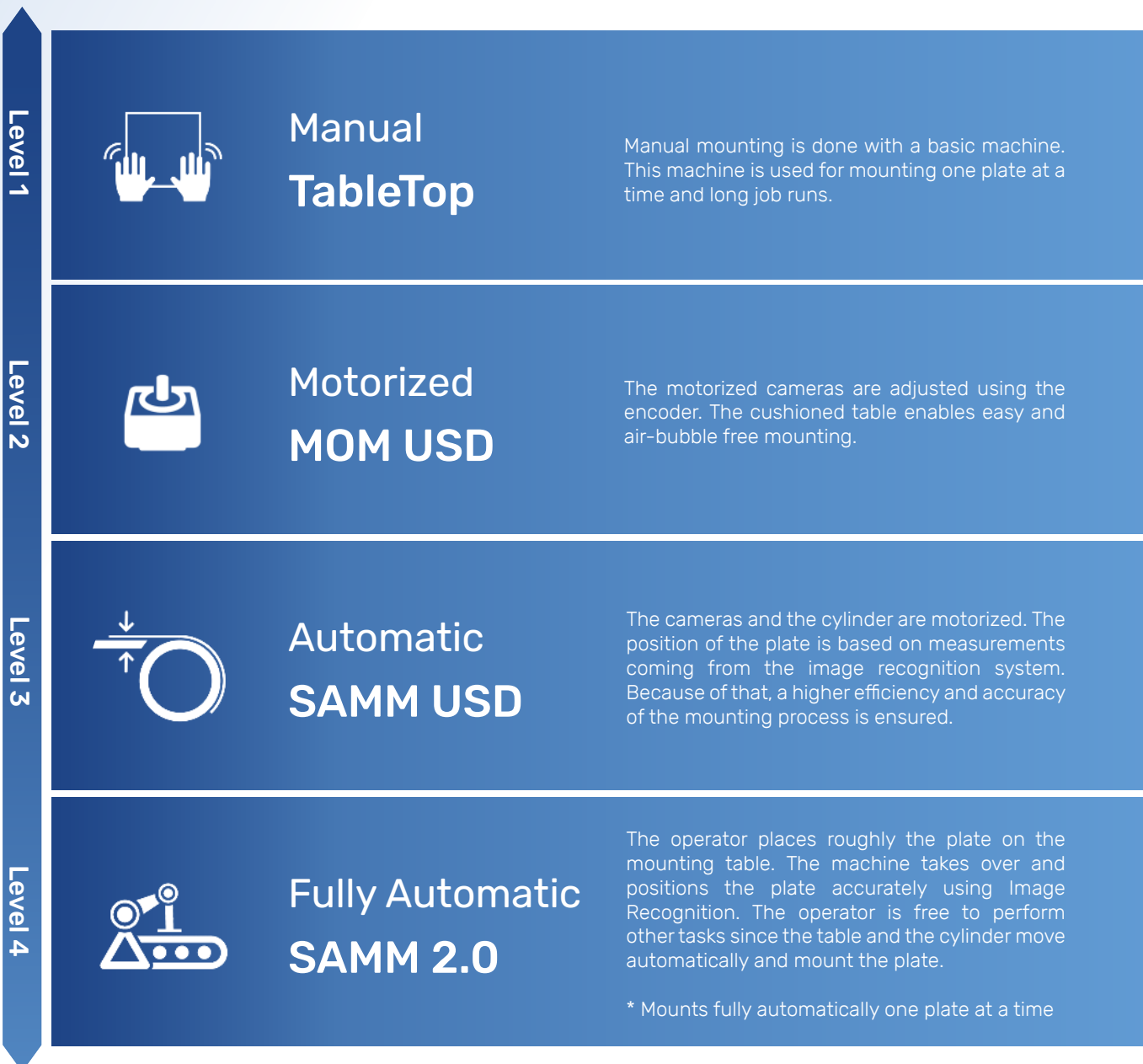
Introduction of mounting concepts

AV Flexologic offers a full range of flexo plate mounting machines, from completely manual to fully automatic. This section describes the 4 different concepts that can be identified in flexographic plate mounting machines, from entry-level to fully robotic:

Level 1

Manual
TableTop

Manual mounting is done with a basic machine. This machine is used for mounting one plate at a time and long job runs.

