

Ramallumin

THE LINE OF TEXTILE

**TAYLOR-MADE SOLUTIONS
FOR THE HIGHEST
WEAVING EFFICIENCY**

WARPING | DYEING | SIZING | DRYING | COATING

OUR HISTORY OUR VALUES

Ramallumin has been established in 1948 in the core of the historical area where Italian cotton industry was born and developed. In 2017 Ramallumin joined Fassi and Comerio Ercole Industrial Group, sharing the common values of:

Flexibility. Our group is made of companies specialised in each phase of the production process and independently managed. This allows to answer very quickly to market requests and to provide personalised solutions.

Efficiency. Warp preparation is essential for making the weaving and the whole fabric production efficient.

Efficiency means for us reaching the best result using less energy and chemicals than other systems.

Innovation. We focus our attention to innovation in various areas such as new materials, production processes, technologies, business models.

Expertise. Our group expertise starts at the beginning of 1800 in the heart of textile industry in Italy where all our machines are still produced.



1850

**Machines
Produced**

930

**Customers
Satisfied**

48

**Countries
Distributed**

70

**Years of
History**



THE TECHNICIANS' CHOICE

Our machines are preferred by the technicians who work on them every day and can appreciate the easiness of use and the extreme reliability. Our main objective has always been, for more than 70 years, to find the best solution for each customer needs. That means design and produce each machine according to customers requests and always put their satisfaction at the first place in our everyday work.

Many customers can testify that our machines are working for more than 30 years and still in efficient way. The long expertise of our technicians and the service network of our group guarantee quick and targeted service solutions everywhere in the World. Excellent relations with customers, textile and technical colleges and universities, assure the continuous professional development of our experts.

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COMPLETE SOLUTIONS

Ramallumin is specialised in the design and the manufacturing of machinery for warp preparation.

We offer complete solutions for warping, indigo dyeing, sizing, drying, cooling, coating, assembling. The main applications are in shirting, terry towels, denim, home textiles, wool, silk, filament, technical textiles, glass technical sector, geo-textiles, digital printing.

Our integrated solutions ensure the highest weaving efficiency with less water, less chemicals, less product waste even with different qualities of yarns and chemicals. This is particularly important in the countries where traditional sizing agents are still used.



STRICT QUALITY CONTROLS

Our R&D constantly focuses on the testing of new materials, processes and technologies. Special attention is devoted to the quality controls in every phase of the production process: PED certifications, non-destructive checks, CNC measuring, materials certificates. Thanks to the specialization of each company of our group all the production process of our machines can

be managed internally with the direct control of each phase under the exclusive expertise of our technicians. This system allow us to provide extended warranty on our machines against any defect of manufacturing or installation. With a normal maintenance our machines can work without any technical intervention for more than 30 years.

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In our technical department new engineers have been hired, new computers and 3D software have been bought to upgrade our product design and engineering.

The first results are visible in the machines showed at ITMA 2019 which are fully digital. All connections are with profinet cables, a 3D touch screen computer controls all the functions of the machine and allow also remote connection with any smartphone or tablet.

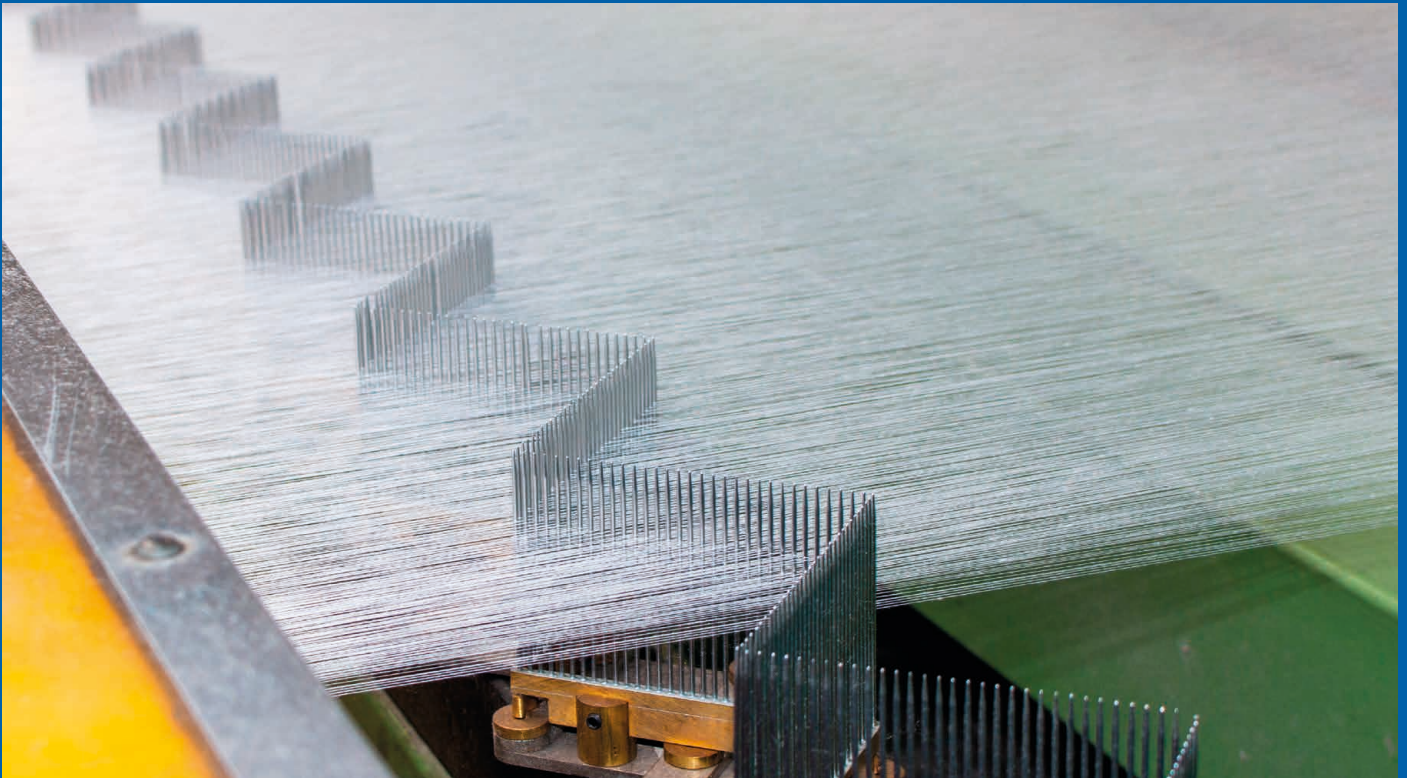
Data registered by the computer can be easily transferred to customer's ERP for a better control and for the implementation of Industry 4.0.

