

# SM-520-ZA

Automatic welding station for  
retractable insect screens



**REVOLUTIONARY**  
MANUFACTURING CONCEPT



**HIGH PRODUCTION OUTPUT**



**VERY EASY**  
TO OPERATE




**FULL AUTOMATIC**  
CYCLES





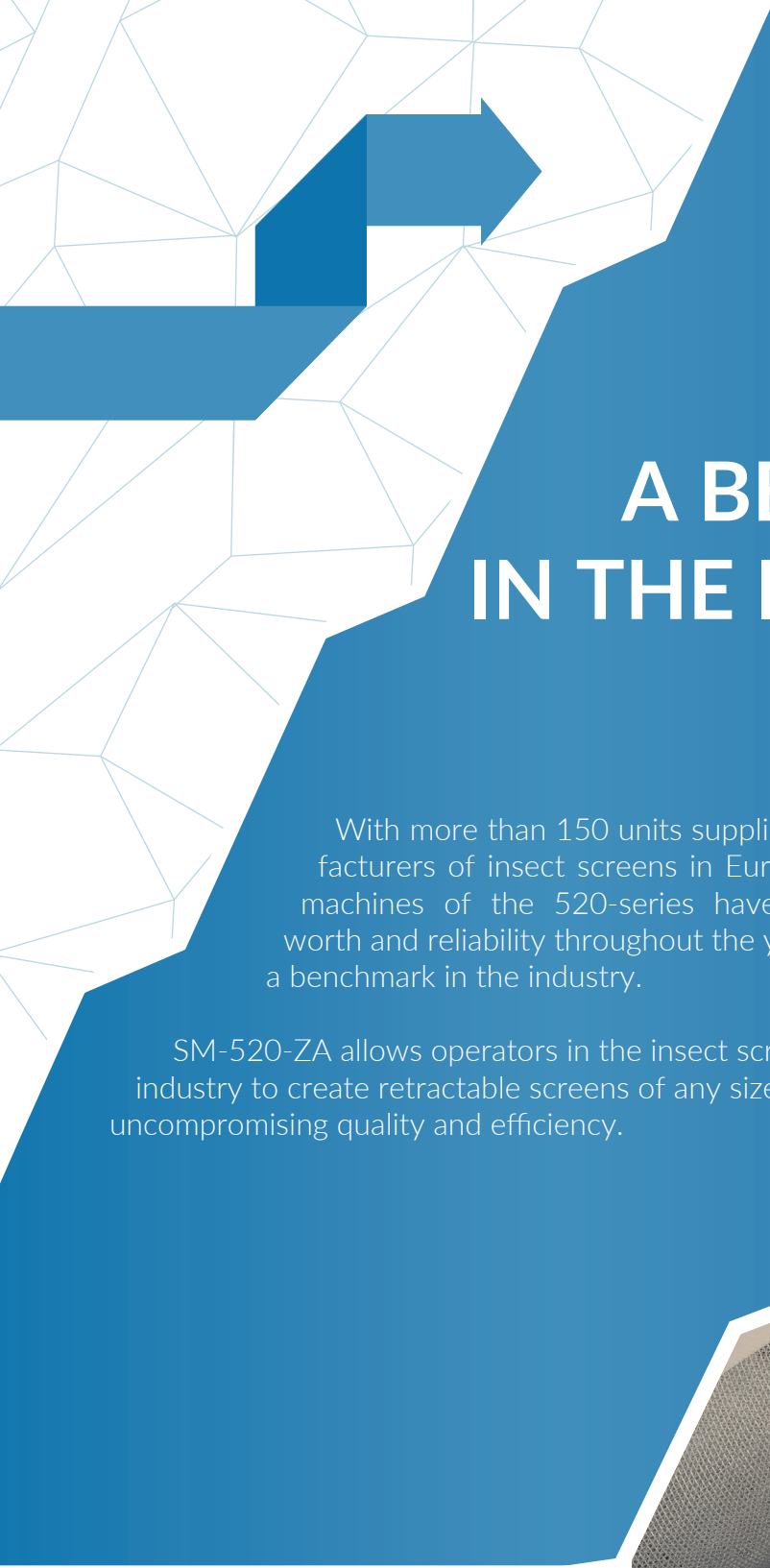
# STREAMLINE YOUR INSECT SCREEN PRODUCTION



First introduced in 2005, machines of the 520-series caused a revolution in the insect screen industry by drastically reducing the production time needed to make a screen, the necessary man power, and the discards.

With its wide variety of tools, accessories and software solutions, this machine is, by far, the most complete manufacturing solution for quality 6 meter profiles and custom-sized retractable insect screens solutions available on the market today and will deliver the efficiency and quality that you are looking for.

