S.M.R.E. Engineering ®

SM-216-SA
SM-210-SA

Multiple technology welding station
with digital fabric tension control

MULTIPLE WELDING
TECHNOLOGIES

A WIDE RANGE OF
APPLICATIONS

DESIGNED FOR
INDUSTRIAL
PRODUCTION

EXCELLENT
PRICE/PERFORMANCE
RATIO

First introduced in 1999, a wide variety of innovative solutions were integrated into this machine to ensure absolute **reliability** and welding of the **highest quality**. If you're looking for **fast** and very **efficient** production cycles made with an **easy-to-use machine**, SM-216-SA and SM-210-SA are the **solution** for you.

Highly specialized fabrics and very specific, customized applications is what characterizes today's demand in many industries. Whether you weld clear PVC or PVC coated textiles, acrylic or polyester fabrics, thermoplastic films or insect mesh, whether you create pockets, overlaps or hems, apply zippers, keders, omega or anti-drip profiles – with its choice of **technologies and wide selection of accessories** SM-216-SA can create a variety of seams and apply countless profiles and accessories on an infinite range of technical fabrics.

SM-216-SA features the **patented Intelligent Torque technology** that allows welding with uncompromising quality. Whichever fabrics you weld, **Intelligent Torque digitally controls the tension** during the welding cycle and delivers **exceptional productivity,** outstanding **efficiency and unique**, **highly professional products.**

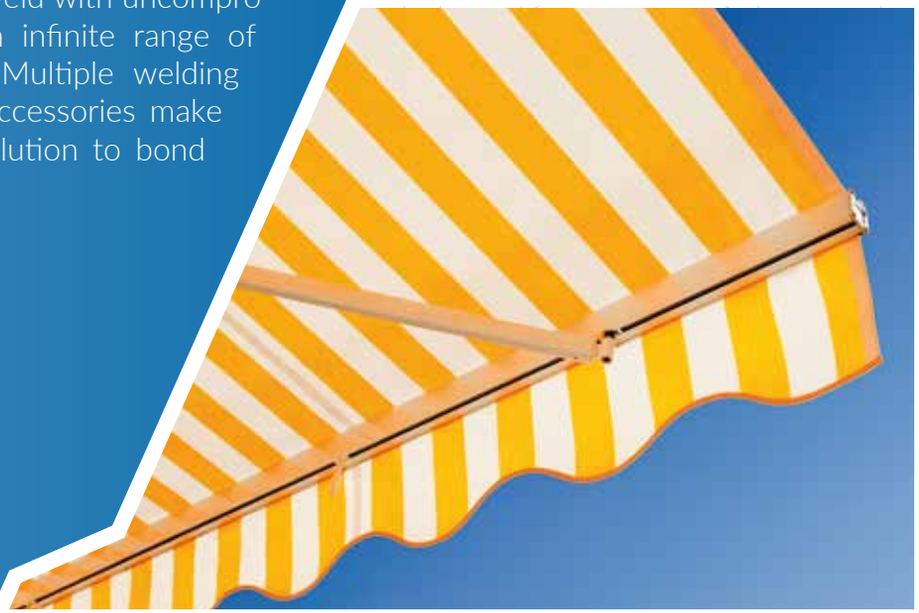
APPLICATIONS

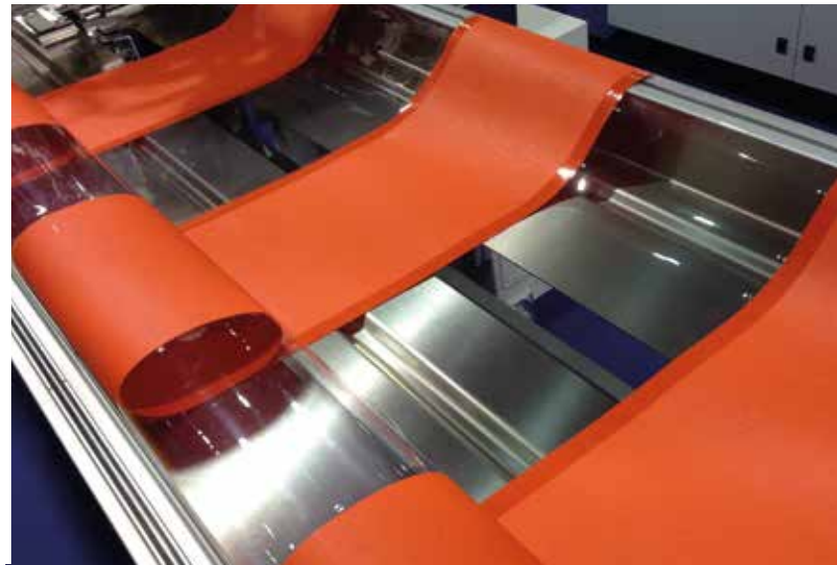
With its cleverly designed tools and multiple technologies SM-216-SA allows operators in a wide range of industries to weld with uncompromising quality and create an infinite range of highly professional products. Multiple welding technologies and a variety of accessories make this machine a truly all-round solution to bond specialty fabrics.