All new machine have modem included for remote service.

We introduced the digital twin technology in our process starting with the squeezing rollers. A digital twin is a virtual model of the product that allows analysis and simulation to prevent possible problems on the real product. For the rollers we analyse the bending and the forces during the squeezing.

To better organize our resources along all the value chain from the suppliers to the planning, production, sales, logistic, services, customers we are in the process of introducing a new ERP.





EASYWARP

Ramallumin warping machines have been specially designed to be very easy to be used by the operator. Indeed the operator from the back of the machine can go very close to the reed and very easily thread the warp.

Our machines are equipped with the main electric switchboard included in the headstock of the warping machine. All cables connecting components in the warping plant and switchboard are supplied with the plant and the machines are tested in our factory with the cables before the delivery. This means a faster and safer start-up

Main electric motor, PLC, electromechanical components installed are from Siemens. The high quality of the manufacturer is guarantee of reliability and availability of the spare parts for many years worldwide.

Ramallumin warping machines are equipped, as standard, with remote control. The operator can start the machine from any place without being obliged to go close to the headstock, therefore is able to repair broken threads faster and reduce stops time.

The machines can be supplied with anti-static bars.

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All the models of the range are manufactured in different working widths and have the following features:

Drive: axial dragging of the beam by means of a AC motor inverter controlled. Constant linear speed which may be regulated from 50 mt/m to 1200 mt/m. At the start the machine reaches automatically the speed with gradual acceleration.

Braking: directly on the beam with hydraulic disk brakes. The pressing roll and the yarn guide cylinder are automatically braked in synchronism with the beam.

Beam compactness: by a special pressing device this can be adjusted from 15 kg to 800 kg.

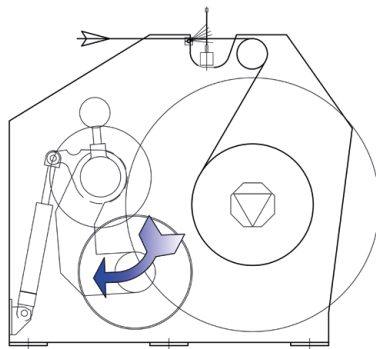
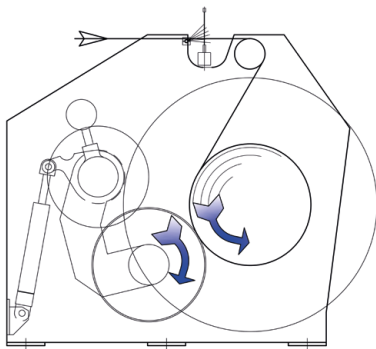
Loading and unloading of the beam: is automatic and self-centering.

Warp reed: zig-zag expansion type with automatic opening, closing and centering movements. A pneumatic blower keeps the reed clean.

Yarn-guide roll: with oscillating motion for high quality warping.

Safety device: any operation made in uncorrect sequence stops the machine or prevent the start.