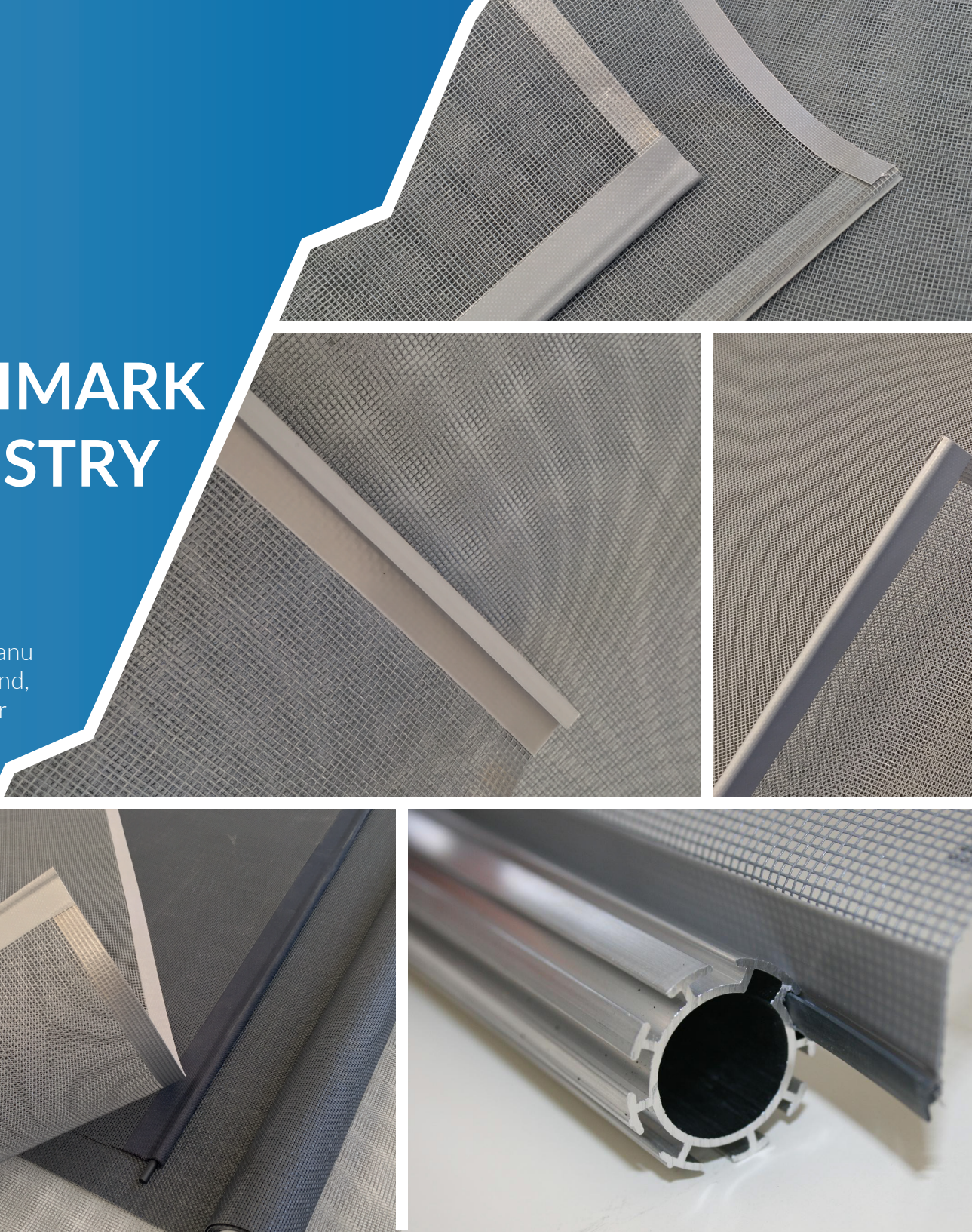




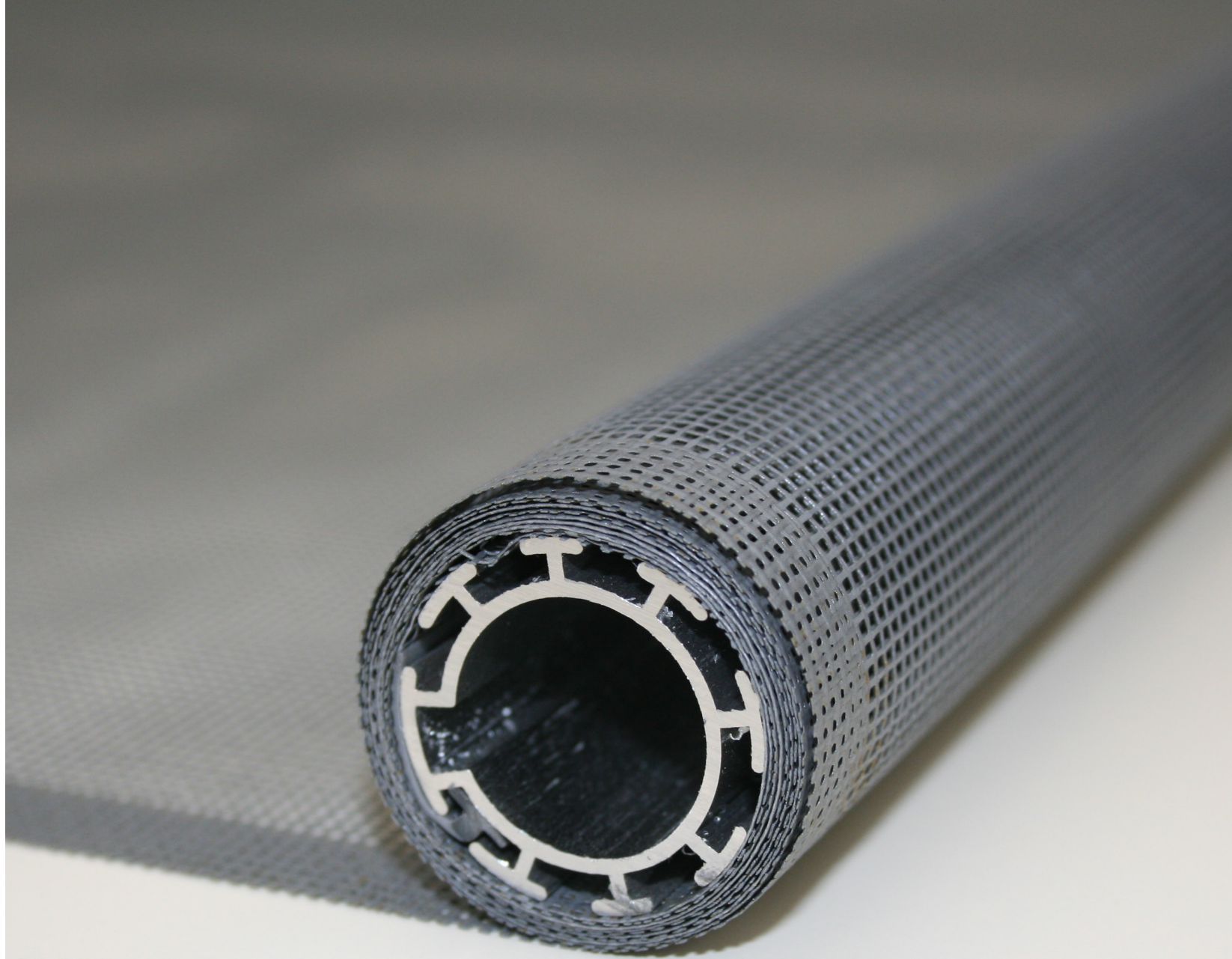
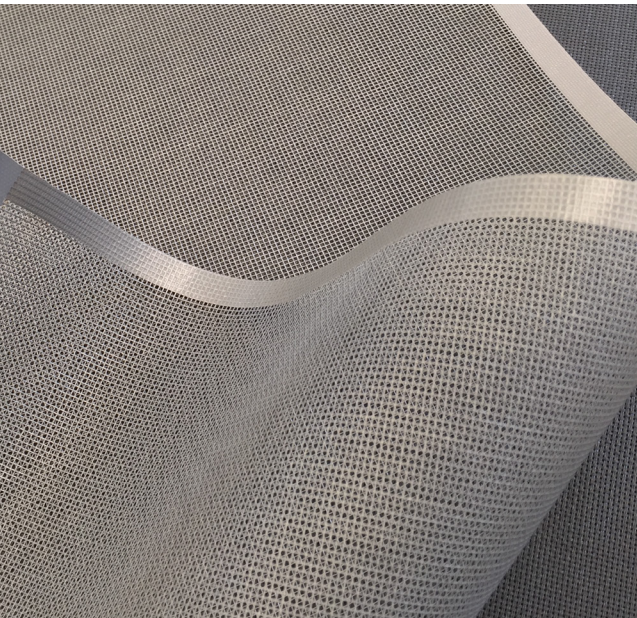
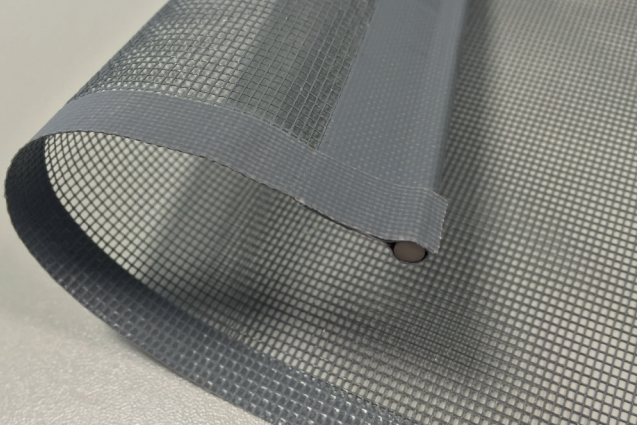
# A BENCHMARK IN THE INDUSTRY

With more than 150 units supplied to major manufacturers of insect screens in Europe and beyond, machines of the 520-series have proven their worth and reliability throughout the years and are a benchmark in the industry.

SM-520-ZA allows operators in the insect screen industry to create retractable screens of any size with uncompromising quality and efficiency.