Whether you make

- **Awnings**
- **Blinds**
- **Pergolas**
- **Advertisement banners**
- **Tarpaulins**
- **Covers in technical fabrics**
- **Insect screens**
- **And many more**

SMRE has a solution just for you. Contact our expert staff to help you choose the technology and welding accessories most suitable for your production.






JACKSON
JARDINE
SAT., MARCH 7
LIVE ON PAY-PER-VIEW

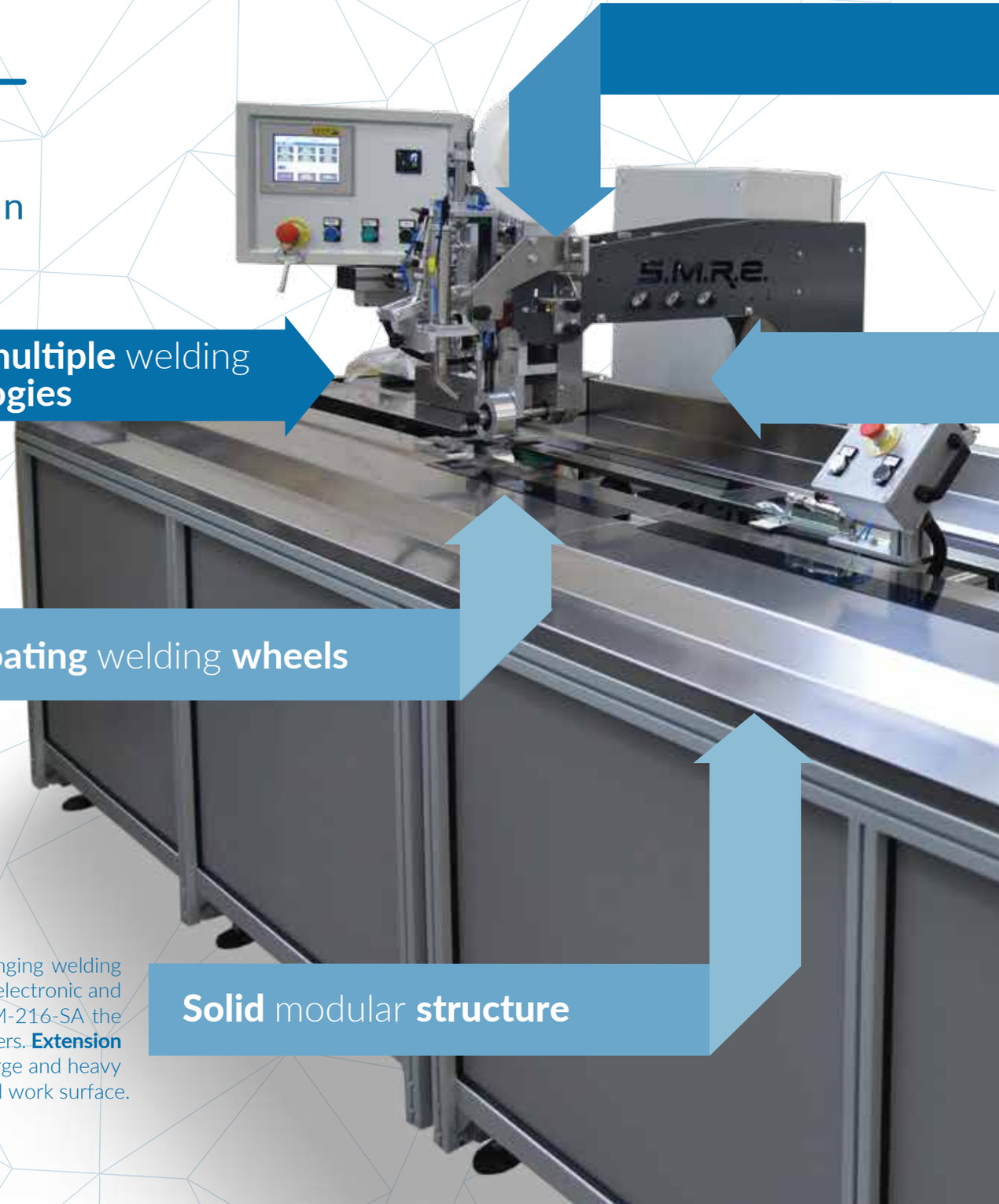
SM-216-SA
SM-210-SA

Multiple technology welding station with digital fabric tension control

SM-216-SA is a **multiple-technology welding** machine and allows for the processing on an infinite range of materials with **hot air**, **hot melt (liquid glue)** and/or **ultrasonic** welding technology. Welding technologies can be installed **individually** or **simultaneously**, making SM-216-SA a true **all-round solution** to bond your technical fabrics.

Welding wheels need to exert exactly the right pressure. If the pressure is too high the seam will show the imprint of the wheels. If the pressure is not high enough, the weld will lack in strength. SMRE welders install **"floating" wheels** whereby the **pressure** is **determined pneumatically**, not mechanically. By adjusting the pneumatic pressure, the upper wheel will **"float"** over the seam, and exert exactly the right pressure on the fabric during the work cycle, even when encountering "obstacles" such as overlap seams in the fabric.

Its **solid industrial structure** makes the machine suitable for the most challenging welding work. All structure components are in solid steel and aluminum. Top of the bill electronic and pneumatic components and precision welding tools and accessories make SM-216-SA the best available on the market. SM-216-SA has a standard usable length of 6,0 meters. **Extension modules** of 2,0 m each make the machine as long as required. To weld very large and heavy panels, the machine is available in a version (model SM-210-SA) with increased work surface.