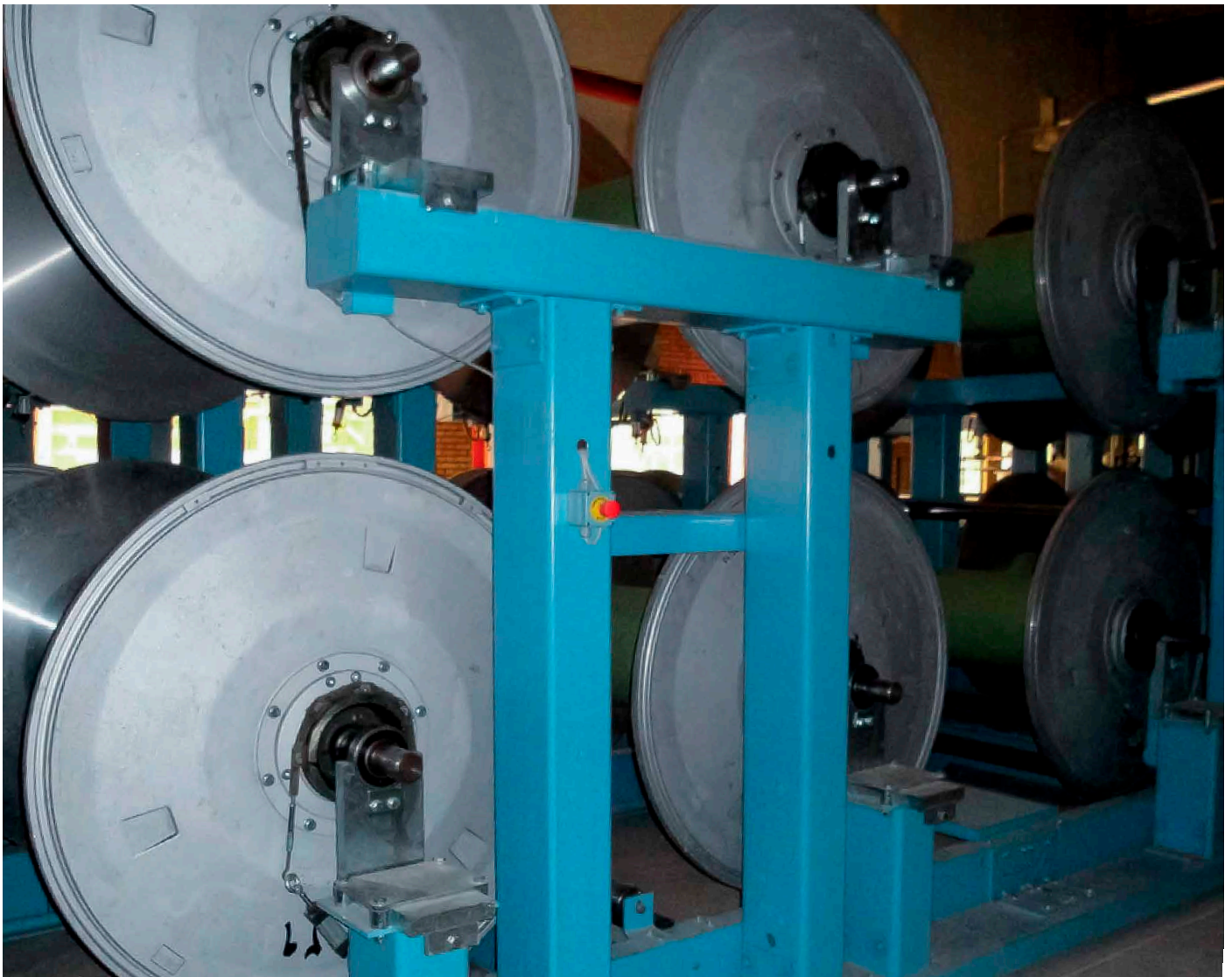


Indirect pressure
with active kickback

**EASY AND
RELIABLE
WARPING**

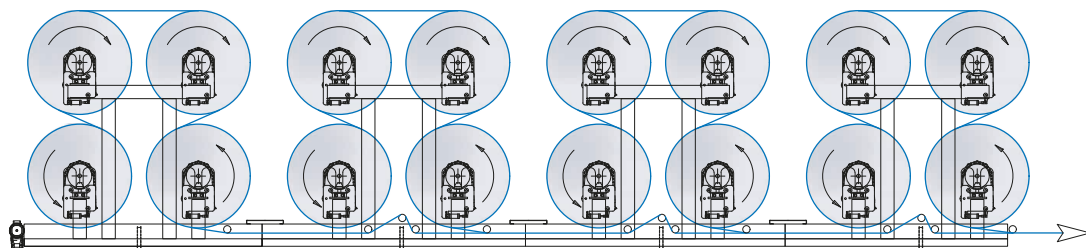
The range of direct warpers includes 3 models according to the flange diameter of warp beams:

- F** - for beams up to 1000 mm diameter
- BF** - for beams up to 1250 mm diameter
- BBF** - for beams up to 1400 mm diameter



BACK BEAMS CREEL

Our special braking system on the beam creel combined with the beaming machine guarantee the optimum tensile force during the process. We offer also movable beam creels and loading and unloading cranes.