Level 2

Motorized
MOM USD

The motorized cameras are adjusted using the encoder. The cushioned table enables easy and air-bubble free mounting.

Level 3

Automatic
SAMM USD

The cameras and the cylinder are motorized. The position of the plate is based on measurements coming from the image recognition system. Because of that, a higher efficiency and accuracy of the mounting process is ensured.

Level 4

Fully Automatic
SAMM 2.0

The operator places roughly the plate on the mounting table. The machine takes over and positions the plate accurately using Image Recognition. The operator is free to perform other tasks since the table and the cylinder move automatically and mount the plate.

* Mounts fully automatically one plate at a time

Specifications

Mounting machine	Widths [mm]	Widths [Inch]	Max Repeat [mm/Inch]	Sleeves or Cylinders
TableTop	≤ 800	24"	610 / 24"	Cylinders and/or sleeves
MOM USD	≤ 850	33.46"	850 / 33.46"	Cylinders and/or sleeves
SAMM USD	≤ 850	33.46"	850 / 33.46"	Cylinders and/or sleeves
SAMM 2.0	≤ 850	33.46"	1350 / 53.15"	Sleeves or Cylinders

AUTOMATIC FLEXO PLATE MOUNTING MACHINE

SLEEVES VERSION
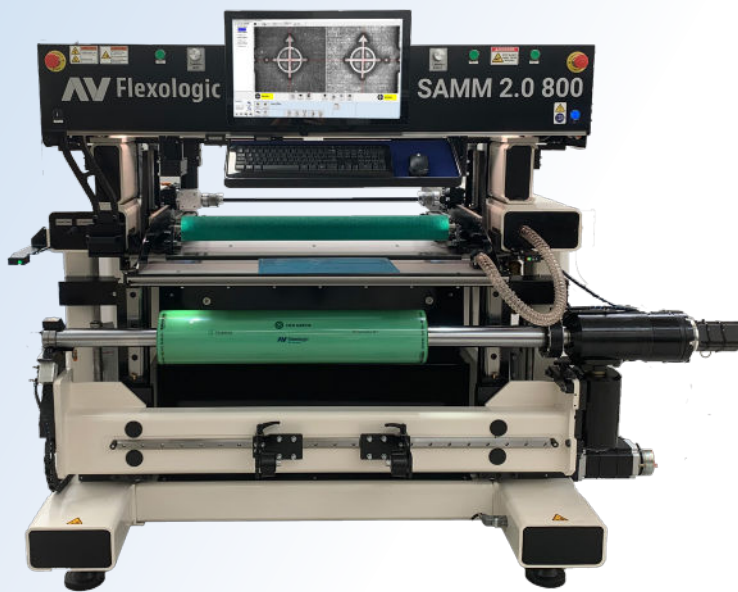
CYLINDERS VERSION
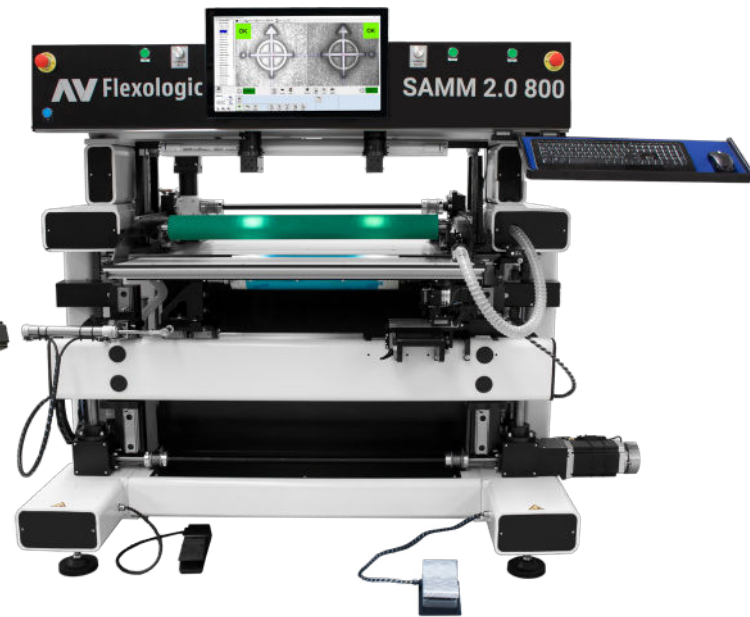
Widths

