

SMA

AUTOMATED MECHANICAL SOLUTIONS

www.sma-solutions.it



ABRASIVE PAPER AND CLOTH CONVERTING MACHINERY



NON-WOVEN FABRIC CONVERTING MACHINERY



S.M.A. Srl (Automated Mechanical Solutions) were established in the 2000s to meet the needs of an ever-changing market. Our Company is a recognised leader in the engineering, manufacturing and marketing of equipment whose purpose is to automate manufacturing processes of those companies that operate in the field of coated abrasives.

S.M.A.'s design and production plant covers 2,500 square metres and is located in a strategic as well as crucial area: here is where the most important enterprises for the conversion of abrasive material first consolidated, thus confirming an excellent reputation both nationally and internationally.

Our considerable wealth of experience as former manufacturers of abrasive wheels in non-woven fabric and cloth has given us one-of-a-kind expertise within the world of coated abrasives.

S.M.A. are committed to manufacturing equipment in order to provide our clients with the tools to work with a just-in-time approach, so that they can be competitive and worldly recognised.

Not only are clients provided with the final product, but they are also given a **solution**: in addition to the equipment, S.M.A. offer wide accessibility to advice, support and, when necessary, availability for spare parts.

S.M.A.'s solutions include equipment for the production of wheels, discs, sheets and rollers made of abrasive cloth or paper and non-woven fabric. Moreover, we manufacture dosing units for one and two-component resins.

Many of our machines are granted a patent for industrial applicability. We can ensure an excellent production quality, since we work with some of the best European and American leading brands.

One of our primary aims is to create innovation and guarantee added value for our clients in terms of saving time and money.



*“if they ever steal our ideas, it won't matter, because something copied is something old.
By the time they mimic our old ideas, we will already be working on something new”*



SMA

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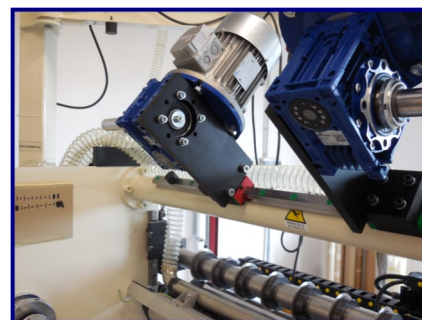
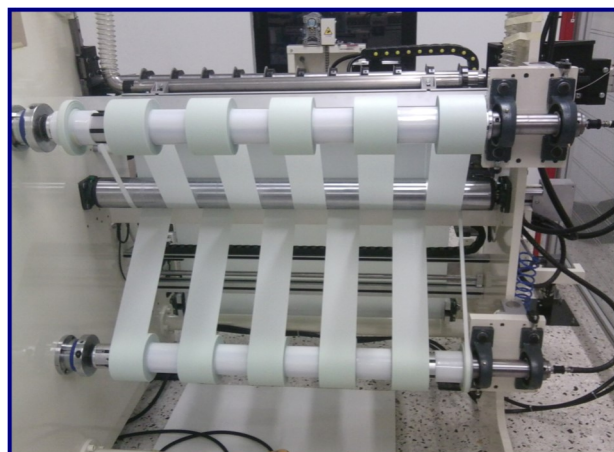
**ABRASIVE PAPER AND CLOTH
CONVERTING MACHINERY**

ABRASIVE PAPER AND CLOTH CONVERTING MACHINERY

- **SMA-SRW** Slitter/Rewinder
- **SMA-AP** Shaft trolley
- **SMA-CR** 100kg Roll loader
- **SMA-CRM** 500kg Roll loader
- **SMA-SW** Rewinder
- **SMA-TFT** Shearing & forming machine for cloth wheels with flange
- **SMA-FV** Vertical press for wheels with flange
- **SMA-FVD** Vertical press for wheels with flange + Dosing unit
- **SMA-BI70** Resin bonding island for wheels with flange
- **SMA-PI** Curing oven
- **SMA-TFWD** Shearing machine for cloth wheels with flange
- **SMA-FAI** Machine for the compacting, cutting and gluing of wheels with flange
- **SMA-FDCOMBI** Combi system for the pressing, bonding and centrifuging of flap wheels with flange
- **SMA-DMPB** Simplified dosing unit for two-component resins
- **SMA-TFW** Pneumatic shearing machine for cloth wheels
- **SMA-FP** Forming machine for 100x100 cloth wheels
- **SMA-PP** Drum unloader
- **SMA-MTLAB** Lab machine for flap discs
- **SMA-BI140** Resin bonding island for flap wheels
- **SMA-BI320** Resin bonding island for shaft mounted flap wheels
- **SMA-TP** Sheet cutting machine
- **SMA-MK** Laminating machine paper/cloth + sponge/Velcro®

Slitter/Rewinder

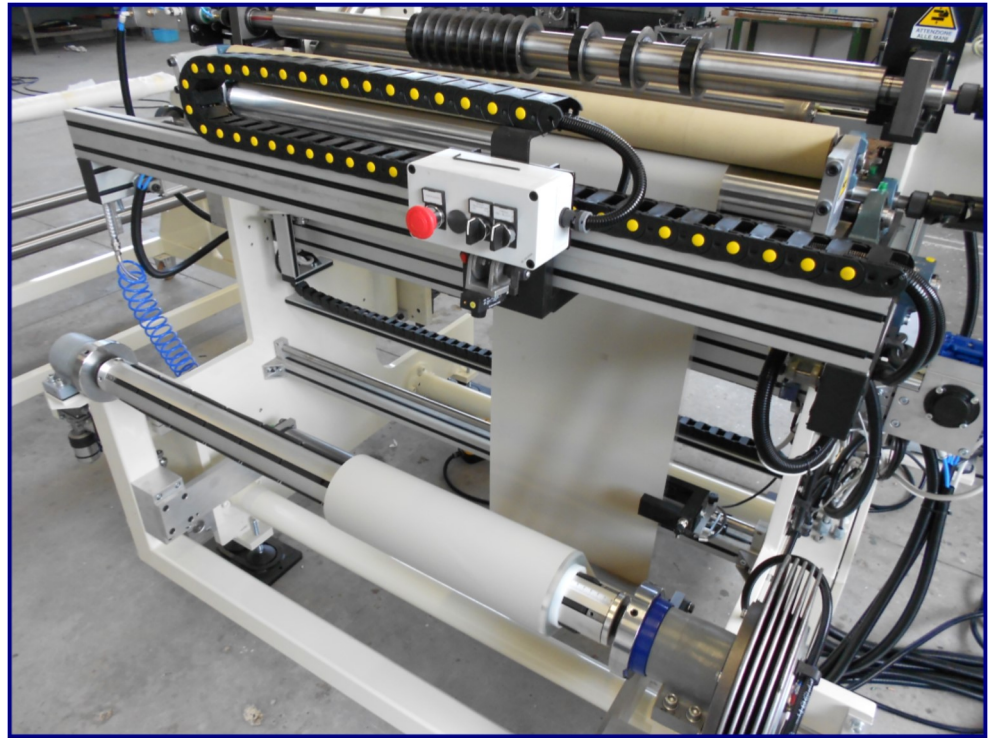
Model: SMA-SRW



The slitter/rewinder is designed for the slitting and rewinding of narrow rolls of paper and abrasive cloth via pressure or scissor-cutting system. It is managed by an integrated PLC system, with a wide-angle touchscreen display that allows to control programming through numerous customised solutions. A specific interface provides automatic and real-time control of the electromagnetic brake and of the vector inverter motors (which serve as clutches) with extra-sensitive regulation. This machine is equipped with a set of decoilers and recoilers that have anodized aluminium expandable shafts whose diameter is \varnothing 76 mm or customisable, and sliding or tilting safety chucks.

During the rewinding phase, the traction of the fibre and the balancing of the roll are consistently and automatically controlled. The cutting unit consists of either side-by-side blades or single repositionable knifeholders.

This machine can be equipped with friction shafts. It also has a cross-cut unit that dissects the roll. The machine has a working width of 1100 to 2100 mm..



Specifications

Productivity:

Speed: 200 m/min

Size and weight:

4000x4000x2300 mm

2500 kg

Power and Consumption:

Voltage 400V

Frequency 50Hz

Current 50A

Power 15kW

3 Ph N/PE

Compressed air pressure: 6 bar

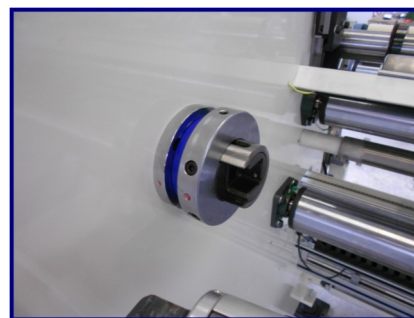
Optional:

Scrap winders

Friction shafts

QCT-50 knifeholders

Electrostatic charge remover



This machine holds the CE marking in compliance with European standards.

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Every piece of equipment manufactured by S.M.A. is customised to the client's requirements.

Shaft trolley

Model: SMA-AP



A wheeled, 6-position trolley for shafts.

Maximum load weight: 250 kg.

This piece of equipment can be complementary to the SMA-SRW machine.



Specifications

Size and weight:

500x1500x500 mm

100 kg



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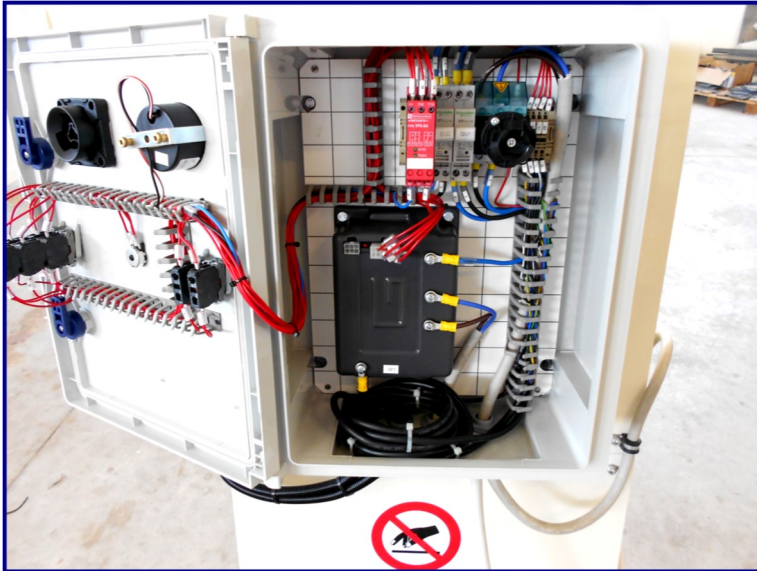
100kg Roll loader

Model: SMA-CR



The CR semi-electric forklift combines 12V battery electric lifting to the manual translation of the machine. It is the best option for the handling of medium to light weights: forks can be lifted or lowered by means of push button switches that are found on the machine's body.

This piece of piece of equipment can be combined with the SMA-SRW Slitter/Rewinder.



Specifications

Size and weight:

1500x700x1400 mm

300 kg

100kg capacity

Power and consumption:

Voltage 12V

Battery supply



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500kg Roll loader

Model: SMA-CRM



The CRM semi-electric forklift combines 12V battery electric lifting to the manual translation of the machine. It is the best option for the handling of medium to light weights: forks can be lifted or lowered by means of push button switches that are found on the machine's body.

This piece of equipment can be combined with the SMA-SRW Slitter/Rewinder.



Specifications

Size and weight:

1500x700x1400 mm

400 kg

500kg capacity

Power and consumption:

Voltage 12V

Battery supply



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A rewinder and meter counter for rolls.

The machine has an unwinder with automatic brake and a winder with a 2kW gearmotor and up to 50m/min rewinding speed.

An encoder is mounted on an idler shaft for meter counting.