Installs **multiple** welding **technologies**

Floating welding **wheels**

Solid modular **structure**

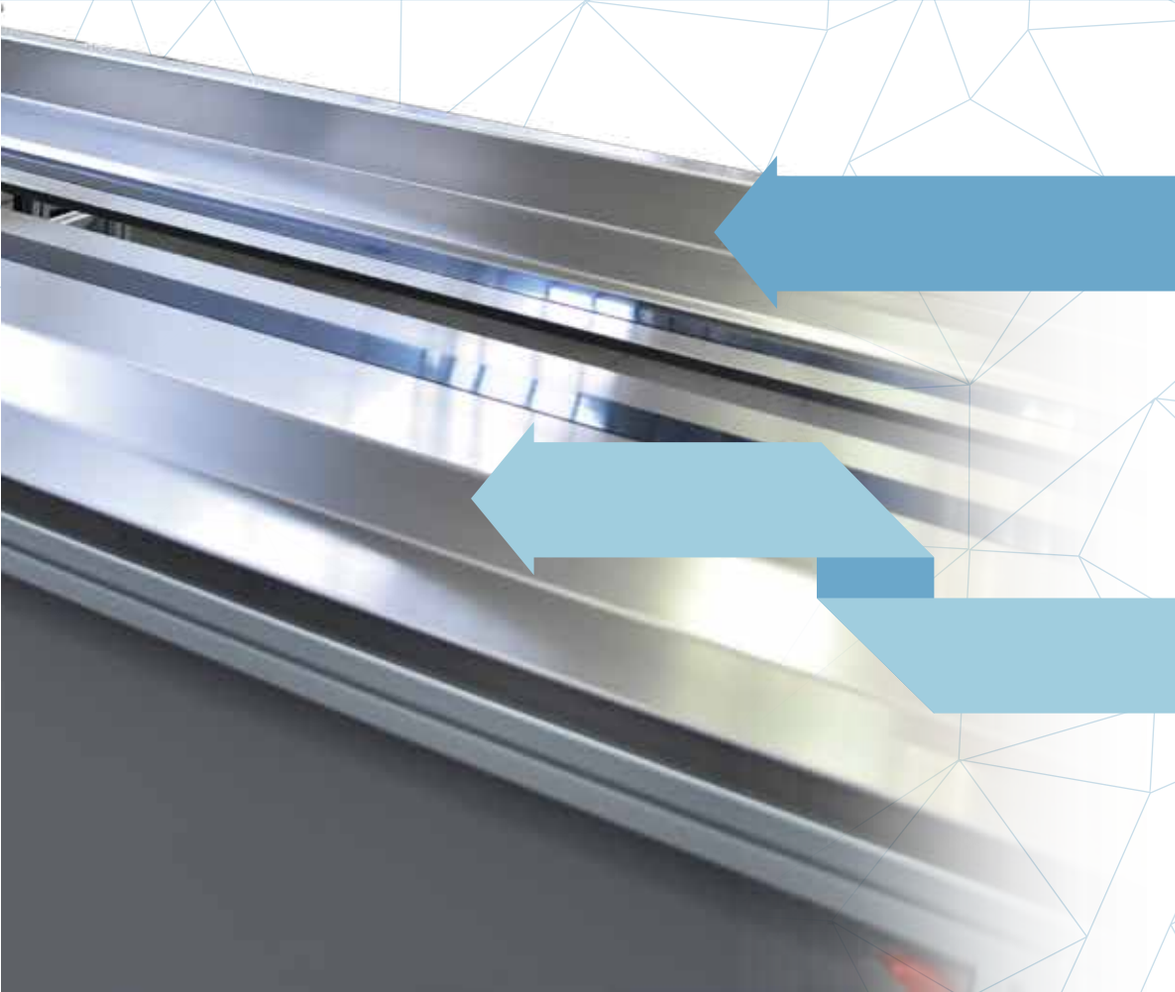
Custom tools, infinite applications

With its **multiple welding technologies** SM-216-SA can bond an **infinite range of specialty fabrics**. Operators can choose from a **wide variety of custom-made accessories** to make overlaps, hems, pockets, pockets-with-rope or cable, or apply zippers, keders, omega or other extruded profiles, or reinforcing strips.

Guides, welding wheels and other tools are **designed according to your production requirements** and allow you to create finished products of the quality you desire.

Intelligent Torque

SM-216-SA features the patented **Intelligent Torque** technology that allows **welding with uncompromising quality**. Whichever fabrics you weld, Intelligent Torque digitally controls the tension during the welding cycle and delivers exceptional productivity, **outstanding efficiency** and unique, **highly professional products**.



Total speed and **motion control**

Motion is generated by **steel rack-and-pinion** transmission and **multiple heavy duty chrome** plated rails for **optimal speed and control**. Whether you make overlaps, hems or pockets or apply omega or other profiles, SM-216-SA will deliver **the quality you expect.**

Superior seams

The patented **Intelligent Torque** technology and the **floating welding wheels** ensure that seams made with SM-216-SA are of **unparalleled quality**, flat and very strong. SM-216-SA is a must-have to create unique, highly professional products.