# SM-520-ZA

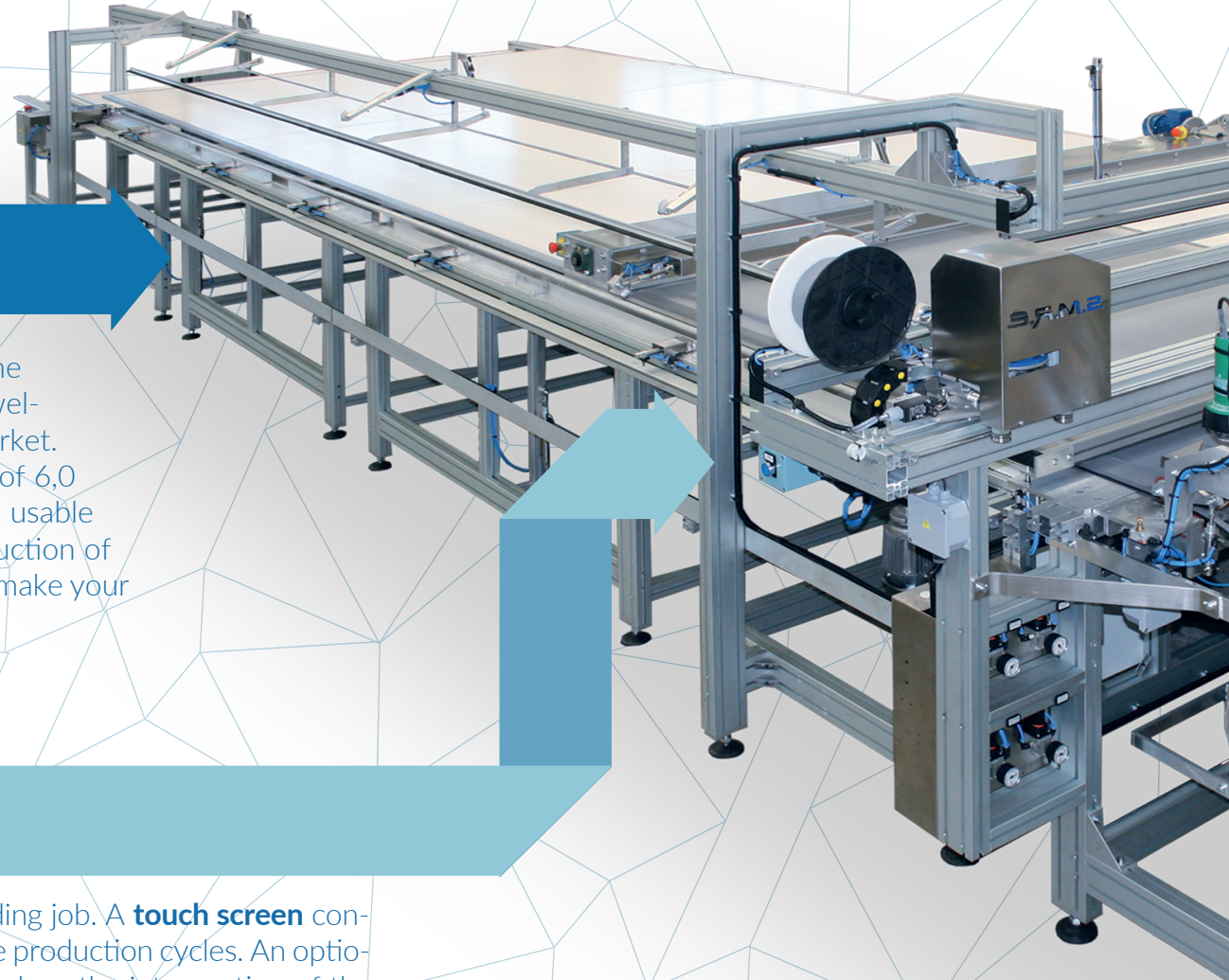
Automatic welding station for retractable insect screens

