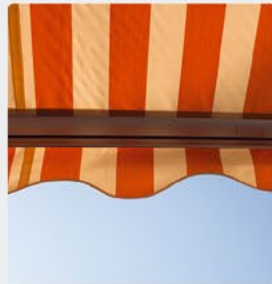




## SM-400-TA Automatic X/Y cutting system with ultrasonic and electric rotary cutting tools





### SM-400-TA Automatic X/Y cutting system with ultrasonic and electric rotary cutting tools

SM-400-TA is an automatic system to make X/Y cuts on technical fabrics typically used for the production of awnings. The machine uses a high performance electric rotary blade to cross cut the fabric off of the roll and one or two ultrasonic cutting tools for length cuts.

SM-400-TA has a simple, but very solid modular structure and can be equipped with a series of highly efficient tools and accessories, making the machine a complete solution for the automated production of awnings, with very limited operational costs and negligible maintenance costs.

SM-400-TA guarantees great precision in cross and length cuts and offers an impressive reduction of discards. Software for easy awning making with a series of preset awning patterns ensure significant time saving when programming the machine. Desired overlaps and lateral hems will be calculated automatically, taking into account the width of the roll and the desired width of the end product. The user interface is an easy-to-use touch screen, all the operator has to do is insert the parameters. With the grip-and-pull system that automatically pulls the fabric off of the roll SM-400-TA has a full automatic production cycle and a single operator can generate a very high production output.

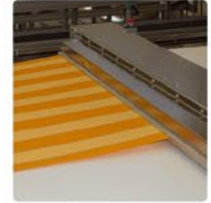
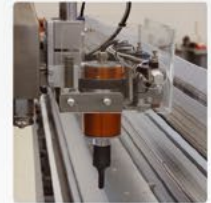
To operate the machine no particular expertise is required. To further reduce the intervention of an operator and thus the possibility of human error a bar code reading program is available. With a simple "beep" of the reading gun the machine will set all working parameters itself, then starts the production cycle.

Originally designed for the production of awnings, the machine can also be used to produce sheets of other technical fabrics. SM-400-TA is being successfully operated by manufacturers of PVC covers and industrial speed doors, installing rotary blades instead of the ultrasonic tools.

To solve the problem of shrinking and puckering crystal (clear) PVC a heat treatment system for single PVC sheets was developed. During the treatment the sheets shrinks between 3% and 8% depending on the quality of the fabric. After the treatment the crystal can be welded or sewn into a final product – like a pergola, a tensile structure, a marquee, or a veranda cover – and remains perfectly stable.

#### For the production of:

- ▶ Quality awnings.
- ▶ Products made of rectangular sheets in technical fabrics such as industrial speed doors.
- ▶ Products that integrate crystal (clear) PVC.





First introduced in 1999 many innovative solutions were integrated into this machine to ensure absolute reliability and cuts of the highest quality. With more than 100 X/Y cutting tables supplied to leading awning manufacturers everywhere in the world SM-400-TA is a thoroughly tested, highly reliable machine, the ideal solution for manufacturers looking for fast and efficient production cycles and high quality cuts of technical fabrics.

### Applications:

- ▶ Full automatic X / Y cutting and marking of technical fabrics typical for the awning industry.
- ▶ Full automatic X / Y cutting and marking of industrial fabrics like PVC.
- ▶ Just in time heat treatment of sheets of crystal (clear) PVC.

### Installable tools:

- ▶ Ultrasound cutting tool for length cuts
- ▶ Additional ultrasound cutting unit for length cuts
- ▶ Motorized rotary knife with pentagonal blade to cross cut the fabric off of the roll
- ▶ System for the heat treatment and stabilization of crystal PVC
- ▶ Automatic positioning for additional ultrasound cutting unit
- ▶ Rotating system for ultrasound cutting tool (to perform square cut)
- ▶ Automatic lateral fabric rewinding system (6 m)
- ▶ Roll cradle with automatic correction of roll position (edge control)

### Installable accessories:

- ▶ Photocell for detection end of fabric roll
- ▶ Photocell for measurement of roll dimension
- ▶ Automatic transversal marker for reference lines
- ▶ Illumination system for detection of defects in the fabric

### Installable software:

- ▶ SM-400-TA Easy Awning Maker software
- ▶ SM-400-TA Software for stabilizing crystal PVC
- ▶ Stock management software
- ▶ Software for reading bar codes