Width [mm]	≤ 850
Width [inch]	33.46"
Max repeat [mm/inch]	1350 / 53.15"

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 is the most accurate and fastest mounting machine in the world. The Automatic SAMM 2.0 mounts flexo plates onto sleeves or cylinders 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 **60-second** mounting speed, attending to higher quality demands and reducing press downtime.
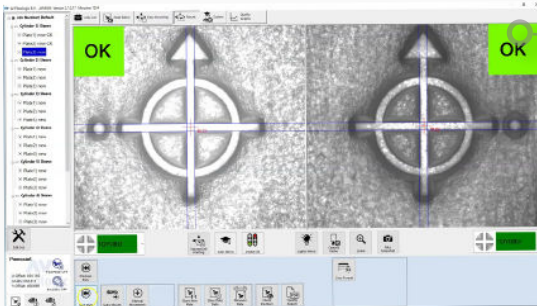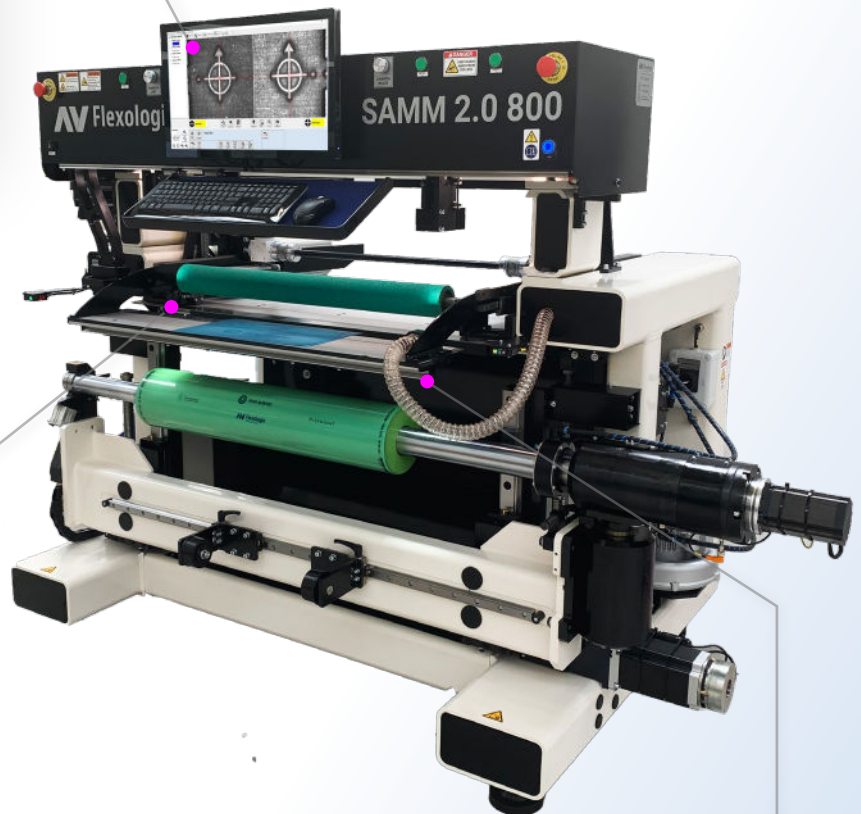
Unique Features

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.

Robotic table

An added advantage of the SAMM 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.