## Solid modular structure

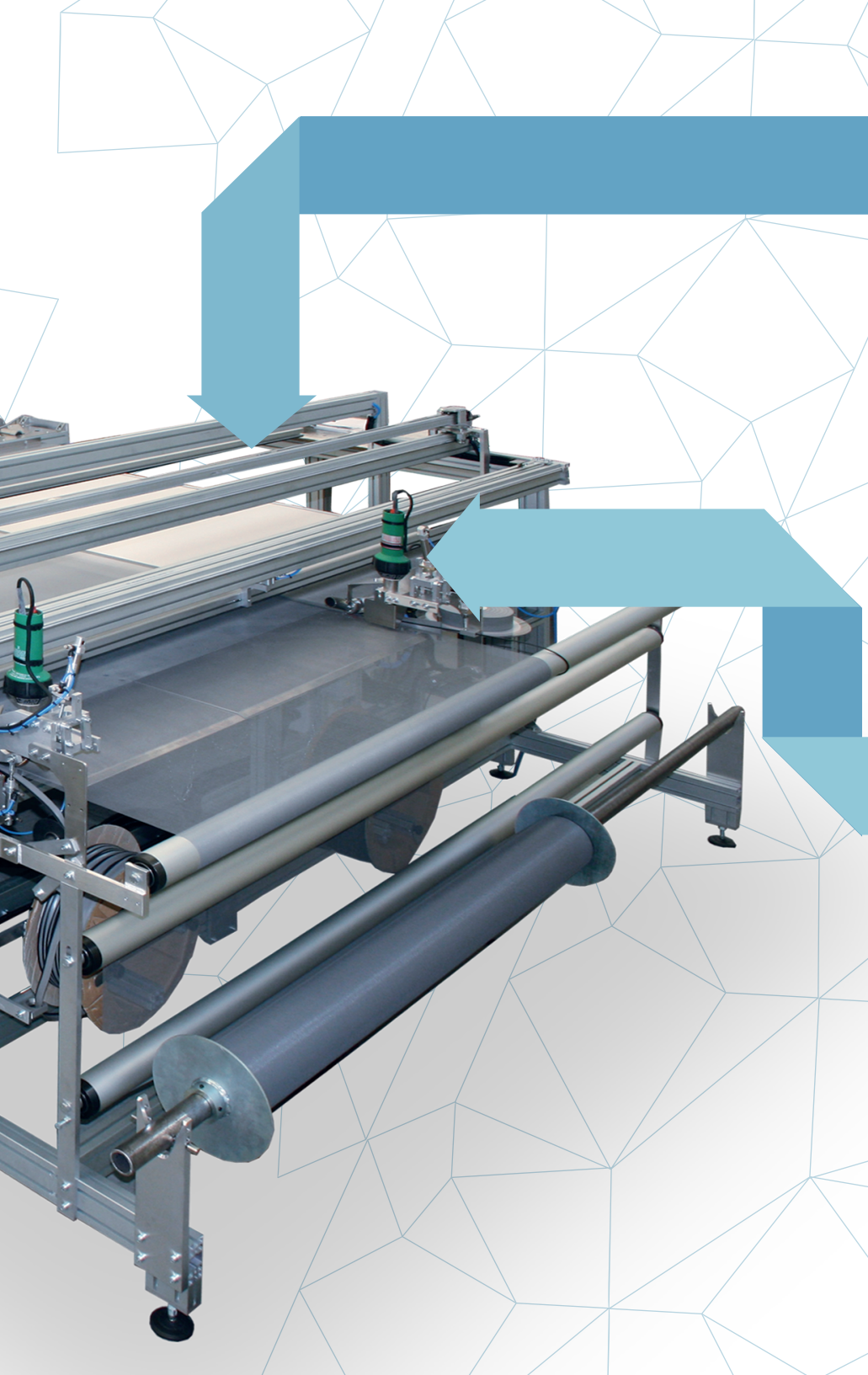
SM-520-ZA has a **simple** but **very solid** structure. Top of the bill electronic and pneumatic components and precision welding tools make this machine the best available on the market. The machine's standard usable width is 2,8 m with a length of 6,0 meters. A smaller version – of the **SM-500-ZA** series with usable dimensions 2,8 x 3,0 m – is available for the exclusive production of custom sized screens. Extension modules of 2,0 m each can make your insect screen machine as long as required.

## Simple to program

SM-520-ZA is **very easy** to set-up for a welding job. A **touch screen** control panel allows for quick programming of the production cycles. An optional **bar code** reading system is available to reduce the intervention of the operator and thus the chance on human errors.







## High production output

A **complete production cycle** for a ready-to-fit 6 m retractable insect screen, perfectly cut and welded, rolled up and inserted in the box, with the hand grip attached, takes **exactly 2 minutes and 48 seconds**. A 3 m insect screen is ready in **less than 2 minutes**.

## Reduction of necessary man power

Machines of the 520-series carry out multiple steps in the production process simultaneously and fully automatically, resulting in significant saving of man power. To work with the machine, only one operator is needed.

## Superior welding quality

**All the experience and know-how** gained in more than a decade of designing, constructing and supplying welding stations is **installed in our machine of the SM-520-ZA series**. Whether you make pockets, hems, or apply keders or coextruded PVC profiles, the cleverly designed welding tools ensure the quality you expect from your SMRE machine.

## Very limited operational costs

Operational costs are extremely limited. Maintenance costs are negligible. The machine is so sturdy, its concept and structure are so simple, that it will go on forever.