Specifications

Productivity:

Speed 50 m/min

Size and weight:

2000X1000X1200 mm

300kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 10A

Power 2kW

3 Ph N/PE

Compressed air pressure: 6 bar

Optional:

Ø 76mm expandable shafts



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Shearing & forming machine for cloth wheels with flange

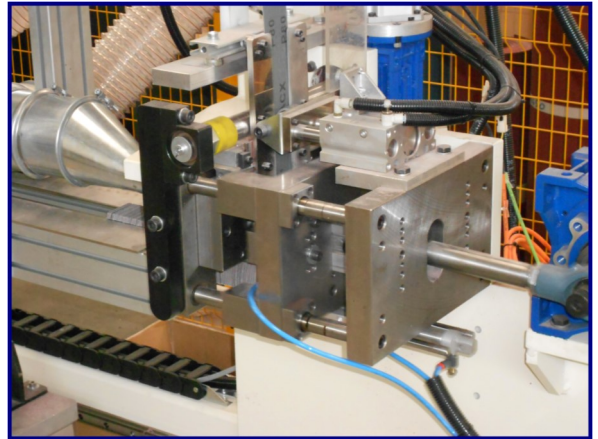
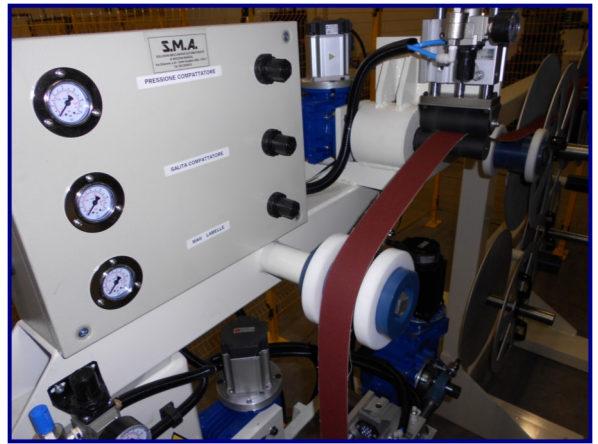
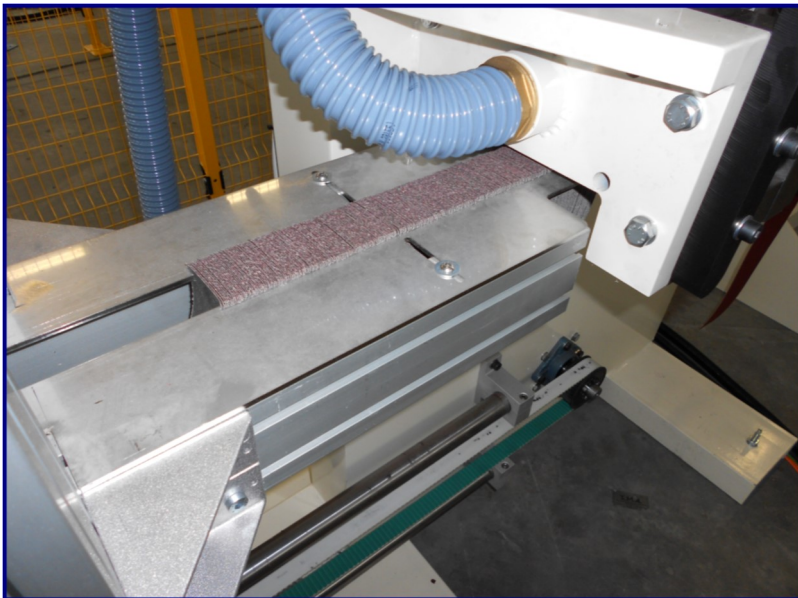
Model: SMA-TFT



This automatic equipment manufactures abrasive cloth wheels with flange, ranging from 165mm to 350mm diameters, and up to 100mm thickness. This full automatic machine shears and binds abrasive cloth flaps which are subsequently stored in a unit at the end of the process. It is equipped with a multifunction touch screen panel that can set and store all the operator's customised programmes.

The working process occurs as follows :

1. The cloth is unwinded and cut into flaps
2. The flaps packet is cut on the surface and glued with Hot Melt glue
3. The adhesive is cooled with X Air system (-20°C) and the final product is removed from the storage unit.



Specifications

Productivity (e.g. for a 200x50x54, 40grit flap wheel):

60 pcs/hour

Size and weight:

6000x2000 mm

1800kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 25A

Power 10 kW

3 Ph N/PE

Compressed air pressure: 6 bar



A suction system must be used with this equipment.

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Vertical press for wheels with flange

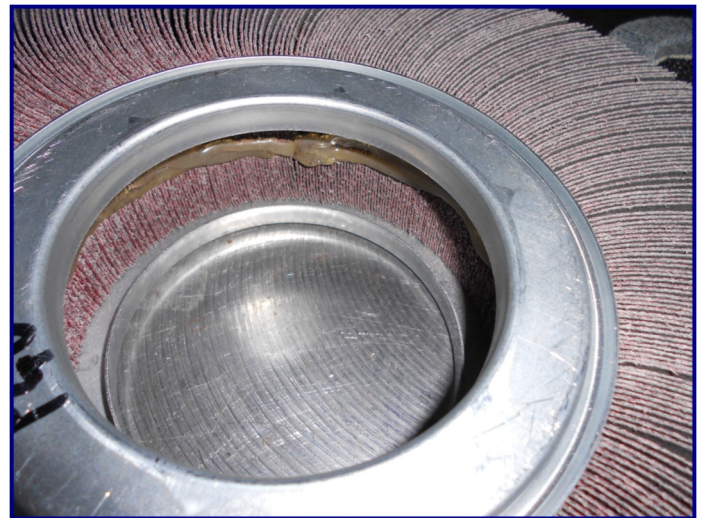
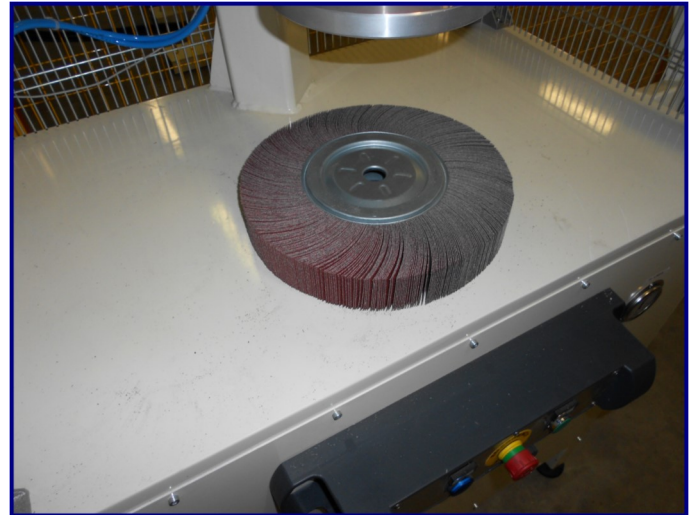
Model: SMA-FV



This equipment provides an automatic working process for the pressing of cloth wheels with flange.

It is designed to guarantee a perfect parallelism between the two flanges of the flap wheel.

It can be integrated with the SMA-TFT machine.



Specifications

Productivity:

6 pcs/min

Size and weight:

1000x1000x1800 mm

400 kg

Power and consumption:

Voltage 230V

Frequency 50Hz

Power 1kW

3 Ph N/PE

Compressed air pressure: 6 bar

A suction system must be used with this equipment.

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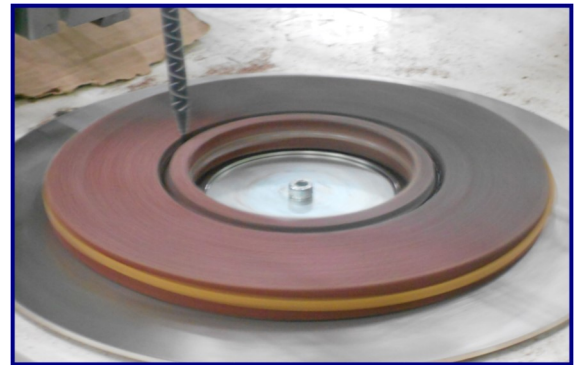
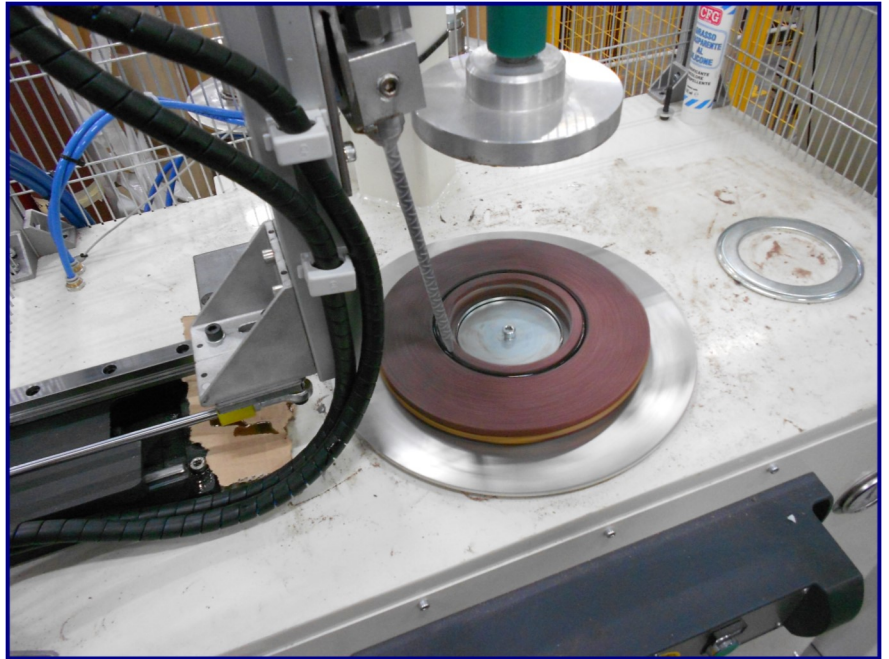
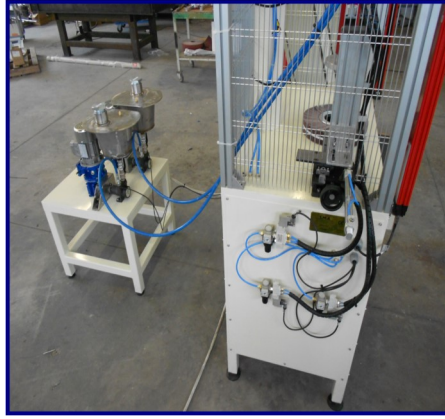
Vertical press for wheels with flange + Dosing unit

Model: SMA-FVD



This equipment provides an automatic working process for the pressing of a cloth wheel with flange and the resin coating of its slot. This machine is designed to guarantee a perfect parallelism between the two flanges of the flap wheel and to increase its mechanical resistance due to the gluing of the flanges to the cloth flaps.

It can be integrated with the SMA-TFT machine.



Specifications

Productivity:

High

Size and weight:

2000x1000x1800 mm

400 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Power 5kW

3 Ph N/PE

Compressed air pressure: 6 bar

A suction system must be used with this equipment.

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Resin bonding island for wheels with flange

Model: SMA-BI70



This machine is designed for the automatic bonding of flap wheels with flange. Its versatility allows to manufacture wheels whose diameters go from 110 mm to 350 mm.

This fully automated system has been designed for large scale production; the average bonding time for a wheel is about 30 seconds. This machine features 7 gearmotors, whose purpose is to make wheels rotate in the different stages of the process. 7 different speed levels can be handled in full automatic mode.

The bonding of the wheels occurs by means of two dosage units: one works with a bi-component epoxy resin, the other dispenses a bi-component polyurethane. Each dosage unit is composed of a static mixing head, two gear pumps and two piston pumps that extract the product from 230kg or 18kg drums. Also, it is equipped with two heating lamps that control the beginning of the polymerisation process.

This machine can be integrated with SMA-TFN machine.