## TECHNICAL SPECIFICATIONS

<b>Usable cutting frame:</b>		<b>Power and air (w/ standard tools and accessories):</b>	
Available widths:	1,3 - 1,7 - 1,8 - 2,1 - 2,3 - 2,7 - 3,1 m	Voltage:	16 Amp, 3 phases + N + E, 400 Vac
Standard length:	6 m	Power consumption:	3 kW
Max. length:	14 m	Air consumption:	150 nl/1' @ 6 bar
<b>Footprint (approximate):</b>		<b>Weight (w/ standard tools and accessories):</b>	
Width at the widest point:	usable width + 0,9 m	1,7 x 6 m:	1.100 Kg
Length:	usable length + 0,9 m		
<b>Transmission:</b>	belt drive	<b>Speed:</b>	
<b>Minimum distance between ultrasonic blades:</b>	0,4 mm	Max. bridge speed w/ ultrasonic length cut*:	16 m/min
<b>Precision:</b>		Max. bridge speed w/ out ultrasonic length cut:	2 m/min
<b>Accuracy and repeatability of the axes motion:</b>	+/- 0,1 mm	Max. bridge moving speed w/ out pull:	40 m/min
<b>Programmable pause position of bridge:</b>		*Actual speed depends on fabric or material and application.	
<b>Typical tool / accessory combination:</b>		<b>Rotating system for ultrasonic cutting tool:</b>	optional
Ultrasound cutting tools (2), motorized rotary knife with pentagonal blade, illumination system for detection of defects in the fabric, automatic lateral fabric rewinding system		<b>Roll cradle with automatic correction of roll position:</b>	optional
		<b>Integrated fabric roll warehouse:</b>	optional
		<b>Automatic lateral fabric rewinding system:</b>	optional
<b>Automatic grip-and-pull system:</b>	standard included	<b>Touch screen interface:</b>	standard included
<b>Electric rotary blade for cross cut:</b>	standard included	<b>Bar code reading program:</b>	optional
<b>Ultrasonic blade for length cut:</b>	standard included	<b>Heat treatment system to stabilize crystal (clear) PVC:</b>	optional
<b>Pneumatic and electronic components*:</b>		<b>Certification:</b>	
Standard industrial: Omron, SMC, SKF, Bonfiglioli, Chiavalli		2006/42/EC; 2006/95/EC; 2004/108/EC; EN ISO 12100; EN ISO 13857; EN 349; EN ISO 4414; EN ISO 13850; EN 60204-1; EN ISO 13849-1	
*May vary without previous notice from manufacturer.			
Given values and shown images are indications and may vary without previous notice from manufacturer.			





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S.M.R.E. Engineering is a dynamic Italian company built on a *young and strongly motivated* group of *highly skilled professionals*, specialized in the design and construction of industrial machines – *global manufacturing solutions*, as we like to call them.

S.M.R.E. builds welding, sewing and cutting machines, and special, custom made machinery to process technical fabrics and flexible materials (FLEX TEX), as well as machines to work rigid and semi-rigid materials (HEAVY DUTY).

Our aim is to enhance efficiency and optimize productivity by combining new technologies and traditional manufacturing methods, by integrating mechanics, pneumatics, electronics and software, and create a complete solution for our customers' production requirements.

With over 900 manufacturing solutions supplied to 35 nations and 5 continents S.M.R.E. is a leading manufacturer of industrial production lines.

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Our customers are the focus of what we do. S.M.R.E. has created a company culture in which the key element is understanding – and meeting – our customers' needs. Our machines not only distinguish themselves with their quality and revolutionary technology, but also because they are *tailor made* according to the specific requirements of our customers.

### Visiting S.M.R.E.

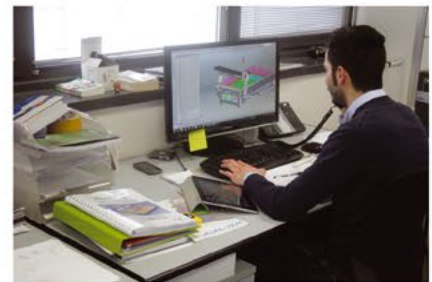
We are glad to receive visitors to our head quarters in Umbertide, in the heart of Italy. Your visit is an outstanding occasion not only to see our plant and look behind the scenes, but to meet the people that design, build and test our machines, and discuss your needs with an expert.

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Our staff is available to assist you in making arrangements for your visit. Please contact us at [info@smre.it](mailto:info@smre.it).

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