# CLEVERLY DESIGNED TOOLS AND ACCESSORIES

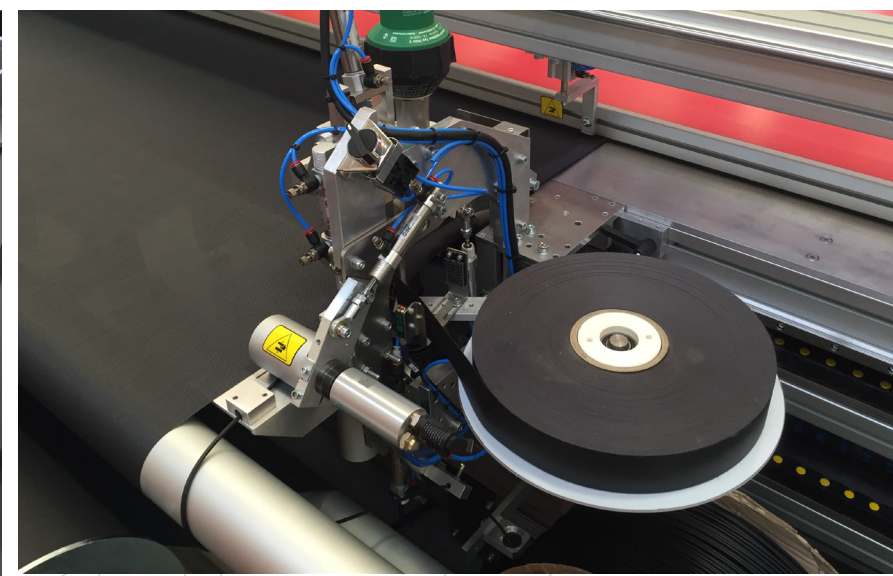
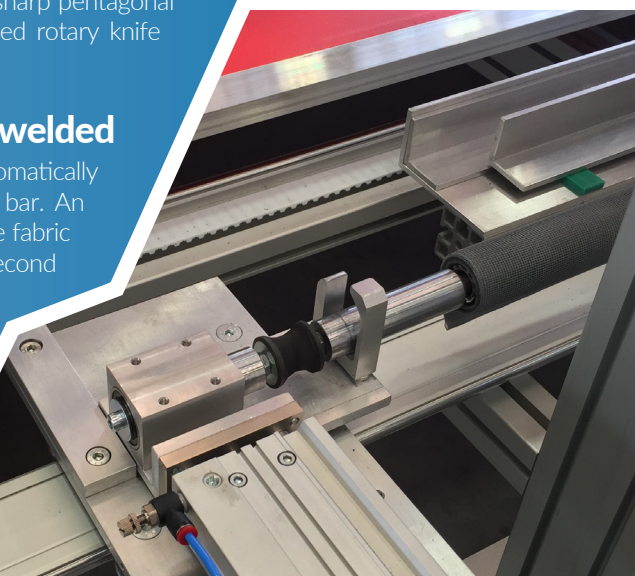
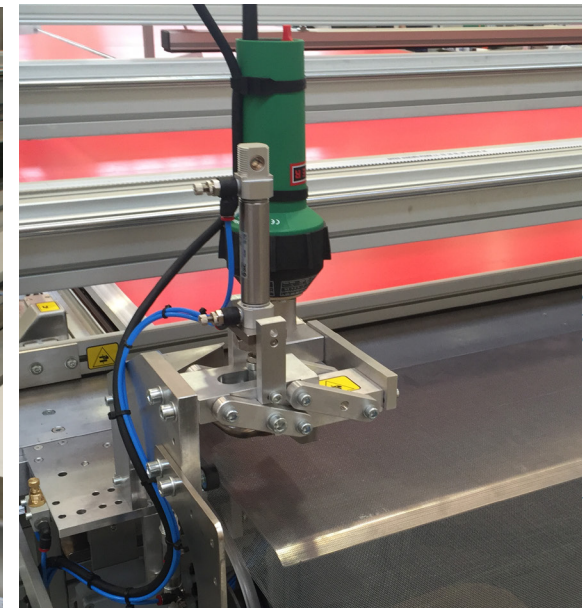
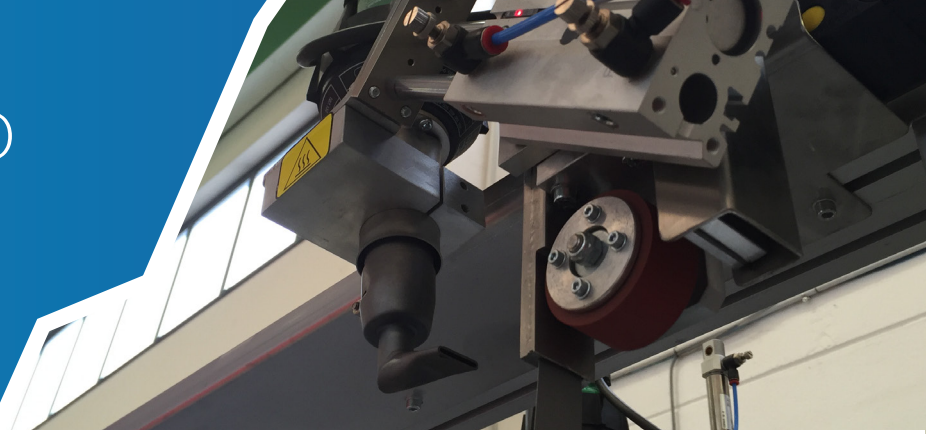
**Welding group for (coextruded) keder.** Applies a coextruded profile to the upper side of the mesh while the grip-and-pull system pulls the insect screen from the roll. A customized guide and roller mechanism makes sure the profile is applied with great precision and that the seam is strong and aesthetically impeccable.

**Pocket welding group w/automatic insertion of reinforcing tube.** Automatically welds a folded PVC strip to the lower, or to the upper side of the screen. While the grip-and pull system pulls the screen from the roll and spreads it on the table top, a guide and roller will fold the strip and automatically insert a tube, thus creating the pocket with which the mesh is attached to the lower hand grip of the insect screen. This operation is done fast, precise, and without any intervention of the operator whatsoever. Guides and rollers are custom built, according to your production requirements.

**Welding unit for lateral reinforcing strip.** Automatically applies a reinforcing strip to the left and right sides of the insect screens. The motorized rotary knife with pentagonal blade runs across the width of the table and cuts the strip straight through the middle, thus creating the left side reinforcing strip of the finished piece, and simultaneously the right side strip of the subsequent piece.