SAMM USD

AUTOMATIC FLEXO PLATE MOUNTING MACHINE

Widths

Width [mm]		≤ 850
Width [inch]		33.46"
Max repeat [mm/inch]		850 / 33.46"

Description

The Automatic SAMM Upside-Down is an extremely precise, fast and easy to use flexo plate mounting machine for labels. It requires nearly no operator skills to mount with this machine since the positioning of the plate is done automatically using the patented Image Recognition software.

Workflow

After loading the sleeve/cylinder on the pneumatically operated quick-lock clamping system, the operator selects a job and the cameras move into position. Then, the operator places the flexo plate on the large mounting table using the laser pointers as position indicators.

The machine takes over and positions the plate using the patented Image Recognition within seconds. The cylinder automatically moves vertically down and the operator moves the table back and forth to mount the plate. After mounting, the machine automatically checks the mounting marks and gives the OK signs if the plate was mounted within the set tolerance.

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'. The Image Recognition is used also for an accurate plate positioning (5 microns).

Cushioned vacuum table

The SAMM Upside-Down is equipped with a large and sturdy mounting table which is very easy to handle. This table enables a bubble-free mounting operation as it doesn't allow any air to pass between the plate and the cylinder. This vacuum table fixates the plate using the patented Recognition and ensures accurate positioning. Locking and unlocking the table is easy and it is done automatically when the plate is placed accurately.
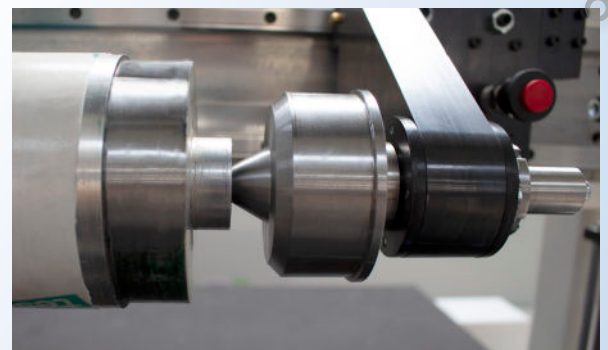
Cone System

The pneumatic clamping system works with 2 (or more) cones which are customized to your needs

MOM USD

MOTORIZED MOUNTING MACHINE

MOM USD 800

Widths

Width [mm]	≤ 850
Width [inch]	33.46"
Max repeat [mm/inch]	850 / 33.46"

Description

The MOM USD is an ergonomic motorized mounting machine for labels. It is equipped with all the AV Flexologic standard features and ensures good quality results.

Workflow

After loading the sleeve/cylinder on the pneumatically operated quick-lock clamping system, the operator selects a job and then adjusts the cameras using the encoders. Then, the operator places the flexo plate on the large mounting table using the laser pointers as position indicators. The plate is positioned manually with the help of HD cameras located underneath the mounting table.

The sleeve/cylinder moves vertically down with just pressing a button in the large touchscreen. By moving the cushioned table back and forth, the operator can mount the plate on the cylinder without any air bubbles. The operator can now unlock the sleeve/cylinder using the foot pedal and proceed with the next one.

Unique Features

Motorized cameras with encoders

The MOM USD is equipped with motorized cameras located underneath the cushioned table. The operator moves the cameras into the mounting position using encoders.
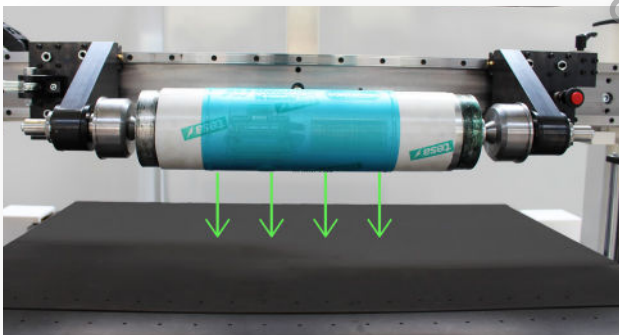

Vertically moving cylinder

After the plate is positioned manually, the cylinder/sleeve moves down vertically towards the fixed-height mounting table. 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.