LESS WATER

LESS CHEMICALS

LESS COTTON WASTE

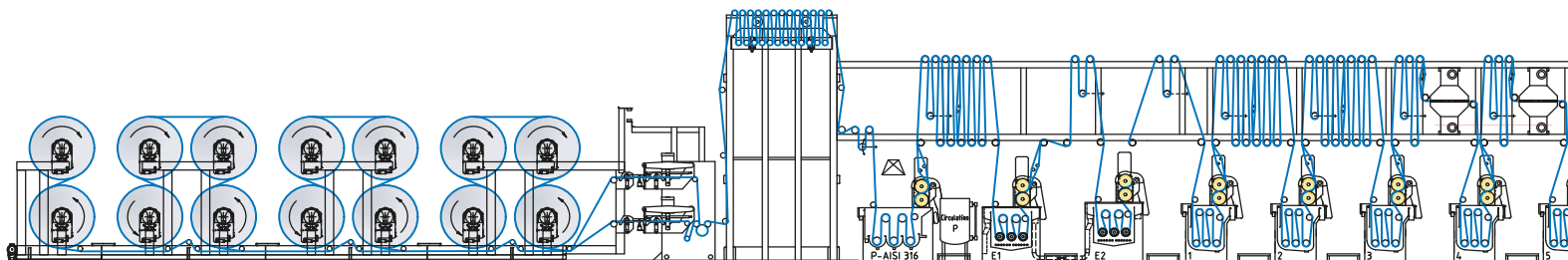
FLEXIDYE

Our new machine for continuous warp dyeing has been developed in synergy with leading denim manufacturers in order to reach the highest flexibility, efficiency and easiness of use and maintenance.

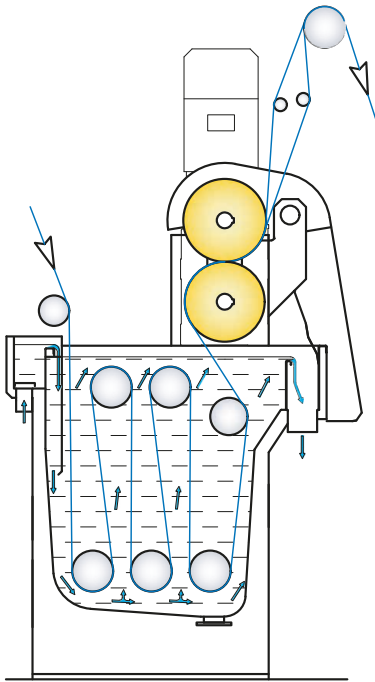
It is impossible to describe all the features of our Flexidye machine in this leaflet. We can just mention few as the Multiflow dyeing boxes, the Greenwash boxes, the Fast Oxidation enhancers, the

new circulation system, the exclusive Ramweld system that allow to automatically connect the lots without stopping or slowing the dyeing machine, the equipressure rolls in stainless steel and rubber, the dandy rolls for a ultra-soft speed adjustment.

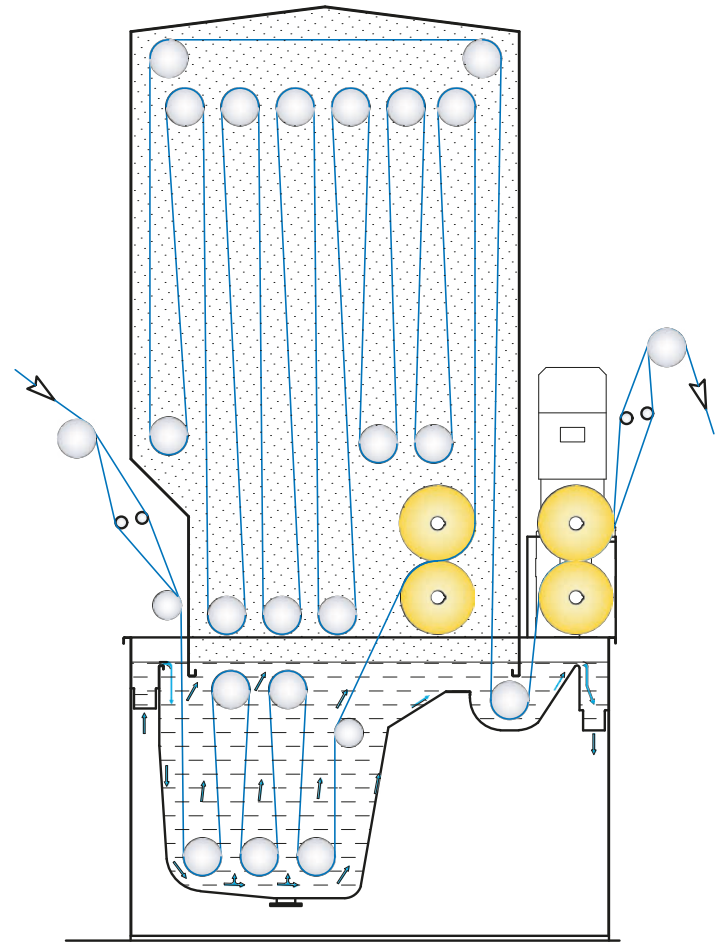
With our new Flexidye indigo dyeing line our customers can get significant savings in water and chemicals consumption, in cotton waste and in maintenance.