Specifications

Productivity:

120 wheels/hour

Size and weight:

5000x3000 mm; 15m² area

2200 kg

Power and consumption:

Voltage 400V

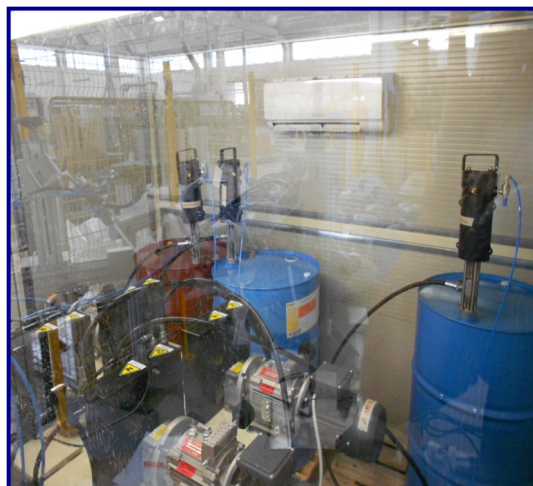
Frequency 50Hz

Current 50A

Power 20kW

3 Ph N/PE

Compressed air pressure: 6 bar



A suction system must be used with this equipment.

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Curing oven heated by diathermic oil.

Polymerising unit for abrasive cloth wheels. Maximum operating temperature is 140°C. This unit is electronically controlled and surrounded by a protective enclosure. By means of a trolley, the operator arranges the wheels within the enclosure and lowers the heaters with the push button switches that are found on the side control panel, starting the polymerisation process.

This system can be integrated with the SMA-BI70 machine.



Specifications

Size and weight:

3000x3000x3000 mm

300 kg

Power and consumption:

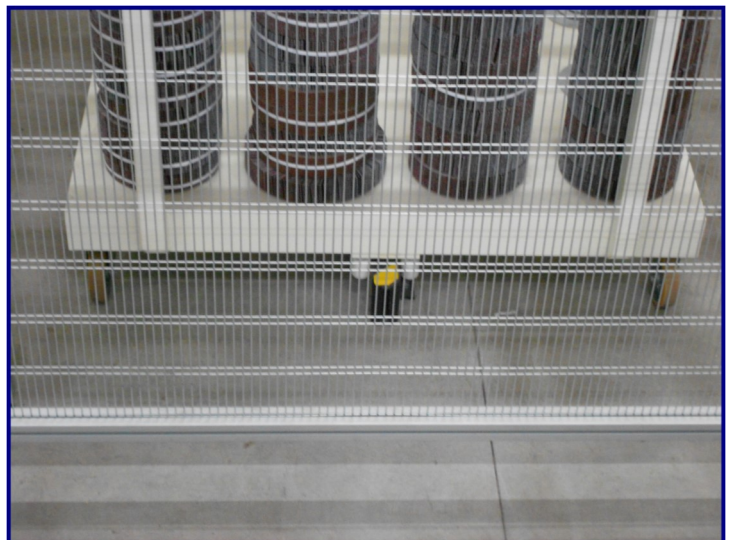
Voltage 400V

Frequency 50Hz

Current 30A

Power 10kW

3 Ph N/PE



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Shearing machine for cloth wheels with flange

Model: SMA-TFWD



This semi-automatic piece of equipment produces abrasive cloth wheels with flange, ranging from 165mm to 350mm diameters, and up to 100mm thickness. The abrasive cloth is sheared into flaps and they are subsequently stored in a vertical loader. It is equipped with a multifunction touch screen panel that can set and store all the operator's customised programmes.

This machine productively works with a dual programming approach; it is possible to simultaneously manufacture two types of wheels, different from one another.



Specifications

Productivity:

Medium

Size and weight:

3500x3500x1600 mm

1500 kg

Power and consumption:

Voltage 400V

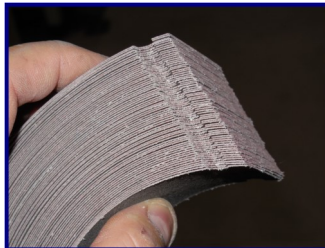
Frequency 50Hz

Current 25A

Power 10kW

3 Ph N/PE

Compressed air pressure: 6 bar



A suction system must be used with this equipment.

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Model: SMA-FAI



This is an automatic machine that binds the flaps packet. It automatically compresses three to six packs of flaps through a hydraulic cylinder, after which they are cut, glued with Hot Melt and finally cooled with X Air system.

This system can be integrated with the SMA-TFWD machine.



Specifications

Productivity:

High

Size and weight:

3500x200x2000 mm

900 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Power 10kW

3 Ph N/PE

Compressed air pressure: 6 bar



A suction system must be used with this equipment.

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Combo system for the pressing, bonding and centrifuging of flap wheels with flange

Model: SMA-FDCOMBI



This combo system is designed for the pressing, bonding and centrifuging of wheels. It is controlled by a multifunction PLC with an operator panel that supervises all the working processes. This system is divided into two workstations: one for the bonding and pressing, the other for the centrifuging.

This system can be integrated with SMA-TFT and SMA-TFWD machines.



Specifications

Productivity:

High

Size and weight:

2500x1500x2000 mm

900 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Power 10kW

3 Ph N/PE

Compressed air pressure: 6 bar



A suction system must be used with this equipment.

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Simplified dosing unit for two-component resins

Model: SMA-DMPB



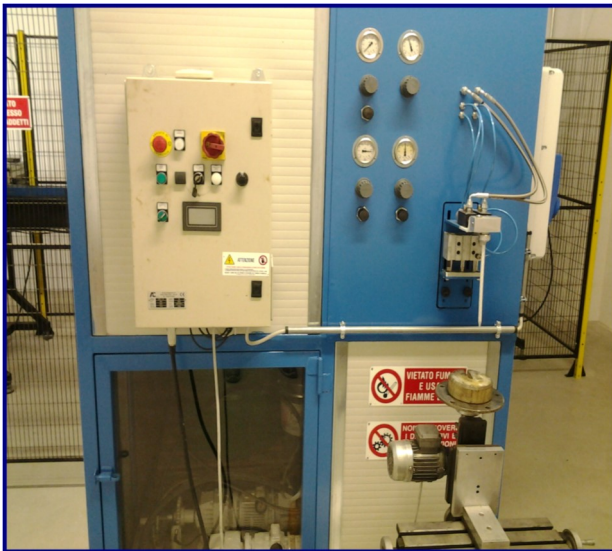
This is a dosing unit for two-component resins.

It is a volumetric proportioning machine that uses piston pumps to glue abrasive wheels.

200/250kg drums of resin are stored in an insulated box; piston pumps extract the product and transfer it into flux regulators and stabilisers; pumps then dose the product.

The mixing unit is composed of a head block, made of AISI-3016 stainless steel, and a double on/off valve. This machine is controlled by an operator interface that manages the dosing parameters, the ratio between component A and component B and the dispensing mode of the product.

This machine is a very valuable option for the gluing of abrasive wheels.



Specifications

Productivity:

Flow rate 18-20 kg/hour

Size and weight:

2000x2000x2000 mm

700 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 25A

Power 10kW

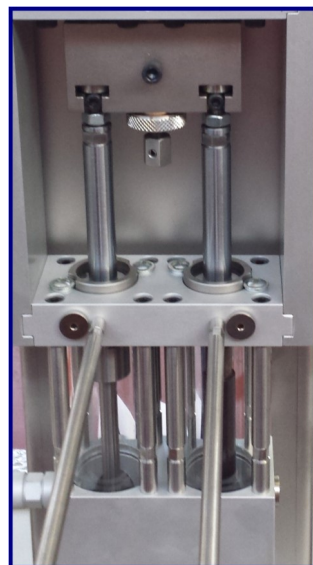
3 Ph N/PE

Compressed air pressure: 6 bar

Optional:

Tube turning device with moving nozzle

Electrically heated tubes



A suction system must be used with this equipment.

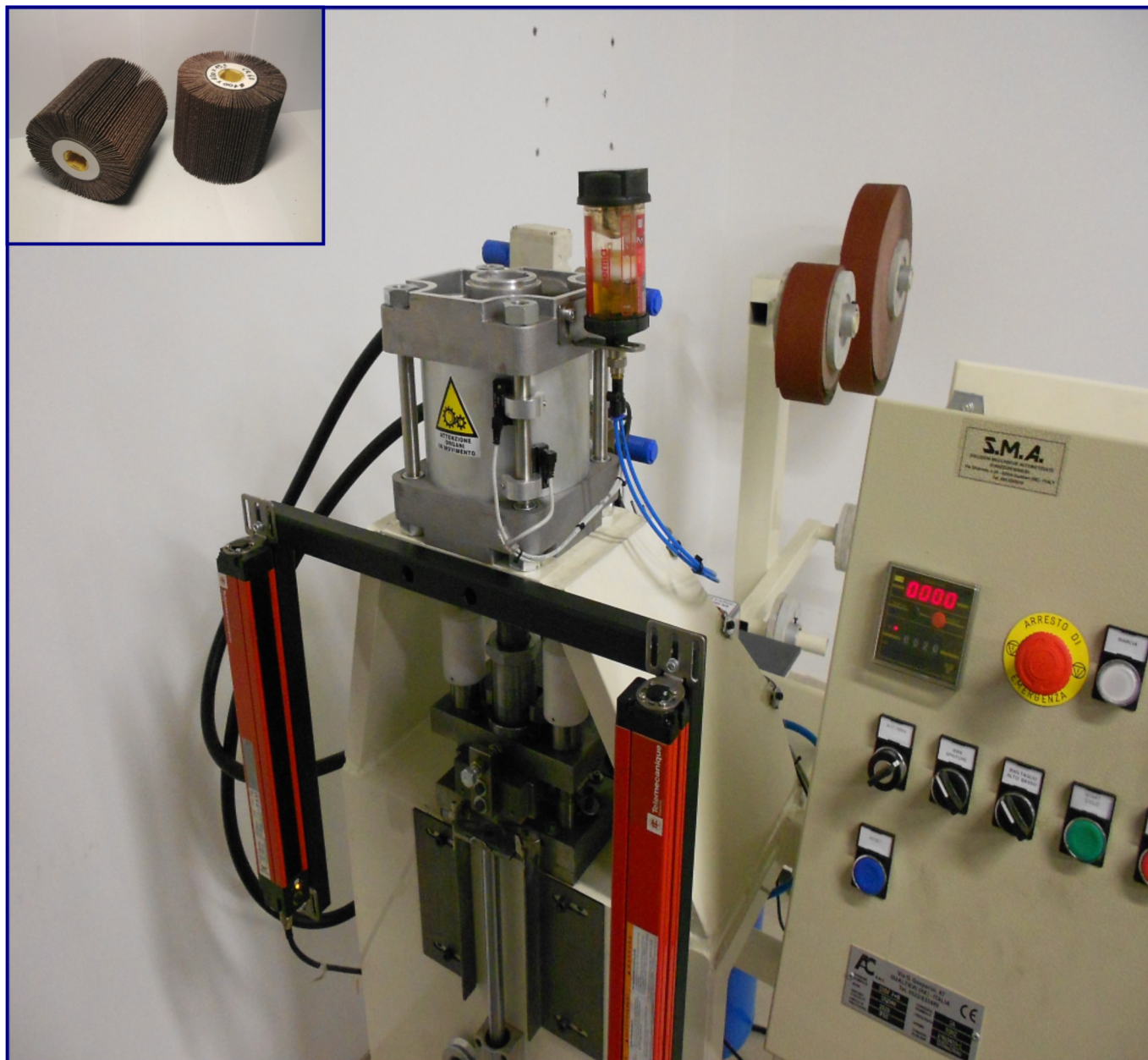
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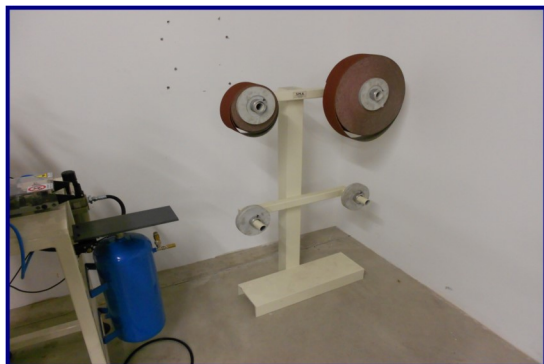
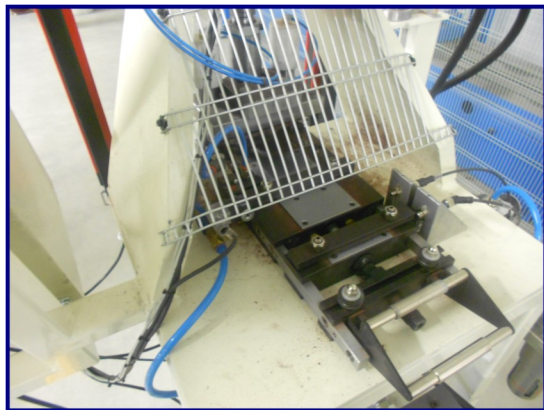
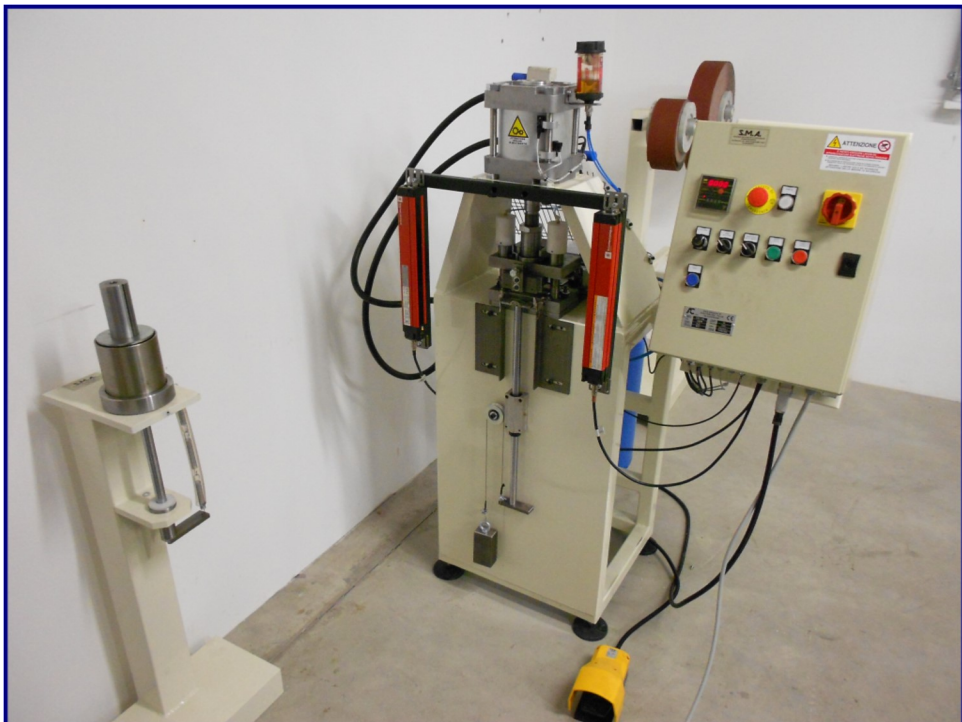
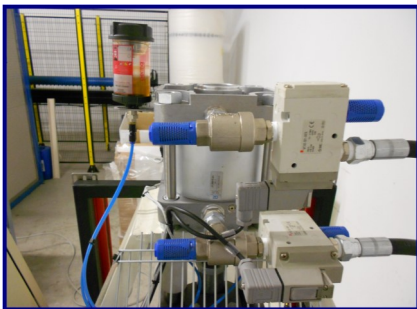
Pneumatic shearing machine for cloth wheels