Cushioned table

The MOM Upside-Down is equipped with a cushioned table like the Automatic SAMM USD. This sturdy table provides bubble-free mounting and high quality results. Locking and unlocking the table is easy and it is done automatically after the plate is positioned.

TableTop
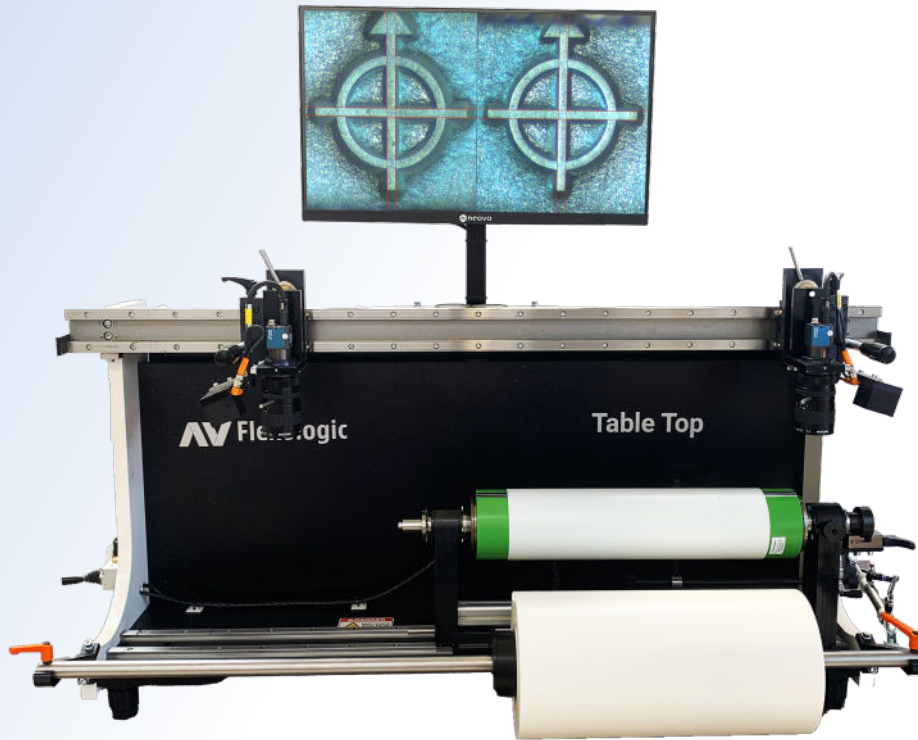
Widths

Width [mm]	≤ 800
Width [inch]	24"
Max repeat [mm/inch]	610/24"

Description

The TableTop is an entry level flexo plate mounting machine for labels. The TableTop is suitable for cylinders and/or sleeves, as it can be equipped with brackets or cones to support cylinders or an air shaft for sleeves.

Workflow

The operator places and locks the cylinder/sleeve using the clamping system or loads the sleeve on the shaft. An optional tape holder can be added to the TableTop for applying tape onto the cylinder/sleeve. When the sleeve is prepared, the HD color cameras are easily calibrated from the beam. The plate is positioned and mounted manually by the operator.

Specifications

There are 3 versions of the TableTop:

1) TableTop Standard: The standard version is suitable for cylinders. The TableTop can be equipped with brackets or cones to support cylinders. There are cylinder support clips, which lock the cylinder in position whilst mounting.

2) TableTop Disc: It can support both sleeves and cylinders. It is provided with 2 cones that clamp the sleeve in the right position. The operator controls the pneumatic clamping system with a foot pedal. The cones are made according to customer specifications and can also be equipped with a central pin for locking cylinders as well as sleeves.