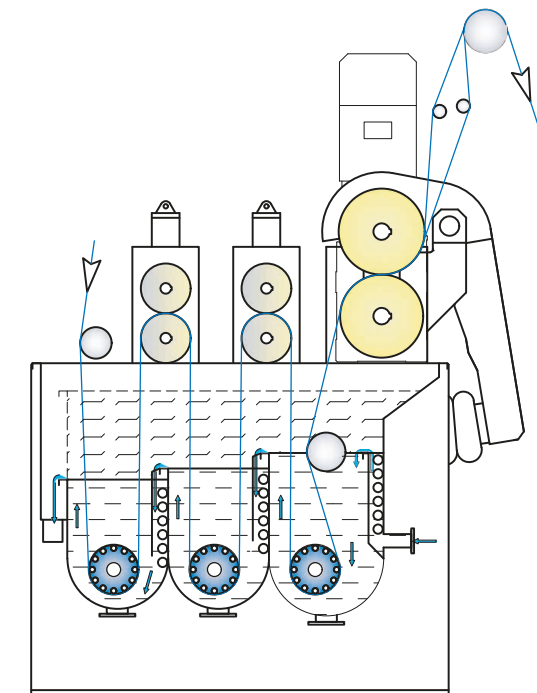
THE LINE OF TEXTILE



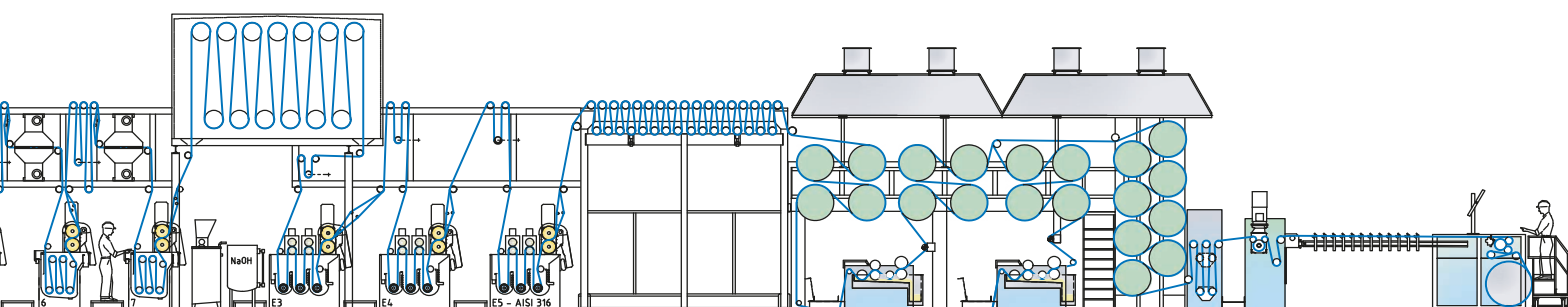
The Multiflow dyeing box has a special and perfect circulation system of the bath that guarantee a uniform dyeing of all yarn.



The Nitrogen dyeing box with double squeezing guarantee an excellent penetration of the colour with significant reduction of hydrosulphite and soda consumption.



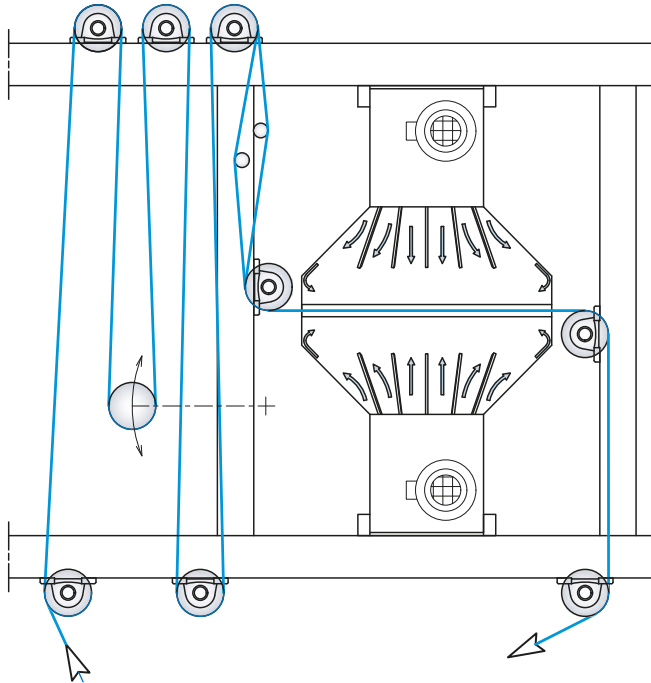
The Greenwash box with 3 counterflow compartments and special rolls allow significant reduction in water consumptions and more efficient washing.