Model: SMA-TFW



This is a semi-automatic equipment for the production of abrasive cloth wheels whose diameter is \varnothing 100 mm. The abrasive cloth is sheared into flaps, and they are subsequently stored in a vertical loader. This machine is equipped with a panel and a counter that select the number of flaps that have to be cut.

The machine is completely pneumatic-powered: a pneumatic cylinder executes the cut and material feeding is operated by a pneumatic press feeder. This equipment provides a very simple and low-cost option.



Specifications

Productivity:

Medium

Size and weight:

1000x2500x1500 mm

700 kg

Power and consumption:

Voltage 230V

Frequency 50Hz

Power 1kW

1 Ph N/PE

Compressed air pressure: 6 bar

A suction system must be used with this equipment.

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Forming machine for 100x100 cloth wheels

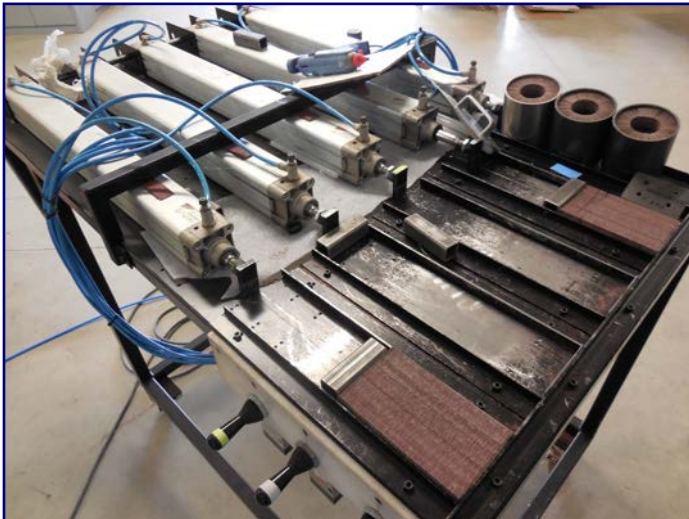
Model: SMA-FP



Mobile workbench for the forming of abrasive cloth wheels, in 100x100 and 100x50mm sizes.

This system is equipped with a 5-workstation pneumatic press, whose maximum capacity is 200 kg per wheel.

It features a Hot Melt dispenser for the gluing of flaps.



Specifications

Size and weight:

1000x2000 mm

300 kg

Power and consumption:

Voltage 230V

Power 1kW

1Ph N/PE

Compressed air pressure: 6 Bar

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Drum unloader

Model: SMA-PP



This is a drum unloader for 18/20kg drums.

This tool has been designed to be installed on flap disc machines.

This system is equipped with electroheated pipes, a resin pressure regulator and a dispensing unit.



Specifications

Size and weight:

600x1250 mm
200 kg

Power and consumption:

Voltage 230V
Power 1kW
1Ph N/PE
Compressed air pressure: 6 Bar

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Lab machine for flap discs

Model: SMA-MTLAB



This is a lab machine for the manufacturing and sampling of flap discs. It is designed to make disc prototypes and their process testing.

It is equipped with an electric spindle for speed testing, whose maximum rotation value is 30,000 rpm.

This system is divided in two units: the first unit, on the left side of the console, is for the cutting and forming of the disc, while the second unit, on the right, performs the speed and breaking test.



Specifications

Size and weight:

900x2000 mm

500 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 30A

Power 3kW

3 Ph N/PE

Compressed air pressure: 6 Bar



A suction system must be used with this equipment.

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Resin bonding island for flap wheels

Model: SMA-BI140



This machine is designed for the automatic bonding of flap wheels.

This machine features a rotary table with 14 workstations and has 3 independent units for the dosing and mixing of two-component resins.

There's an automatic extraction unit for closing covers or flanges.

It is equipped with an insulated box where 200kg drums of resin are stored. All the resin pipes and tanks are electroheated.

This new generation machine is very versatile for quick and precise gluing applications.



Specifications

Productivity (e.g. for a 100x100mm wheel):

120 wheels/hour

Size and weight:

5000x3500 mm, 17.5m² area

2500 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 30A

Power 15kW

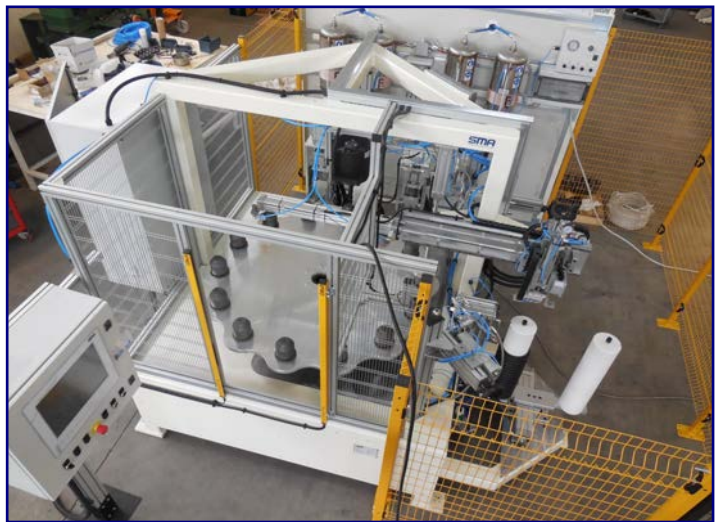
3 Ph N/PE

Optional:

Ring container for flaps

Mold with 19.10mm centring for wheel gluing

Automatic glue melter with 5kg tank



A suction system must be used with this equipment.

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Resin bonding island for shaft mounted flap wheels

NEW GENERATION

Model: SMA-BI320



Robotic automated machine for the gluing of shaft mounted flap wheels.

It is a high-tech machine, entirely controlled by a CNC developed by S.M.A. This efficient programming system automatically calculates the resin volume that has to be dosed within every single wheel; the machine automatically controls two different sizes. An extremely reliable dosing system guarantees a dispensing accuracy within 1% of the dosing parameter that has been set.

This machine features an automatic unloading in boxes that are placed below the selection workstation.

This unique machine fully expresses S.M.A.'s capacity and innovation.



Specifications

Productivity:

500 wheels/hour

Size and weight:

3300x3800x2300 mm

2000 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

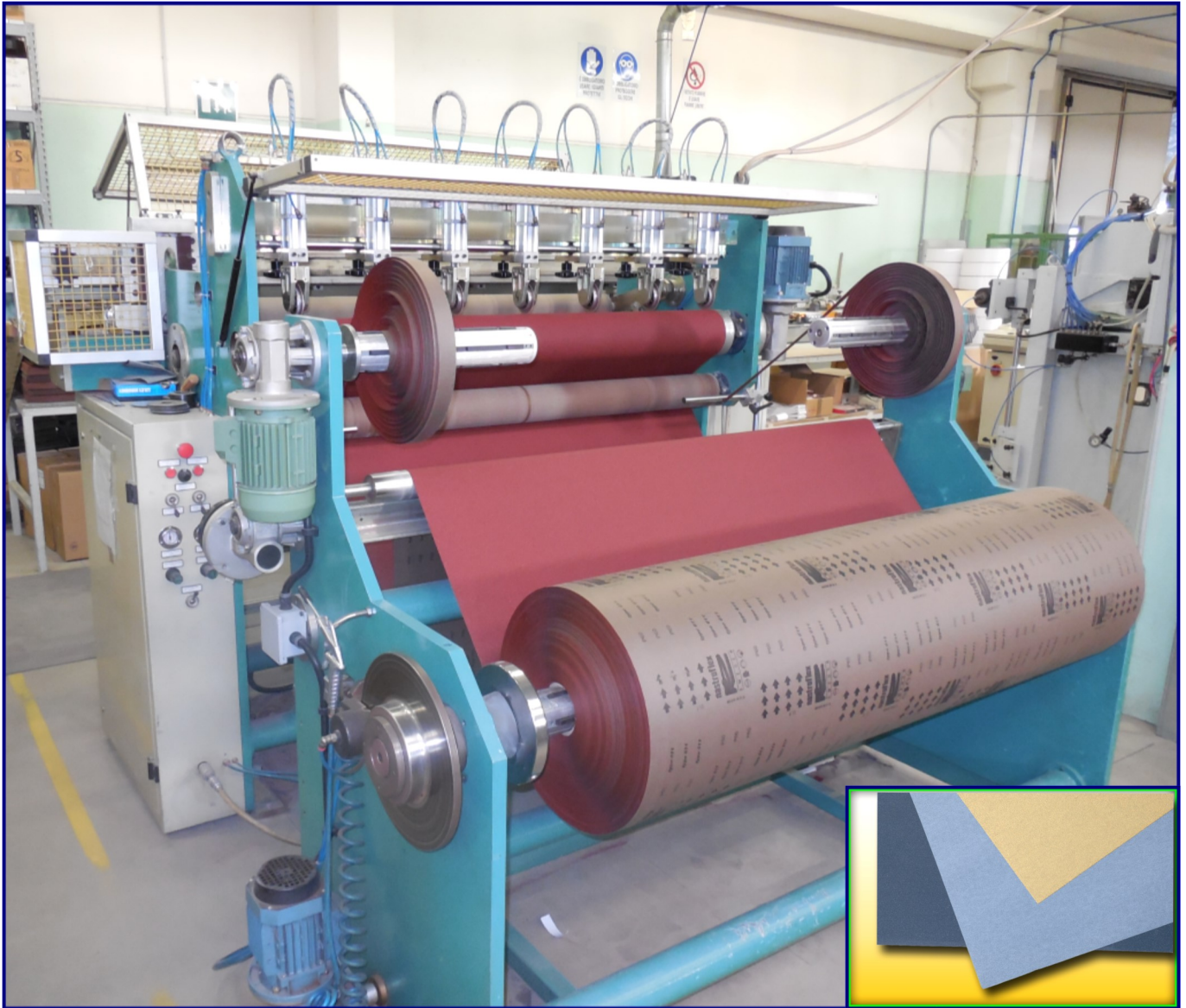
Power 10kW

3 Ph N/PE

Compressed air pressure: 6 bar



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This is an automatic equipment for the cutting of abrasive cloth and paper rolls. This fully automatic machine cuts and neatly stacks the sheets; it consists of a transverse cutting unit that operates with a cup blade. The cutting frequency is very high; it is possible to work with all types of abrasive cloths and papers. This system is supervised by a PLC and an axis control system that has been developed to control the handling kinematics of the servomotors that perform the cutting of the material.

This piece of equipment can be sized to work on Master Jumbo rolls, up to 1000kg weight.



Specifications

Productivity:

High

Size and weight:

3000x400x1800 mm

1900 kg

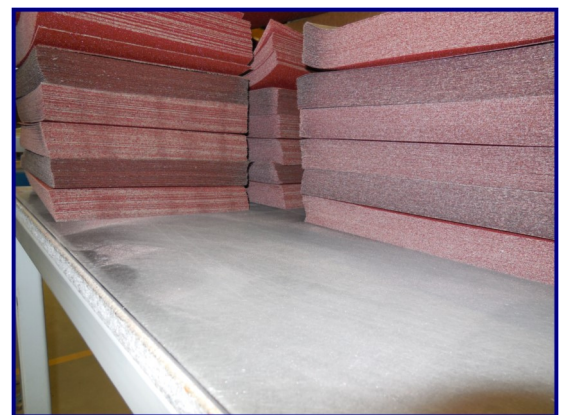
Power and consumption:

Voltage 400V

Frequency 50Hz

Power 15kW

3 Ph N/PE



A suction system must be used with this equipment.

This machine holds the CE marking in compliance with European standards.

These pictures are indicative only; the machine features here described are general guidelines.

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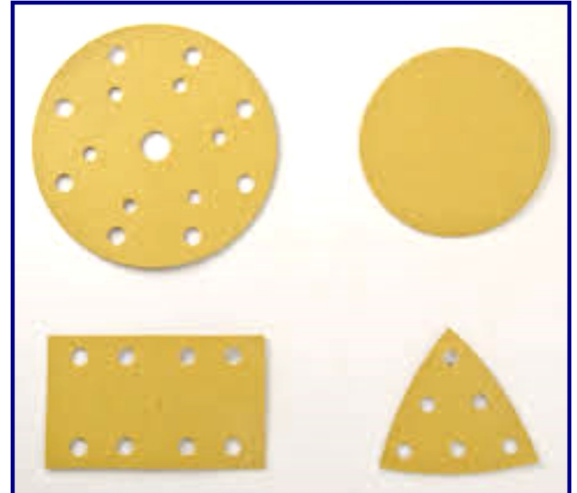
Laminating machine paper/cloth + sponge/Velcro®

Model: SMA-MK



This is an automatic machine for the lamination of abrasive cloth and paper to Velcro® or sponge. This equipment is designed to make large quantities of rolls. Several voltage and alignment sensors automatically control its running, which allows the manufacturing of all kinds of abrasive/non-abrasive cloths and papers.

All the unwinding and winding tools feature 3" (76mm) shafts. This equipment has edge-guiding systems along every step, from the spreading of the glue to the lamination phase, from the heating to the rewinding.



Specifications

Size and weight:

5000x12000 mm; area 60m²

5,000 kg

Power and consumption:

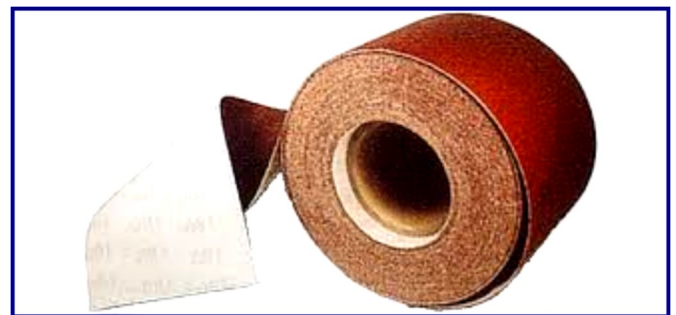
Voltage 400V

Frequency 50Hz

Power 60kW

3 Ph N/PE

Compressed air pressure: 6 bar



A suction system must be used with this equipment.

This machine holds the CE marking in compliance with European standards.

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SMA

AUTOMATED MECHANICAL SOLUTIONS



**NON-WOVEN FABRIC
CONVERTING MACHINERY**

NON-WOVEN FABRIC CONVERTING MACHINERY

- **SMA-TFNW** Shearing & forming machine for non-woven wheels **New generation**
- **SMA-TFN** Shearing & forming machine for non-woven wheels
- **SMA-TN** Shearing machine for non-woven wheels
- **SMA-OPT** Optional Power Pure (Complementary equipment for SMA-TFN and SMA-TFNW machines)
- **SMA-FNE** Automatic forming machine for non-woven wheels
- **SMA-FNP** Manual forming machine for non-woven wheels
- **SMA-DMG** Dosing unit for two-component resins
- **SMA-TD** Cutting machine for wheels
- **SMA-MT** Disc and wheel tester
- **SMA-TL** Flap cutting machine
- **SMA-FPIB** Hydraulic press for non-woven rollers
- **SMA-DMP** Dosing unit for two-component resins for the bonding of Bakelite tubes
- **SMA-CD** Gluing station for wheels
- **SMA-TTR** Lathe for cutting and grinding
- **SMA-TRA** Automatic grinding machine for non-woven wheels
- **SMA-EQ** Balancing machine

Shearing & forming machine for non-woven wheels

New Generation

Model: SMA-TFNW



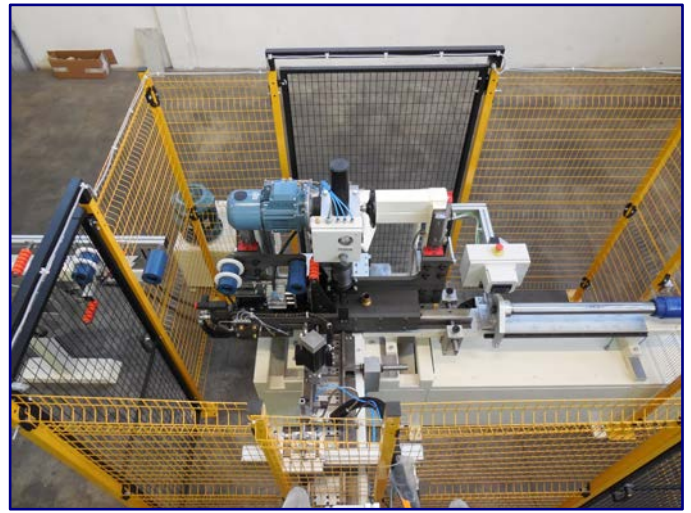
This is a new generation automatic machine for the production of wheels in non-woven fabric and combined non-woven + cloth.

The machine cuts a pre-cut roll into flaps, then compresses and glues them with Hot Melt glue. This machine can manufacture combined wheels (non-woven + cloth) in a 1+1 flap combination; a double decoiler unrolls the material.

The abrasive material is processed via mechanical cutting, performed by a double blade made of hard metal.

Types of wheels

<i>Wheels with arbor hole</i>	<i>Shaft mounted wheels</i>
120x100	100x50
110x100	80x50
100x100	80x30
120x50	60x50
110x50	60x30
100x50	



Specifications

Productivity (e.g. for a 110x100 AC wheel):

160 pcs/hour

Size and weight:

5000x3000 mm; area 15m²

2000 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 35A

Power 18kW

3 Ph N/PE

Compressed air pressure: 6 bar

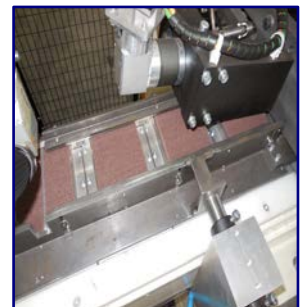
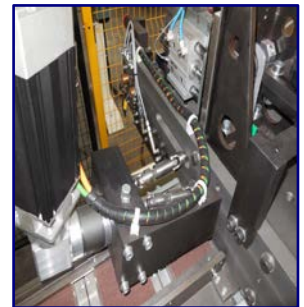
Optional:

Ring to contain flaps

Mold with 19,10mm centring to bond the wheel

Mold with centring for shaft mounted wheels

with 6 or 3mm shank



A suction system must be used with this equipment.

This machine holds the CE marking in compliance with European standards.

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Shearing & forming machine for non-woven wheels

Model: SMA-TFN



This is an automatic machine for the production of wheels in non-woven fabric and combined non-woven+cloth. Sizes are: diameter 100, 110, 120 mm; height 100 mm.

The machine cuts a pre-cut roll into flaps, then compresses and glues them with a Hot Melt glue. This machine can also manufacture combined wheels (non-woven + cloth) in a 1+1 flap combination; a double decoiler unrolls the material.

The abrasive material is processed via mechanical cutting, performed by a double blade made of K20 hard metal.

The machine is controlled via a console, placed alongside of the double decoiler.



Specifications

Productivity (e.g. for a 110x100 AC wheel):

120 pcs/hour

Size and weight:

6000x3000; area 18m²

1500 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 30A

Power 15kW

3 Ph N/PE

Compressed air pressure: 6 bar

Optional:

Ring to contain flaps

Mold with 19,10mm centring to bond the wheel



A suction system must be used with this equipment.

This machine holds the CE marking in compliance with European standards.