3) TableTop Air Cylinder: The TableTop Air Cylinder is made for sleeves and is equipped with an airshaft for mounting plates onto sleeves. A bracket on the right hand side can be opened to conveniently change the sleeves.
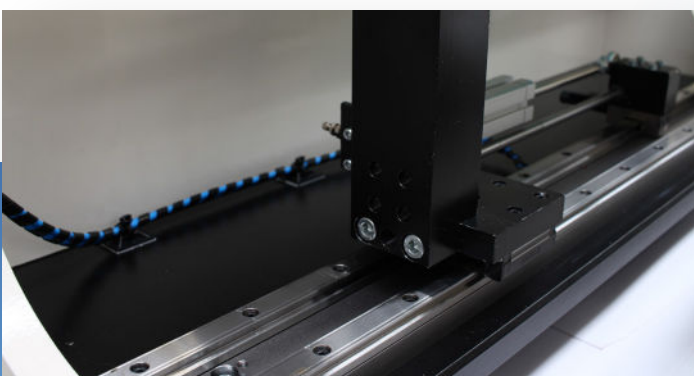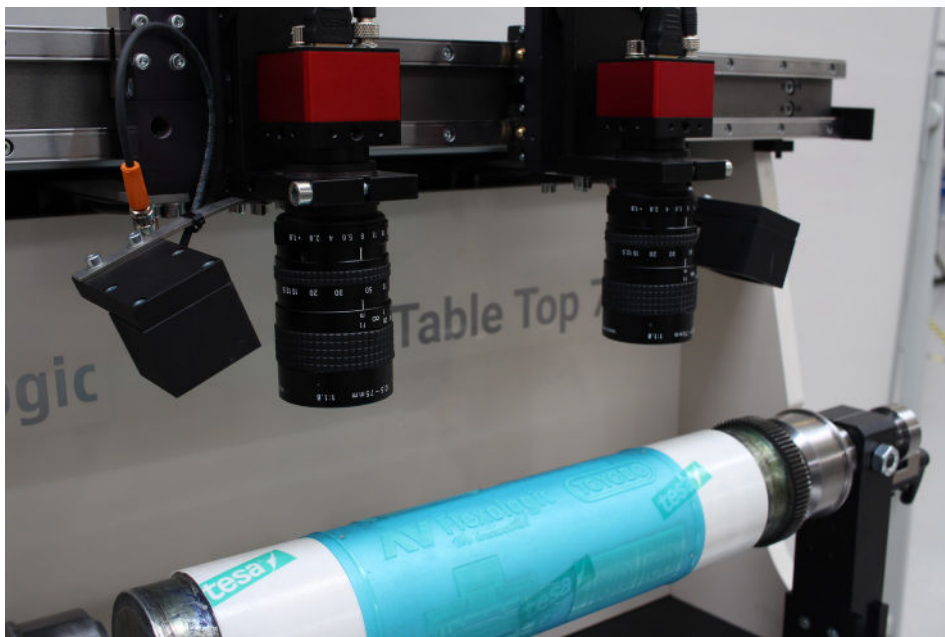
Options

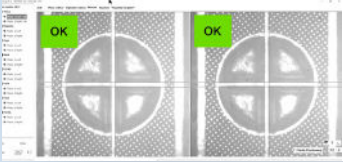| Mounting table |
| Cutting knife |
| Tape holder on precision rail |

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'.
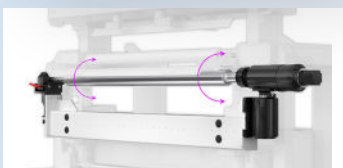
Motorized rotation cylinder

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.
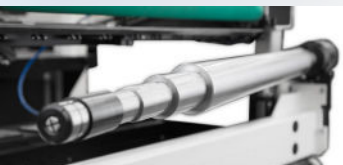
Custom made Air Cylinder

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.
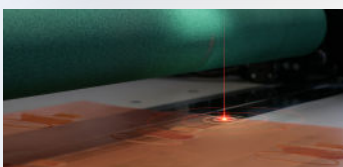
Laser pointers

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.