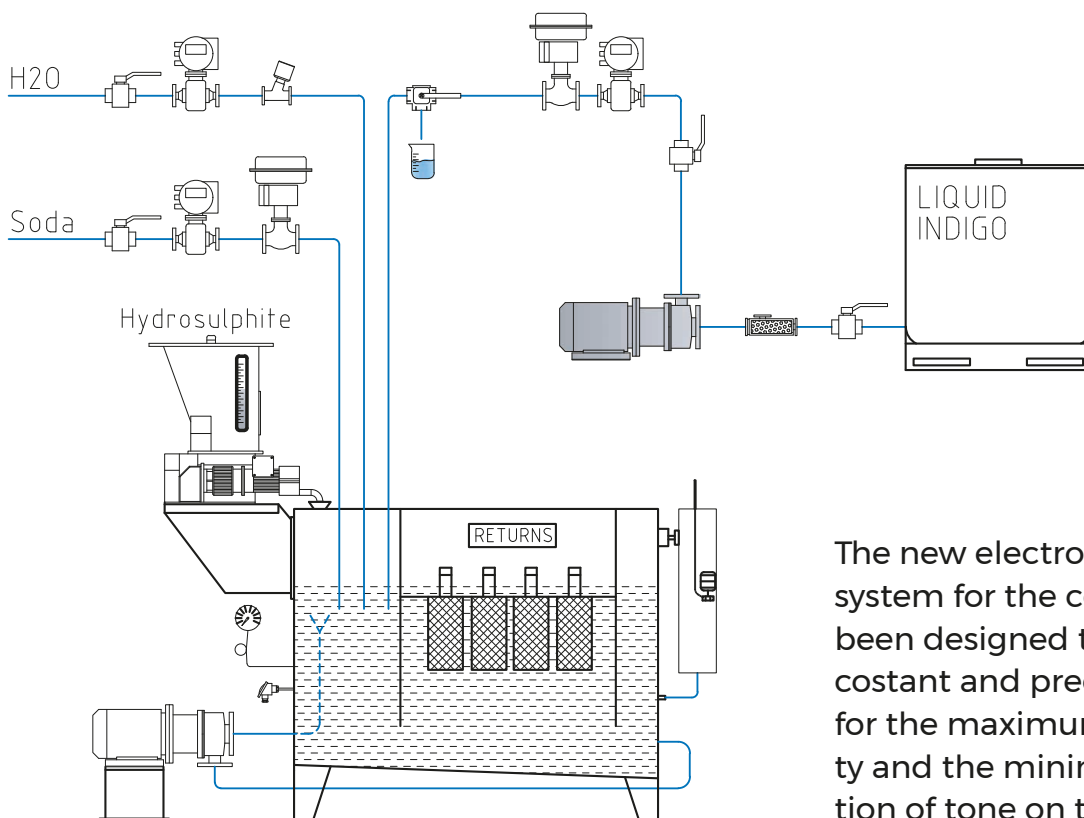
THE LINE OF TEXTILE



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The new Fast Oxidation enhancers have a wide surface and high prevalence fans to ensure a more deep oxidation with the significant advantage of less discharge of indigo from the yarn in the subsequent bath.



The new electronic dosing system for the colours has been designed to ensure constant and precise flow for the maximum reliability and the minimum variation of tone on the yarn.



NEW MECHANICS

NEW ELECTRONICS

NEW DESIGN

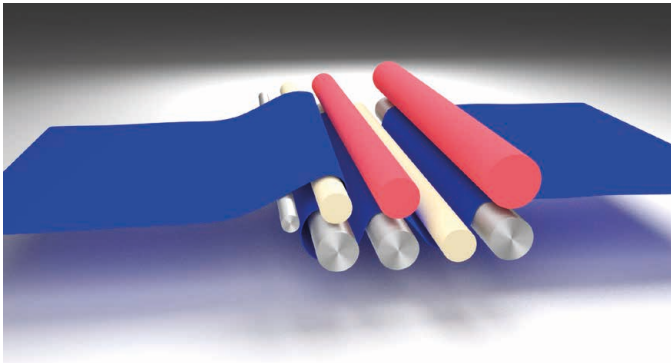
FLEXISIZE

Ramallumin new sizing machine is the result of more than 70 years of expertise in sizing upgraded in mechanics, electronics and in the design following the suggestions of the customers that are working with our machines since 1948.

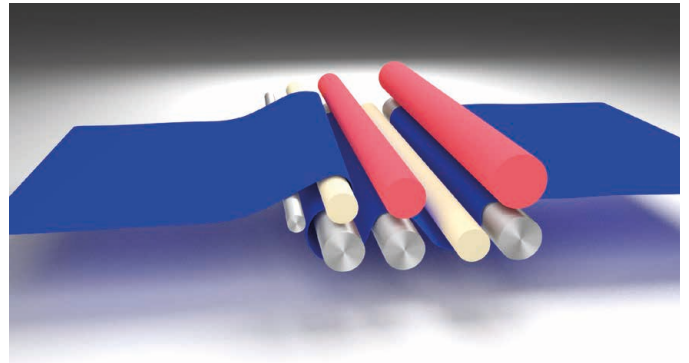
The new headstock has been designed to be user friendly and safe also thanks to the new control panels that allow a very ergonomic control of the machine. Its specific system for warp tension control ensure constant beam hardness from the beginning to the end with significant advantages in the weaving phase.

The simplicity of the machine means short training for the operators and reduced maintenance.