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Shearing machine for non-woven wheels

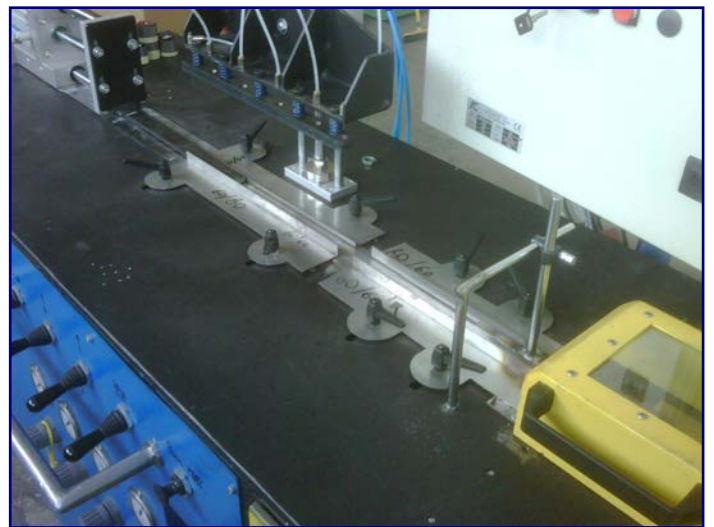
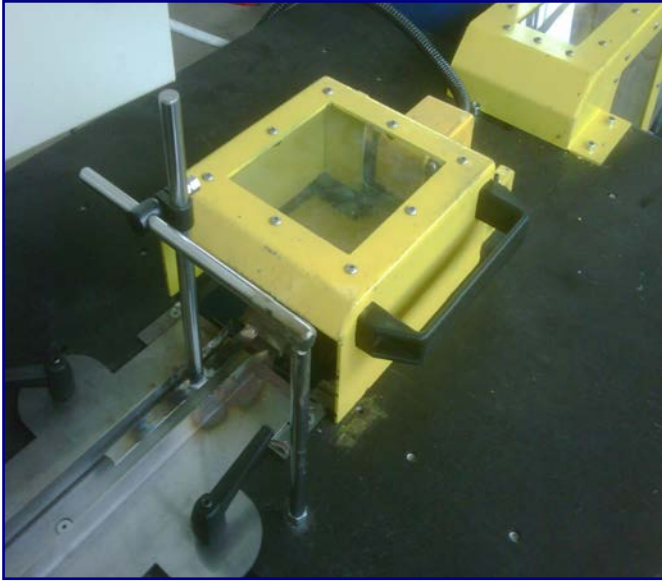
Model: SMA-TN



Manual machine for the manufacturing of non-woven wheels whose sizes are 100x100, 110x100, and 120x100 mm; for shaft mounted wheels, diameter goes from 60 to 120 mm.

The machine cuts flaps from a pre-cut roll and, with the help of lever controls, the operator can form the wheel manually. It is possible to make mixed wheels (non-woven + cloth) in a 1+1 combination. It is equipped with a double decoiler to unroll the material. The abrasive material is processed via mechanical cutting, performed by a double blade made of K20 hard metal.

The machine is controlled via a console, placed alongside of the double decoiler.



Specifications

Productivity (e.g. for a 100x100mm wheel):

25-30 wheels/hour

Size and weight:

1000x2000 mm

600 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Power 3kW

3Ph N/PE

Compressed air pressure: 6 Bar

Optional:

Ring container for flaps

Mold with 19.10mm centring for wheel gluing

Automatic glue melter with 5kg tank



A suction system must be used with this equipment.

This machine holds the CE marking in compliance with European standards.

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Optional Power Pure

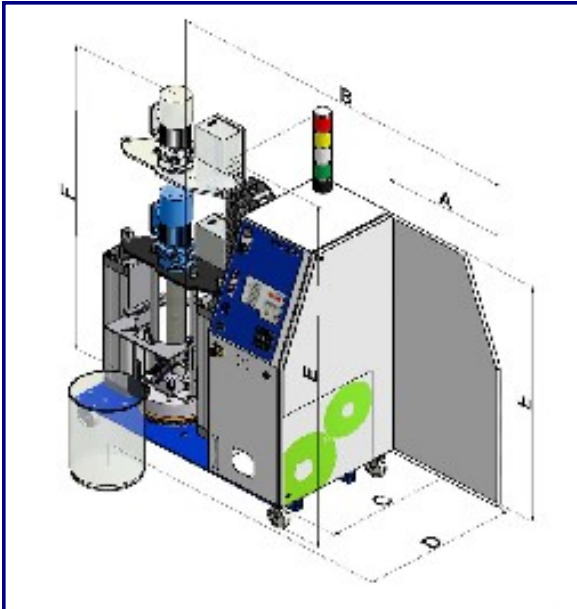
Model: SMA-OPT

COMPLEMENTARY EQUIPMENT FOR
SMA-TFN AND SMA-TFNW MACHINES



This is a bulk adhesive unloader for PUR Hot-Melt glues.

The melting system and the particular dispensing unit provide a homogeneous bonding of the surface of the bushing, which is made of ABS or Nylon.



Specifications

Productivity:

Up to 160 wheels/min

Size and weight:

A/B 600x1250 mm

C/D 600x700 mm

E/F 1350x1850 mm

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 25A

Power 10kW

3 Ph N/PE

Compressed air pressure: 6 bar

Optional:

Electroheated pipe with a 5000mm increased length



This machine holds the CE marking in compliance with European standards.

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Automatic forming machine for non-woven wheels

Model: SMA-FNE



This concentric compression machine is designed for the insertion of the non-woven wheel manufactured by SMA-TFN and SMA-TFNW machines into a metal mold. Through simultaneous closing of four pneumatic jaws, the machine homogeneously compresses the material and inserts it into a retaining cylinder.

The machine is equipped with an automatic ejector of the finished wheel, a PLC and is fully automatic.



Specifications

Productivity:

6 wheels/min

Size and weight:

800x800x1600 mm

400 kg

Power and consumption:

Voltage 230/400V

Frequency 50Hz

Power 1kW

3 Ph N/PE



This machine holds the CE marking in compliance with European standards.

These pictures are indicative only; the machine features here described are general guidelines.

Every piece of equipment manufactured by S.M.A. is customised to the client's requirements.

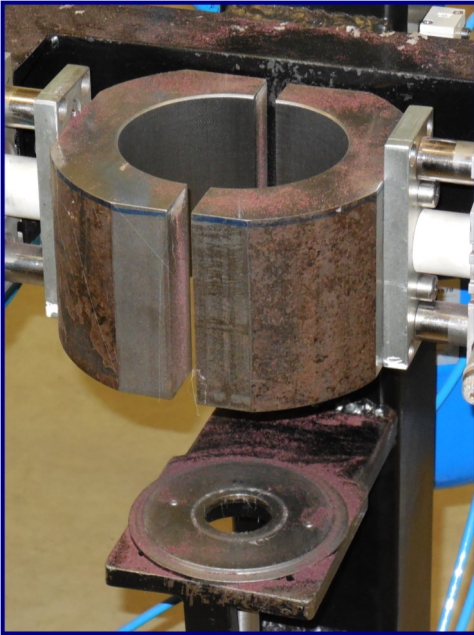
Manual forming machine for non-woven wheels

Model: SMA-FNP



This concentric compression machine is designed for the insertion of the non-woven wheel manufactured by SMA-TFN and SMA-TFNW machines into a metal mold. Through simultaneous closing of two pneumatic jaws, the machine homogeneously compresses the material and inserts it into a retaining cylinder.

The machine is entirely controlled by pneumatic valves with a two-hand safety module.



Specifications

Productivity:

3 Wheels/Min

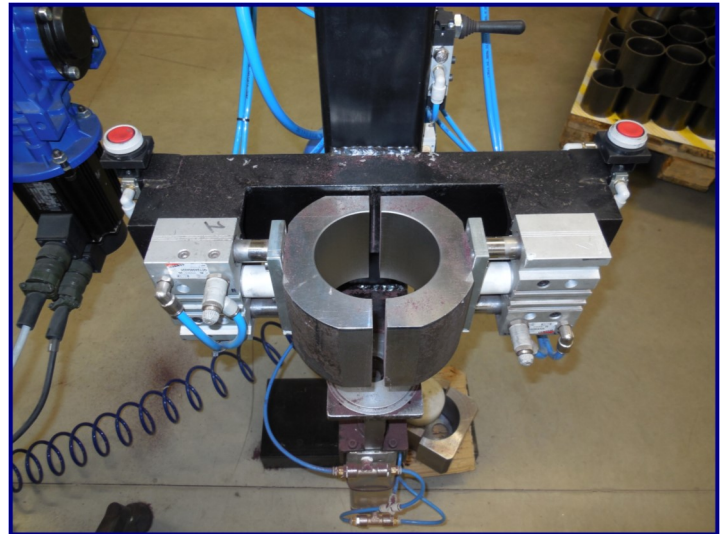
Size and weight:

300x500x1600 mm

200 kg

Power and consumption:

Compressed air pressure: 6 bar



This machine holds the CE marking in compliance with European standards.

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Dosing unit for two-component resins

Model: SMA-DMG



This is a dosing unit for two-component resins.

It is a volumetric proportioning machine that uses gear pumps to bond wheels with arbor hole as well as shaft mounted wheels, manufactured by SMA-TFN and SMA-TFNW machines. 200/250kg drums of resin are stored in an insulated box; piston pumps extract the product and transfer it into flux regulators and stabilisers, gear pumps then dose the product. The mixing unit is composed of a head block, made of AISI-3016 stainless steel, and a double on/off valve. This machine is controlled by an operator interface that manages the dosing parameters, the ratio between component A and component B, and the dispensing mode of the product.

For large-scale production, a buffer rotary table with 8 to 12 workstations can be installed to operate continuously.



Specifications

Productivity:

18-20 kg/hour

Size and weight:

2000x2000x2000 mm

900 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 25A

Power 10kW

3 Ph N/PE

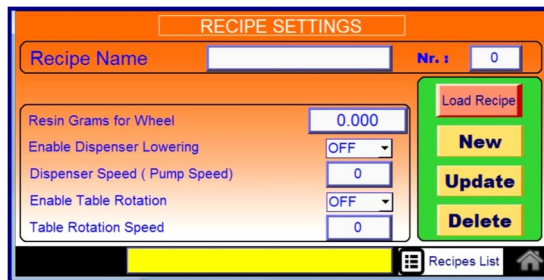
Compressed air pressure: 6 bar

Optional:

Rotary table, 8 to 12 workstations

Denso robot installation

Electrically heated tubing



A suction system must be used with this equipment.

This machine holds the CE marking in compliance with European standards.

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Cutting machine for wheels

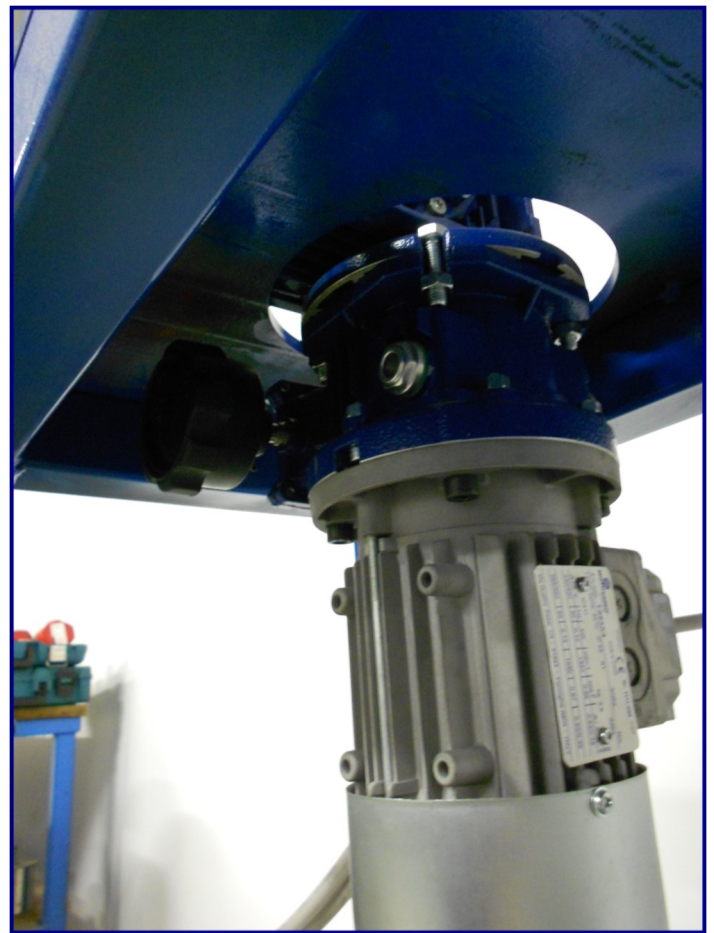
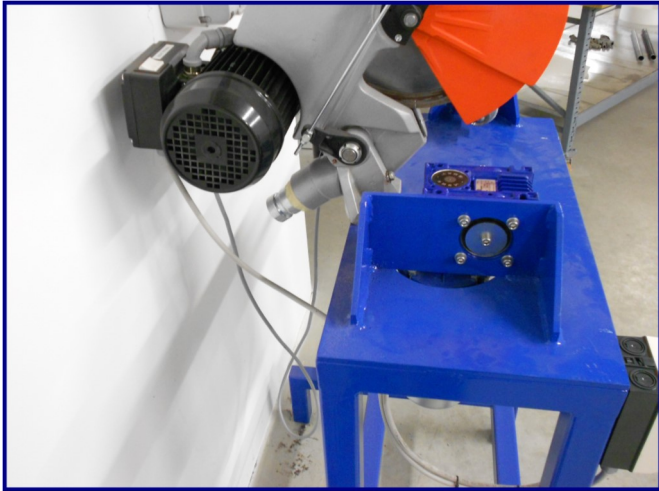
Model: SMA-TD



This is a manual cutting machine for 100x100mm wheels.