Cushioned table

The SAMM and MOM USD are equipped with a large and sturdy mounting table which is very easy to handle. This table enables a bubble-free mounting operation as it doesn't allow any air to pass between the plate and the cylinder. Locking and unlocking the table is easy and it is done automatically when the plate is placed accurately.
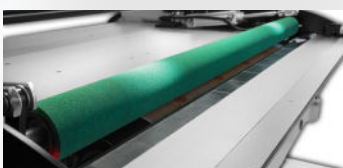
Pressure roller

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.
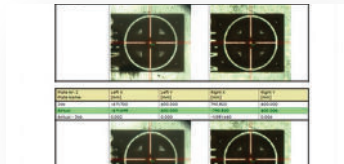
Digital zoom capability

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.
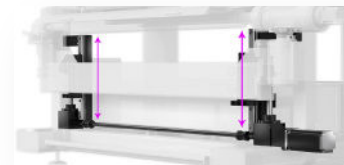
Vertical movement of cylinder

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.
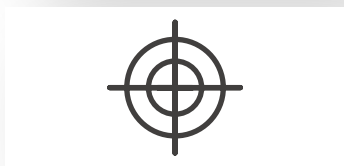
Digital calibration system

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.
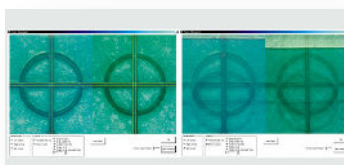
Overlay

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.

Tape holder

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.
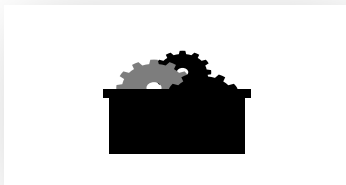
Extra set of cones

An extra set of cones for cylinders can be made. Every set of cones is custom designed according to customer needs.

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.

Narrow-Web Product Summary

Specifications	TableTop	MOM USD	SAMM USD	SAMM 2.0
Max Width (mm)	≤ 800	850	850	850
Max Width (inch)	24"	33.46"	33.46"	33.46
Max Repeat (mm/inch)	610/ 24"	850/ 33.46"	850 / 33.46"	850 / 33.46"

| Features & Options	TABLETOP	MOM USD	SAMM USD	SAMM 2.0
Camera encoders	✓	✓	✓	✓
Sturdy frame	✓	✓	✓	✓
laser pointers		✓	✓	✓
Vertically moving cylinder		✓	✓	✓
Fixed distance from lens to plate		✓	✓	✓
Touchscreen			✓	✓
Windows 10			✓	✓
Overlay System (patented)			✓	✓
Motorized cameras		✓	✓	✓
Image Recognition			✓	✓
Quality check using Image Rec			✓	✓
Robotic positioning			✓	✓
Vacuum table			✓	✓
Digital calibration system			✓	✓
Digital zoom capability			✓	✓
Quality report				✓
DOAL Lights				✓
Automatic mandrel rotation				✓
Automatic pressure roller				✓
Motorized rotation cylinder				✓
Air mandrel				✓
Cone system	✓	✓	✓	
Cushioned table		✓	✓	
Extra set of cones	O	O	O	
Critical Spare Parts Package	O	O	O	O
Tape holder	O	O	O	O
Cutting knife				O
Barcode Scanner				O
Automatic Easyreg detection				O

✓ = Included   O = Optional

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%.
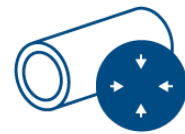
LIGHTWEIGHT TECHNOLOGY
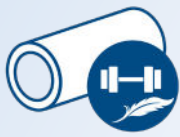
LIGHTWEIGHT SLEEVES & BRIDGES

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
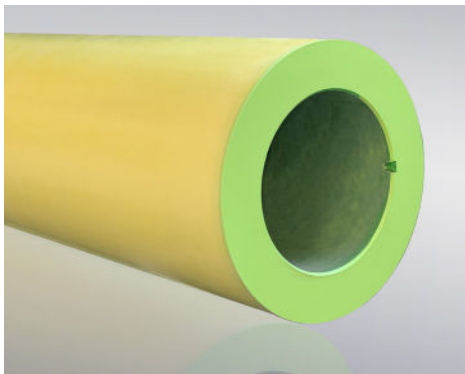
RUBBER SEALED EDGES WITH REINFORCED SLOT