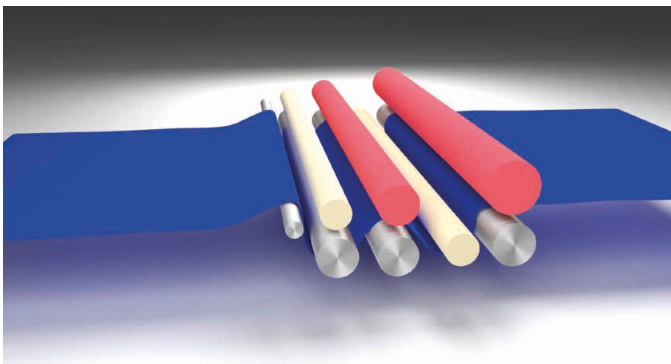
THE LINE OF TEXTILE



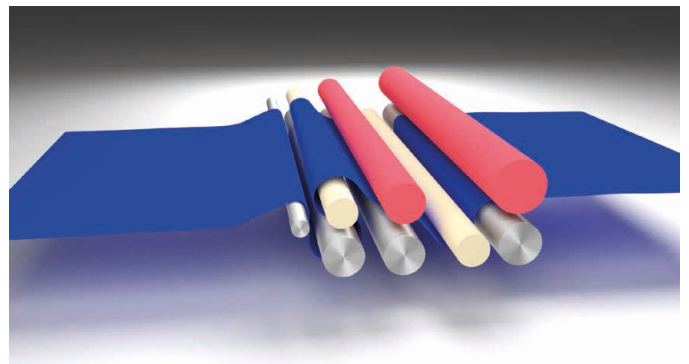
3 nips



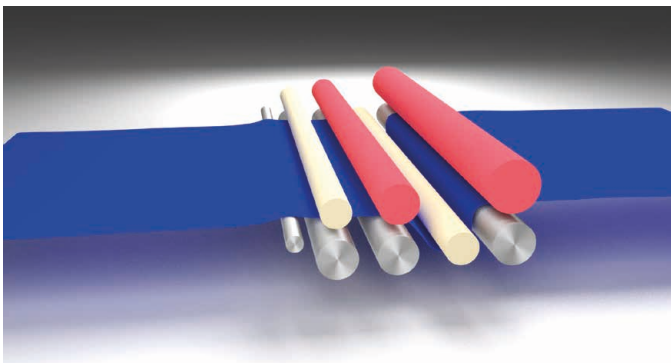
4 nips



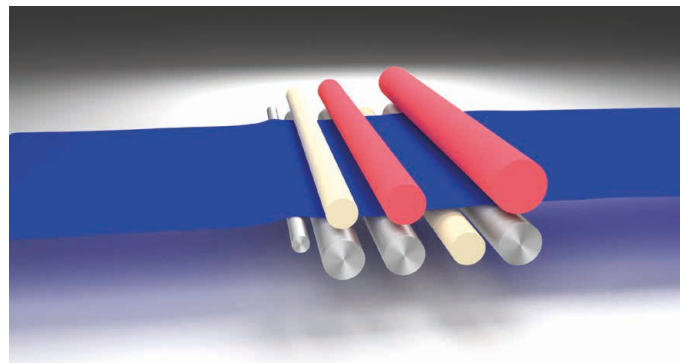
2 nips + 2 dips



3 nips + 2 dips



1 nip + 1 dips



1 nip

PERFECT SIZING

The sizing box is 100 % in stainless steel for a long lasting reliability even with the most aggressive chemicals. Thanks to the efficient and flexible squeezing system it is possible to use up to 6 different threadings in the same machine in order to have always the best result even with different qualities of yarns and chemicals.

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The perfect squeezing is the result of the combination of equipressure rolls in stainless steel and rolls rubber coated. The main squeezer can reach 50kN pressure.

The temperature of the size is controlled continuously and automatically adjusted through indirect size heat exchanger in stainless steel located in the bottom of the box.