This machine allows the cutting of 50mm thick wheels, using a 1.2mm thick, 300mm diameter diamond blade.

This piece of equipment can be integrated with SMA-TFN and SMA-TFNW machines.



Specifications

Productivity:

High

Size and weight:

500x400x1500 mm

200 kg

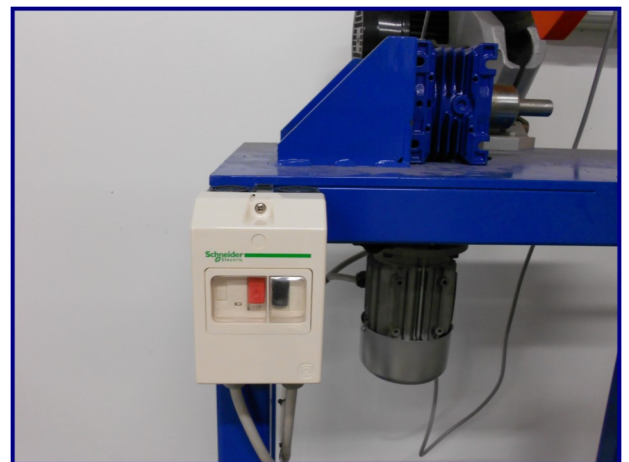
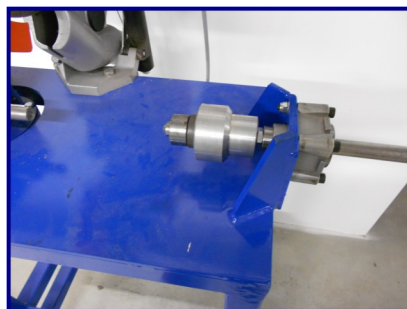
Power and consumption:

Voltage 400V

Frequency 50Hz

Power 2kW

3 Ph N/PE



A suction system must be used with this equipment.

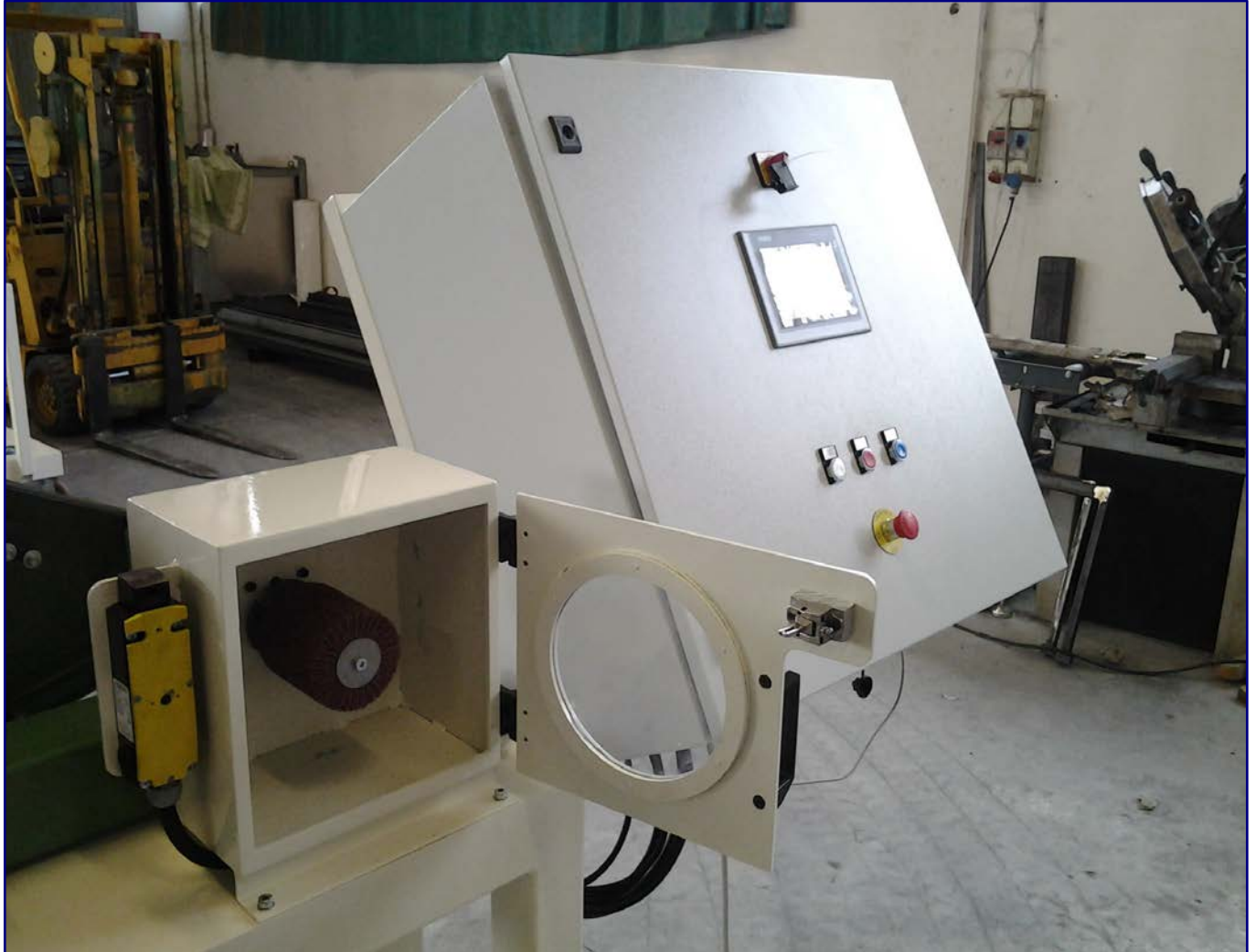
This machine holds the CE marking in compliance with European standards.

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Disc and wheel tester

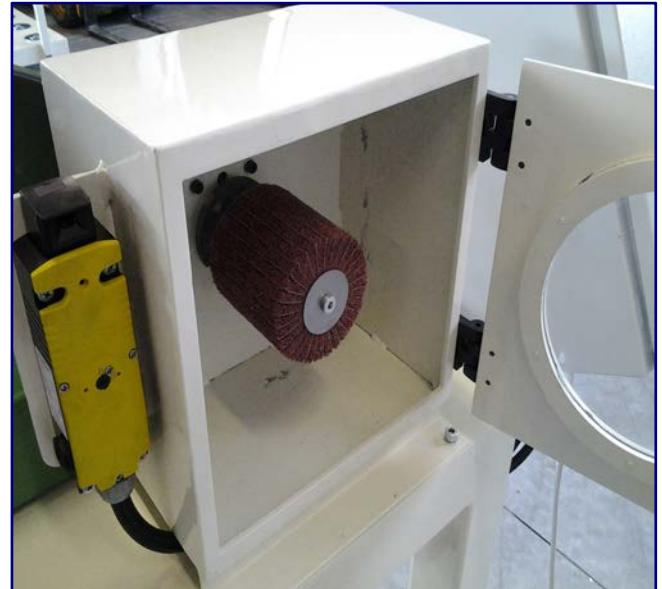
Model: SMA-MT



This is an automatic machine for the speed testing of non-woven flap discs and wheels. This tester works with a rotor at a maximum speed of 30,000.00 rev/min and is controlled by a high frequency inverter. Thanks to an integrated CPU, the operator panel on the side of the machine controls testing parameters, speed and acceleration ramps. The rotor is closed behind an explosion-proof armoured door with electric locking system.

A photocell sensor detects the breaking of the disc or the wheel during the speeding phase.

A laser printer provides a printing of the test report.



Specifications

Size and weight:

1000x700x1200 mm

400 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 15A

Power 2kW

3 Ph N/PE



A suction system must be used with this equipment.

This machine holds the CE marking in compliance with European standards.

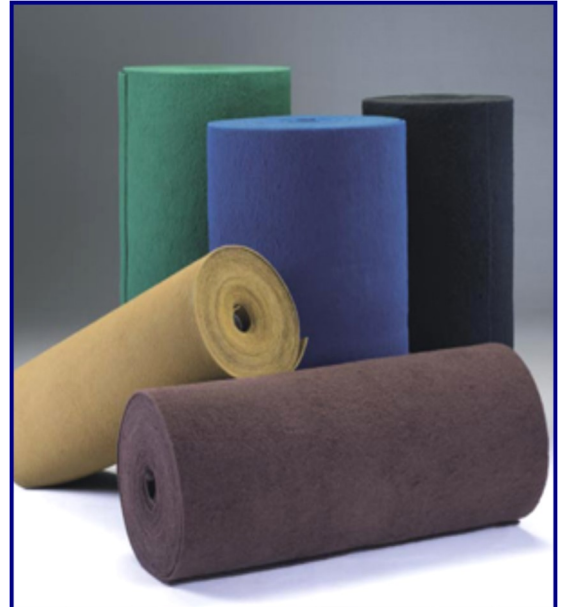
These pictures are indicative only; the machine features here described are general guidelines.

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This automatic machine cuts flaps made of non-woven fabric, paper or cloth with the same height as the original roll; the maximum working width is 2000 mm. This system cuts a pre-set number of flaps that are used to assemble a roller in full automatic mode. The cutting is performed by means of a circular blade that, when shifted by a servomotor, performs the cut with great precision and speed. Flaps are then piled up in a buffer container and ready to be collected and processed.





Specifications

Productivity:

40 flaps/min

Size and weight:

4000x3000 mm

1500 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 25A

Power 10kW

3 Ph N/PE

Compressed air pressure: 6 bar

Optional:

Mobile trolley for flaps

Power R 7" WVGA Touch Screen Multifunction operator panel



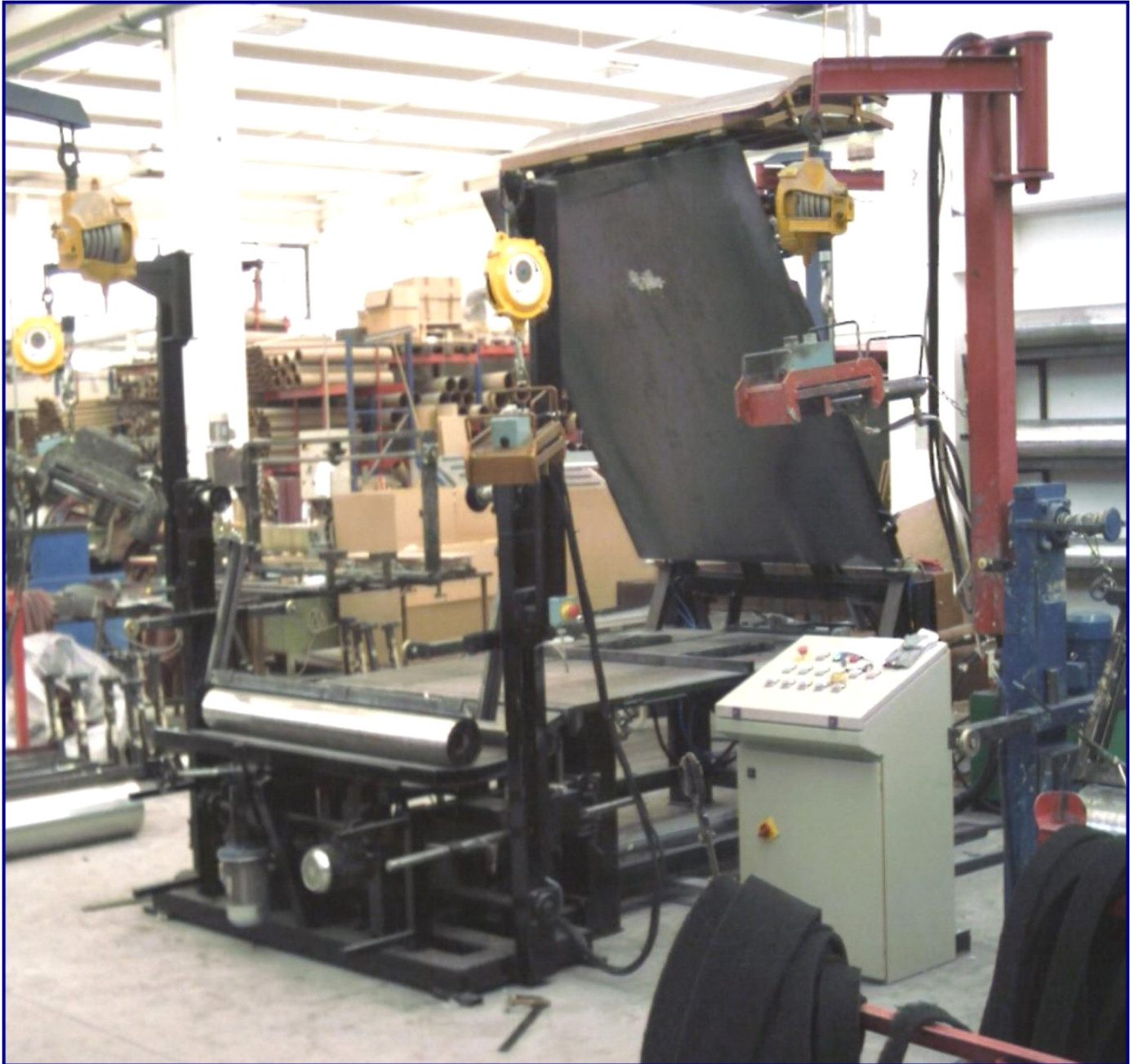
This machine holds the CE marking in compliance with European standards.

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Hydraulic press for non-woven rollers

Model: SMA-FPIB



This is a machine for the production of abrasive rollers; maximum working sizes are 500mm diameter and 1500mm standard length. A hydraulic cylinder presses the material and two operators put it into the moulds.

It is a very flexible option that allows to manufacture numerous sizes.



Specifications

Average productivity:

4 rollers/hour

Size and weight:

5000x2500x1200 mm

2500 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 15A

Power 5kW

3 Ph N/PE

Compressed air pressure: 6 bar

Optional:

Adjusted workbench for
2000mm wide rollers



This machine holds the CE marking in compliance with European standards.

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Dosing unit for two-component resins for the bonding of Bakelite tubes

Model: SMA-DMP



This is a dosing unit for two-component resins for the bonding of Bakelite tubes.

This machine uses piston pumps for volumetric proportioning to bond abrasive rollers. A light and versatile mechanism extracts the product from 200/250kg resin drums; piston pumps then extract and transfer it into flux regulators and stabilisers, to be eventually directed into the dosing pumps. The mixing unit is composed of a head block, made of AISI-3016 stainless steel, and a double on/off valve. This machine is controlled by an operator interface that manages the dosing parameters, the ratio between component A and component B, and the dispensing mode of the product.

With the use of specific equipment, this machine is the best option for the bonding of Bakelite tubes.



Specifications

Capacity:

25 kg/hour

Size and weight:

1000x600x1500 mm

400 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 10A

Power 3kW

3 Ph N/PE

Compressed air pressure: 6

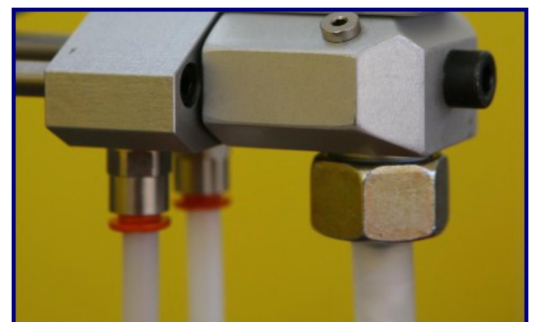
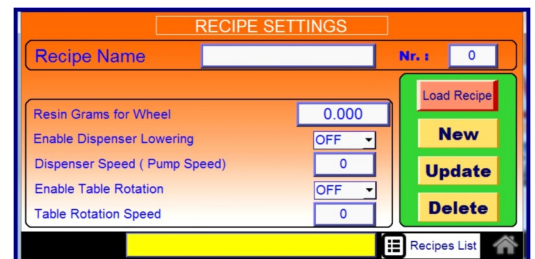
bar

Optional:

Tube turning device with

moving nozzle

Electrically heated tubes



A suction system must be used with this equipment.

This machine holds the CE marking in compliance with European standards.

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Gluing station for wheels

Model: SMA-CD



This station is configured as an optional tool for the SMA-DMP dosing unit.

This vertical column features a rotary table for the rotation of the wheel during the gluing phase. The height of the dosing mixer can be set thanks to a vertical rail guide with handwheel and rev counter.

The system is programmable and equipped with a cylinder that, during the dosing stage, lowers toward the dispensing unit. Its standard stroke is 50 mm.



Specifications

Size and weight:

300x1700 mm
100 kg

Power and consumption:

Voltage 230V
Power 0.37 kW
3Ph N/PE
Compressed air pressure: 6 Bar



A suction system must be used with this equipment.

**This machine holds the CE marking in compliance with European standards.
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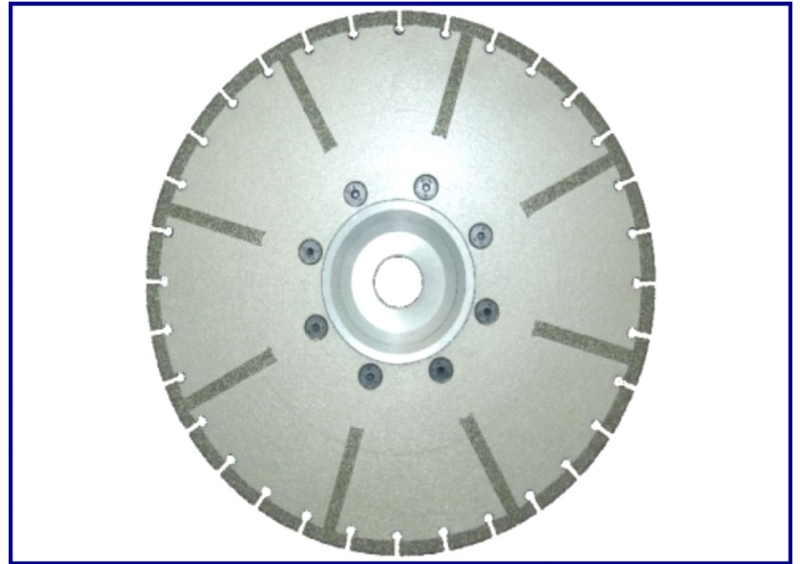
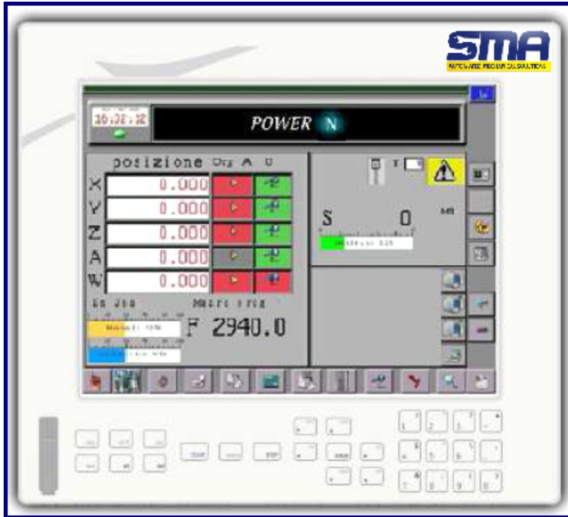


Automatic machine for the cutting and grinding of non-woven rollers; maximum working sizes are 500mm diameter and 2000mm length.

This new generation machine differs from others because the cutting unit is suspended over the roller that is being processed. This system reduces the guideway wear, thus considerably lengthening the useful life of the guidance systems.

The machine is controlled by a PLC with an axis control CPU that works on S.M.A. specifications. This system allows to work on the roller with a 0.05mm positioning accuracy.

To ensure maximum quality of the grinding and cutting processes, S.M.A. uses the Dx-20 Diamond abrasive disc: this disc, manufactured by S.M.A., has a unique cutting profile as well as a diamond graining on the sides.



Specifications

Productivity:

Very high

Size and weight:

4000x1500x1800 mm

2200 kg

Power and consumption:

Voltage 400V

Frequency 50Hz

Current 25A

Power 10kW

3 Ph N/PE

Compressed air pressure: 6 bar

Optional:

X/Y Remote handwheel

Motorised tailstock



A suction system must be used with this equipment.

This machine holds the CE marking in compliance with European standards.

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Automatic grinding machine for non-woven wheels

Model: SMA-TRA



Automatic equipment for the grinding of non-woven wheels.

This automatic machine grinds non-woven wheels whose maximum diameter is 250 mm and maximum length is 700 mm (wheels are in a side-by-side configuration).

Grinding is performed by means of a diamond blade whose diameter is 300 mm and width is 20 mm; it is specifically shaped to perform the grinding activity.

Wheels are placed on a revolver that guarantees complete automation of the process; the operator has to unload and reload the revolver.

With full load, the revolver can handle approximately 65 (250x50mm) wheels. The machine is controlled by a PLC for the management of each work stage.



Specifications

Productivity (e.g., for a 200x50mm wheel):

1200 wheels/hour

Size and weight:

4000x2000x1800 mm

Power and consumption:

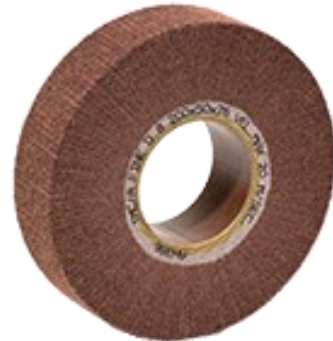
Voltage 400V

Frequency 50Hz

Power 5kW

3 Ph N/PE

Compressed air pressure: 6 bar



A suction system must be used with this equipment.

This machine holds the CE marking in compliance with European standards.

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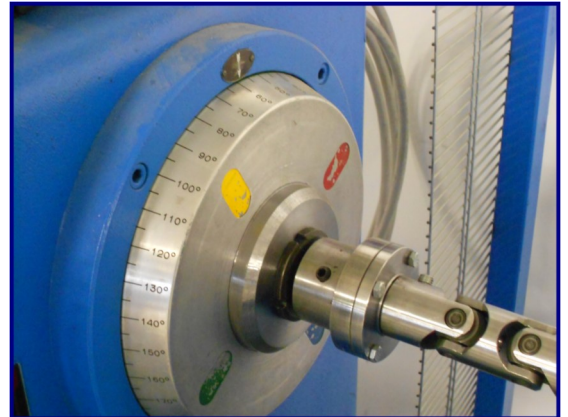


This is a dynamic balancing machine with rigid supports.

This machine allows the balancing of non-woven rollers. Maximum working sizes are 100kg weight, 500mm diameter and 2000mm length.

The machine is equipped with perimeter protection and electric lock, the engine is controlled by an inverter with an adjustable potentiometer and balancing speed from 300 rev/min to 1000 rev/min.

It can be equipped with a printer to print the balancing test report.



Specifications

Size and weight:

3000x900x1200 mm
2500 kg

Power and consumption:

Voltage 400V
Frequency 50Hz
Current 15A
Power 5kW
3 Ph N/PE

Optional:

Laser printer for test report



A suction system must be used with this equipment.

This machine holds the CE marking in compliance with European standards.

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AUTOMATED MECHANICAL SOLUTIONS

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