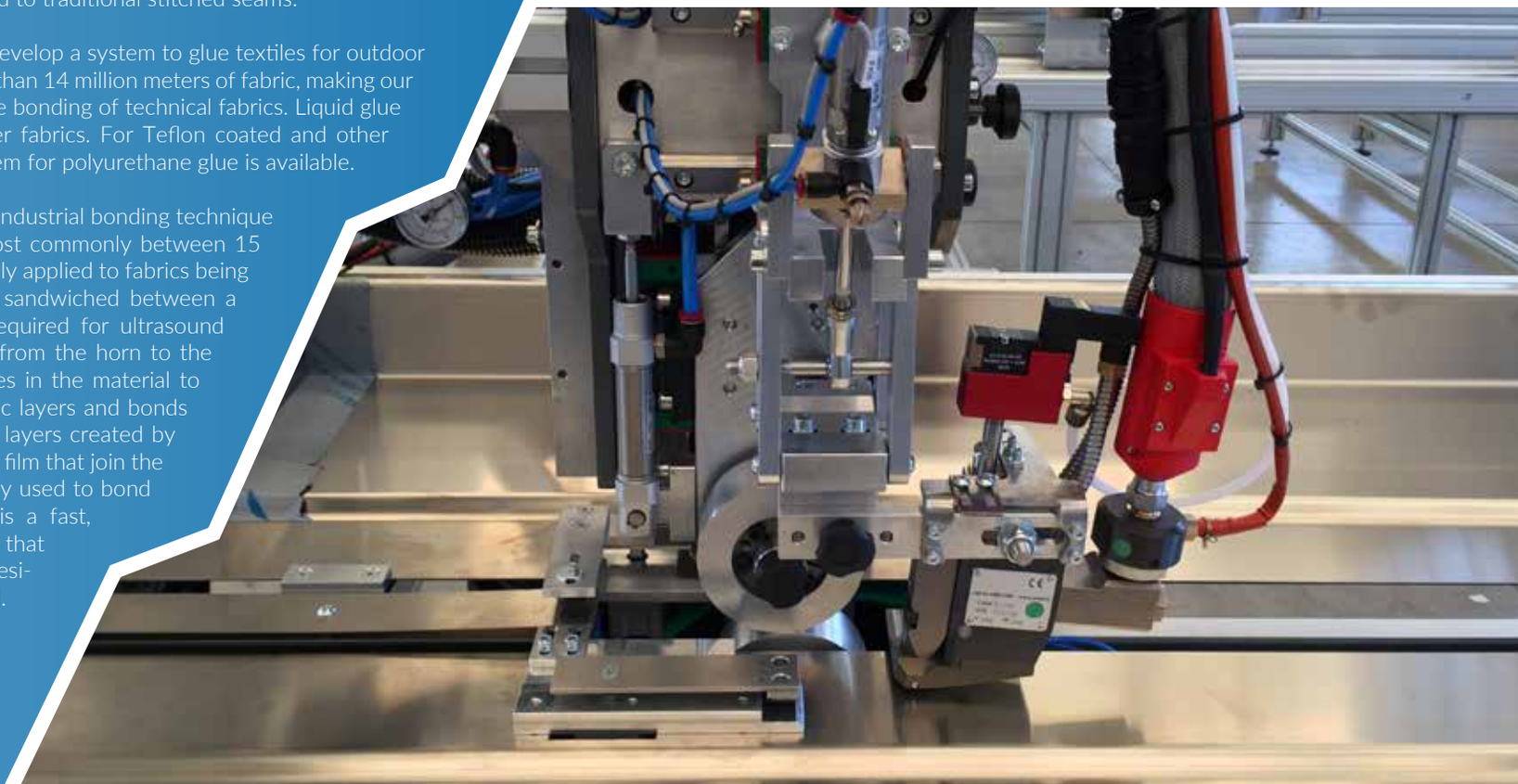
MULTIPLE WELDING TECHNOLOGIES

Hot Air. Ensures high quality bonding in terms of strength, precision and aesthetics. As opposed to technologies such as impulse and high frequency (HF), hot air welding does not produce any heat stress and only affects those sides of the material that are bonded together. Since the inner part of the fabric is not affected by the heat in any way, its physical and aesthetic properties remain intact. In combination with the patented Intelligent Torque, hot air welding technology avoids puckering of the fabric and fading or altering of the colors, and ensures seams of superior quality. The technology is commonly used on PVC or PVC coated fabrics and gives excellent results when used to weld glue coated zippers to fabrics or to apply glue tape to bond acrylic and polyester.

Hot melt (liquid glue). Liquid glue technology is used in place of conventional sewing with needle and thread and guarantees incomparable strength, durability and aesthetical results when used on textiles like acrylic and polyester. Besides a significant aesthetical improvement, the liquid glue bonding process ensures waterproof seams since it does not puncture the fabrics (as happens with sewing needles). Tests carried out by independent laboratories show that liquid glue accounts for an increase in durability of up to 60% compared to traditional stitched seams.

SMRE was the first manufacturer in the world to develop a system to glue textiles for outdoor awnings. Today, our customers have welded more than 14 million meters of fabric, making our liquid glue system the undisputed champion in glue bonding of technical fabrics. Liquid glue is suitable to bond uncoated acrylic and polyester fabrics. For Teflon coated and other hard-to-weld fabrics, a specifically developed system for polyurethane glue is available.

Rotosonic. Rotosonic (or ultrasonic) welding is an industrial bonding technique whereby high-frequency acoustic vibrations – most commonly between 15 and 70 kHz (inaudible to the human ear) – are locally applied to fabrics being held together under pressure. The materials are sandwiched between a horn (or sonotrode) and an anvil. The energy required for ultrasound welding is created by transferring the vibrations from the horn to the material. The created energy causes the molecules in the material to vibrate, resulting in heat. The heat melts the fabric layers and bonds them together in the contact points between the layers created by the pressure of the welding wheels, or melts a glue film that join the fabric. Ultrasound welding technology is commonly used to bond thermoplastics, synthetic fabrics and films and is a fast, efficient and environmental friendly process that consumes little energy. For most materials, no adhesives or solvents, or other consumables are required.