**Motorized rotary knife.** Cuts the insect mesh off of the roll. When the grip-and-pull system has pulled the fabric to the programmed length, a pressing bar secures the fabric in place. The motorized rotary knife now makes a fast, very precise cross cut along the width of the table. With its razor sharp pentagonal blade and the high speed with which it rotates, the motorized rotary knife makes a fast, high precision cut.

**Automatic rewinding unit of the cut and welded insect mesh on the aluminum bar.** Automatically rewinds the cut-and-welded insect screen on the aluminum bar. An electronic sensor in the table surface recognizes the end of the fabric and automatically stop the rotating motion a fraction of a second later. With this accessory an otherwise very time consuming and imprecise step in the production cycle is carried out fast and with great precision.





# STREAMLINE PRDUCTION CYCLES

## **Pneumatic mechanism for the automatic positioning of a new aluminum bar.**

The structure can hold up to 20 aluminum bars. At the end of every cycle this device will automatically put a new aluminum bar in position, ready for the upcoming cycle. A series of pneumatic cylinders will make sure that every new aluminum bar is placed smoothly and silently.

## **System for the semi-automatic insertion of the rolled up insect screen in the box and the automatic attachment of the lower hand grip.**

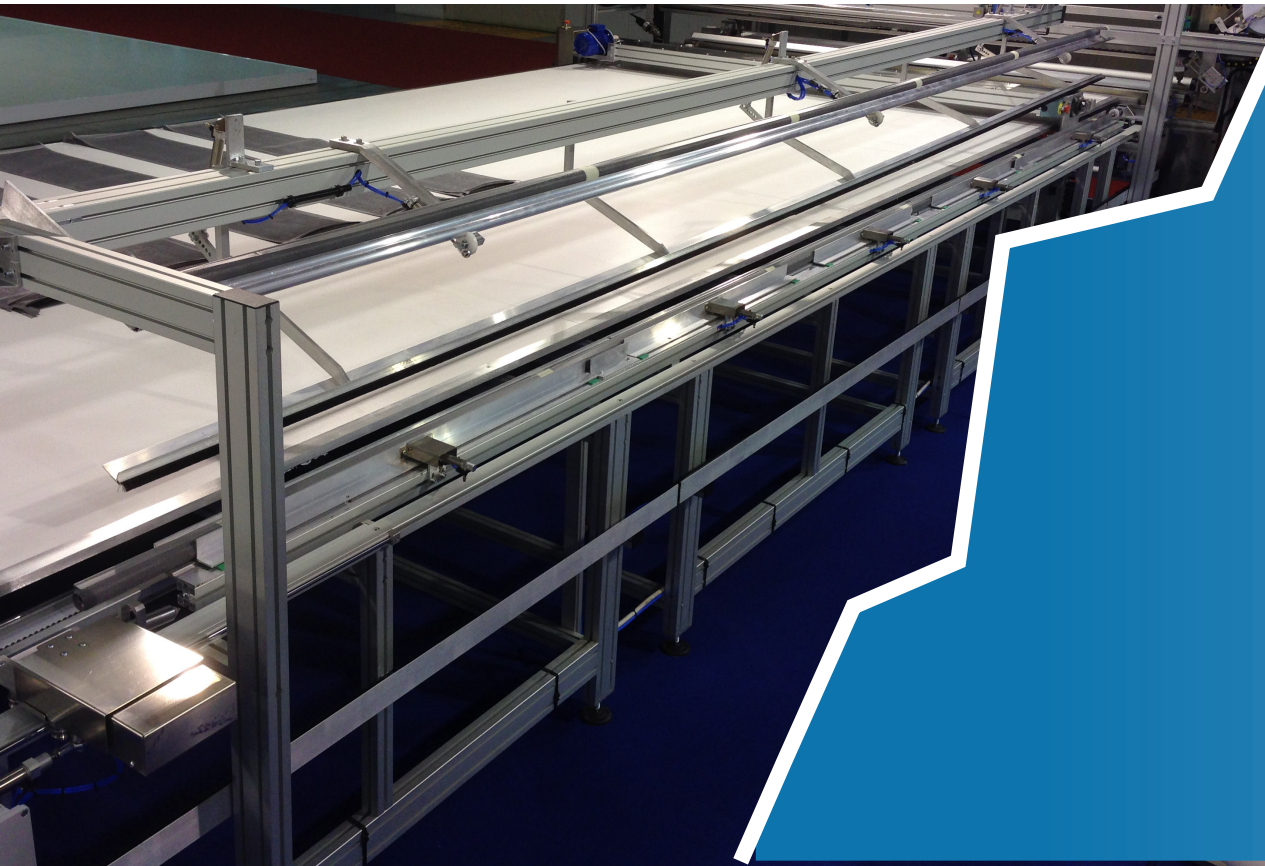
An (optional) station inserts the rolled up insect screen in the box and automatically attaches the lower hand grip to the screen. This station carries out an otherwise difficult to manage and time consuming operation and completes the production cycle.