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.
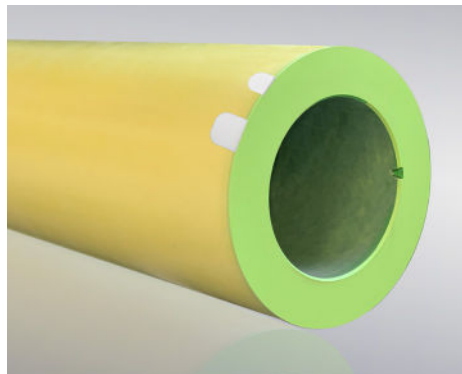
SMART SLEEVE (RFID CHIP & MAGNET)

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.
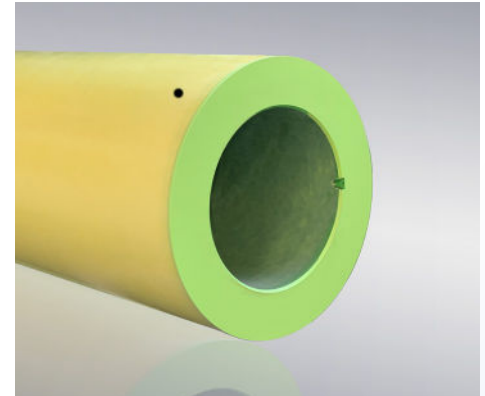
CONDUCTIVE SLEEVE

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.
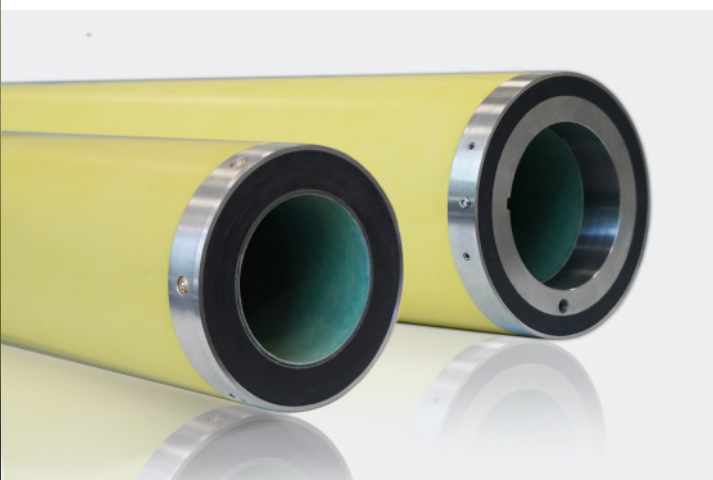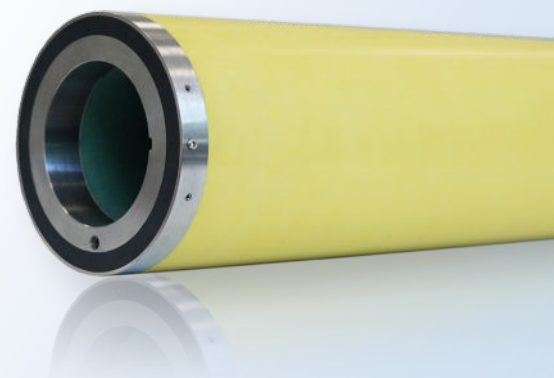
Features & Options

✓ 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

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Global Support Network

24/7 assistance 📞 +31 (0) 172 503 621

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Eastern Europe
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Thailand

South Africa

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

AV Flexologic Care

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

Level 1	Level 2	Level 3
● 24/7 Support	● 24/7 Support	● 24/7 Support
● Remote Support	● Remote Support	● Remote Support
	● Software updates	● Software updates
	● 15% discount on spare parts	● 15% discount on spare parts
		● Warranty extension *

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

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

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

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

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

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

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

What happens next?

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

A.

No Solution?

B.

C.

Ticket received!
Our service team will
contact you soon

Remote support via
telephone

Remote assistance
via TeamViewer

We will send an
engineer to repair
your machine

Do you want to easily find information about your machine?

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

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

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