INTELLIGENT TORQUE

Besides the usual parameters installed in welding machines built by other manufacturers – speed of the welding head and of the wheels, temperature of the air or of the glue, pressure of the wheels on the fabric – SMRE added another parameter: **Intelligent Torque.**

Intelligent Torque is the **force** with which the wheels pull the processed **fabric** under **tension** during the **welding cycle**. Fabric tension is of **fundamental importance** to **guarantee high quality seams.** If the tension is too high, the fabric tends to stretch during the weld and shrink after the welding process, causing wrinkles in the seam. If the tension is not enough the fabric tends to run out of the guide, compromising the precision of the seam.

By **digitally controlling the tension in the processed fabric, the patented Intelligent Torque technology** guarantees seams of the **highest quality,** both **aesthetically** and in terms of **strength.**

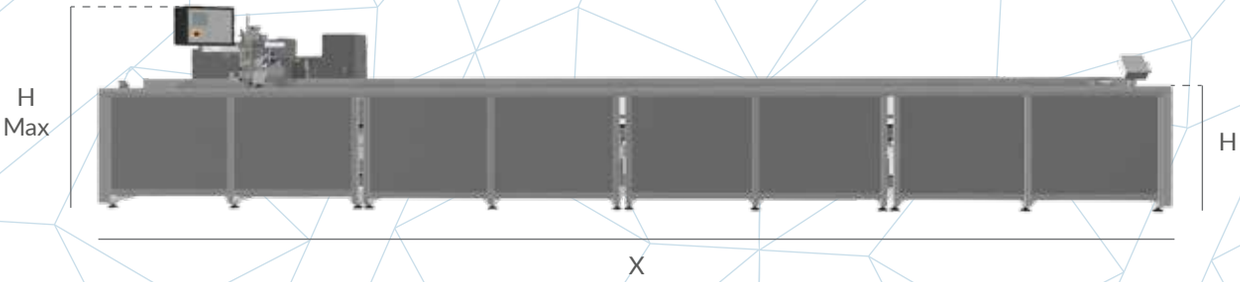
SOFTWARE

Software. A series of **specific parameters** can be chosen from the touch screen to create the **ideal setting for every type of fabric and every application**. Multiple operational menus can be stored in the machine's memory. Each menu can be given a specific name so that the operator simply chooses the menu most suitable for the fabric or application at hand and the machine will set the parameters by itself, allowing even unskilled operators to create superior products with this highly advance digital welder.

The operator spreads the fabric on the worktop, chooses the right menu for the application at hand, and push the START button. The Intelligent Torque technology pulls the fabric under exactly the right tension. The welding head travels the full length of the fabric until the clamps open at the end of the cycle and the product is ready.

Unlike other welding technologies (such as HF or impulse) SM-216-SA create seams in a smooth, continuous cycle and makes seams of unparalleled quality. SM-216-SA is very user-friendly. No specific skills are required, the machine is as easy to operate as your average household appliance. The cleverly designed tools and accessories make working with the machine – often a very repetitive operation with many guide switches – easy and very efficient.

Standard **usable welding length: 6,0 m**
Extension modules: **2,0 m**/each



SM-216-SA	Hot Air	Hot melt (liquid glue)	Rotosonic
Power (KW)	3,5	5	3
Voltage (V)	400 (3 phases N+E)	400 (3 phases N+E)	400 (3 phasesN+E)
Circuit breaker (mA)	300	300	300
Air (Quality Class 1.4.2.; ISO 8573) (bar)	6	6	6
Air consumption (nl/min)	300	50	50
Certification	2006/42EC; 2014/30/EU; EN ISO 12100		

SM-216-SA
SM-210-SA

Multiple technology welding station
with digital fabric tension control

SM-216-SA with usable welding lenght 6,0 m

Footprint	Hot Air	Hot melt (liquid glue)	Rotosonic
X (mm)	1142	1295	1142
Y (mm)	8094	8094	8094
H (mm)	912	912	912
H MAX	1579	1579	1579
Under arm space (diameter) (mm)	210	210	210
Work surface depth (mm)	710	710	710
Weight (KG)	1050	1150	1080

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 c**utting, 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** MACHINES | **SPECIAL** MACHINES | **SOFTWARE** SOLUTIONS

1 INDUSTRIAL GROUP

1 USA BRANCH

2 MANUFACTURING PLANTS

40 / 6 CUSTOMERS IN 40 NATIONS ON 6 CONTINENTS

3 SPECIALIZED BUSINESS UNITS

13 INTERNATIONAL PARTNERS

5 PRODUCT LINES

65 HIGHLY SKILLED EMPLOYEES