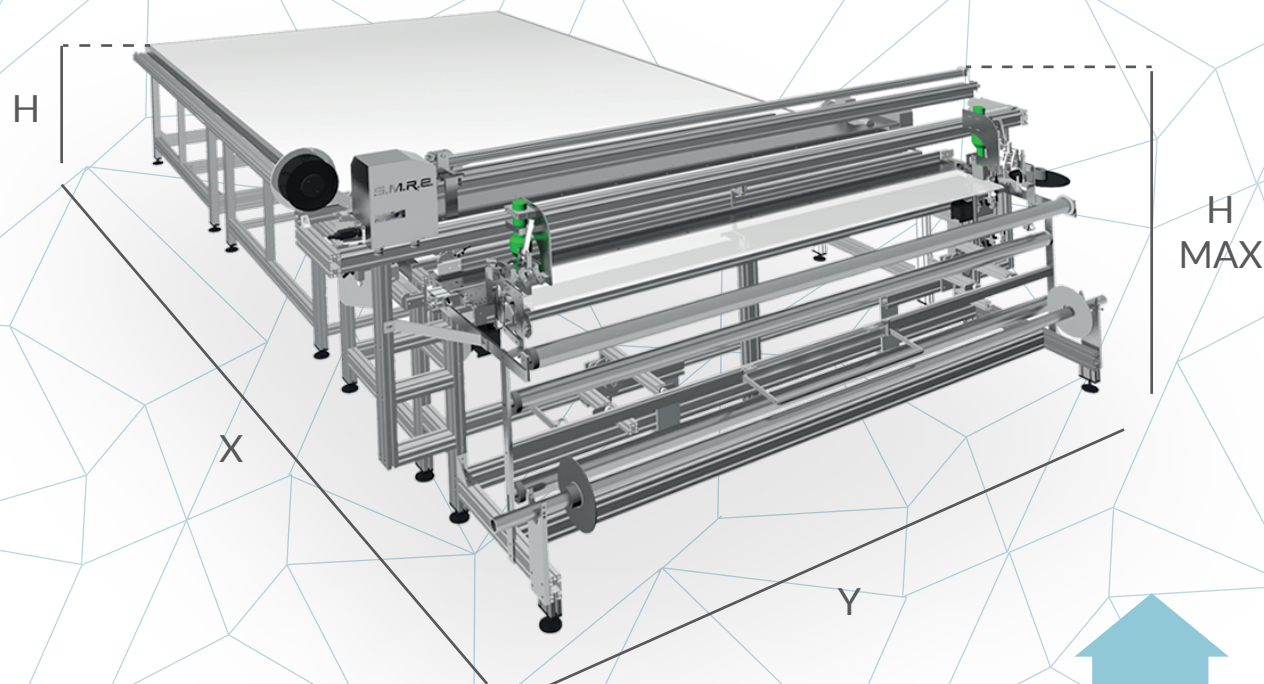
# SOFTWARE

A specifically developed software assists the operator in quickly setting up the machine for the production of screens of any chosen size. Numerous different end products can be programmed on the touch screen interface, with up to 99 repetitions each.

The optional bar code reading program enables to set the working parameters with a simple "beep" of the reading gun, further reducing the possibility of human error.



Standard dimension: 2,8 x 3,0 m ( SM-500-ZA) or 2,8 x 6,0 m ( SM-520-ZA)  
 Extension modules: 2,0 m



# SM-520-ZA

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## SM-520-ZA

Machine  
 2,8x3 m; 2,8x6 m

Power (kW)	5
Voltage (V)	400 (3 phases + N + E)
Circuit breaker (mA)	300
Air (Quality class 1.4.2 ISO 8573) (bar)	6
Air consumption (nl/min)	300
Max. axes speed x/y/z (m/min)	30
Certification:	2006/42/EC;2014/30/EU; EN ISO 12100

## Footprint

SM-500-ZA  
 2,8 x 3,0 m

SM-520-ZA  
 2,8 x 6,0 m

X (mm)	6177	9080
Y (mm)	3940	4106
H (mm)	920	920
H MAX (mm)	1556	1768
Weight (KG)	1550	1664

Images and technical features in this catalogue may differ from the actual product. Some of the images may show machines equipped with optional components, tools and/or accessories. SMRE SpA reserves the right to change or modify the product without any prior notice





# SMRE THE GLOBAL MANUFACTURING SOLUTION

Founded in 1999 by Samuele Mazzini, SMRE S.p.a. is a **globally operating** company based in **Italy** specialized in the **design and construction** of industrial manufacturing solutions.

SMRE builds **cutting, welding, and sewing machines**, and **special, custom-made solutions** that **streamline** our customers' manufacturing processes, **optimize** their **efficiency**, and increase the **quality** and **output** of their production.

More than **1000 manufacturing** solutions provided to customers in **40 nations** and **6 continents** secure our positions as **leading supplier of industrial machines**.

SMRE is quoted in **AIM Italia** since April 2016



CUTTING  
MACHINES



WELDING  
MACHINES



SEWING  
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SPECIAL  
MACHINES



SOFTWARE  
SOLUTIONS

INDUSTRIAL GROUP

1

USA BRANCH

1

MANUFACTURING  
PLANTS

2

CUSTOMERS IN 40 NATIONS  
ON 6 CONTINENTS

40  
6

SPECIALIZED  
BUSINESS UNITS

3

INTERNATIONAL  
PARTNERS

13

PRODUCT LINES

5

HIGHLY SKILLED  
EMPLOYEES

65



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