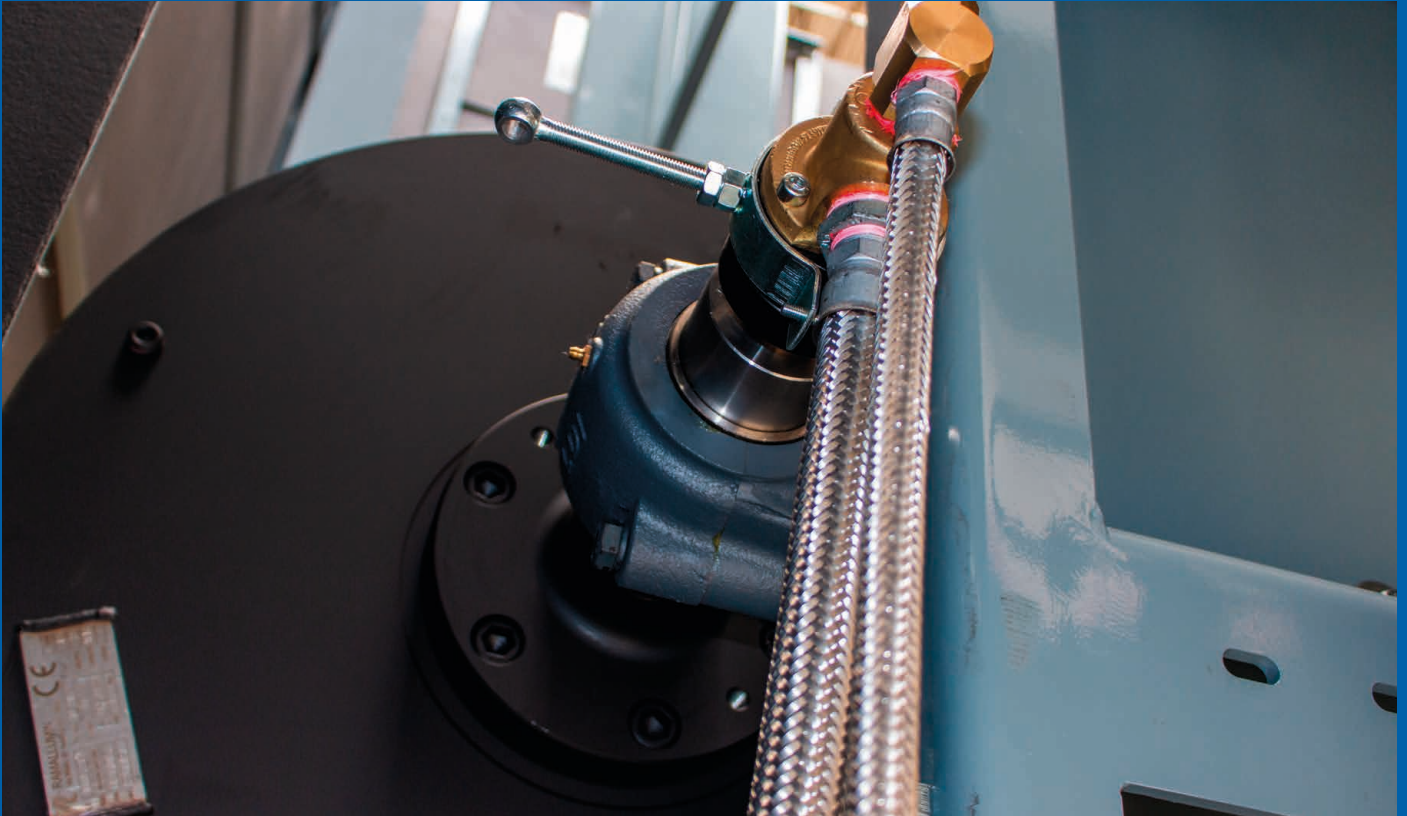
The special circulation system with the easy to clean size filter allow the operator to work with confidence.

The automatic system that controls and continuously adjust the dosing of the sizing guarantees uniform size pick-up at different operating speeds.

The yarn tension is controlled automatically in every section of the machine. The yarn stretch is constantly monitored in any section and at any speed.

The machine is provided with an electronic system to control residual humidity on the yarn in order to reduce energy consumption and increase efficiency.





DRYING COOLING

Ramallumin is specialised in the production of drying and cooling cylinders for more than 60 years and for this reason we can guarantee superior accuracy in the production and in the surface polishing required for yarn process.

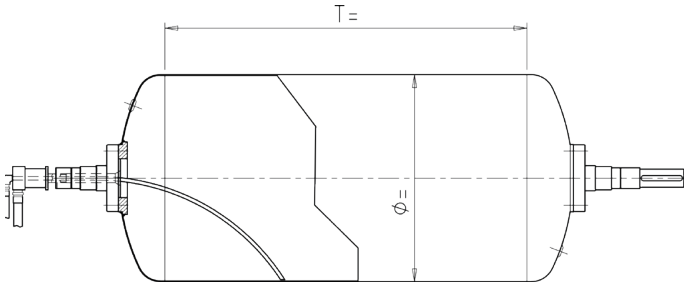
Stainless steel wall thickness is 3 mm to ensure maximum working pressure of 6 bar at 160° C.

Roller bearings are housed in big pillow-blocks with increased grease content to reduce maintenance.

Drying cylinders are equipped with flanged journals, this means that when the customer needs to disassemble them it can be done very easily without dismantling the frame.

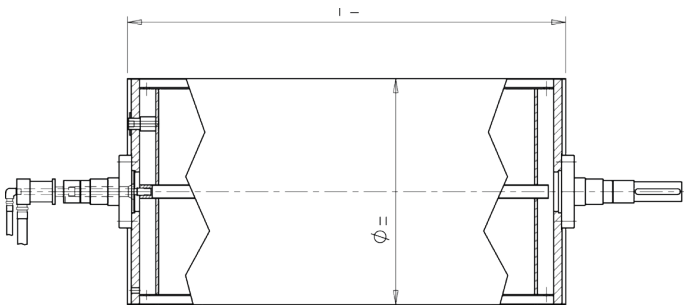
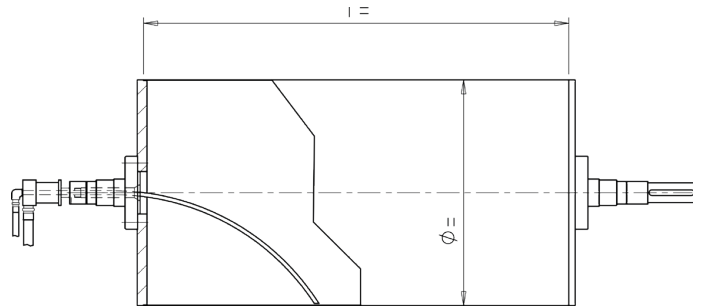
In the cylinders are included special rotary joints for steam and condensate manufactured 100% in stainless steel and one trap for each.

Ramallumin dryer is supplied with special threading in order to split warp web in two layers and increase sizing quality and density.



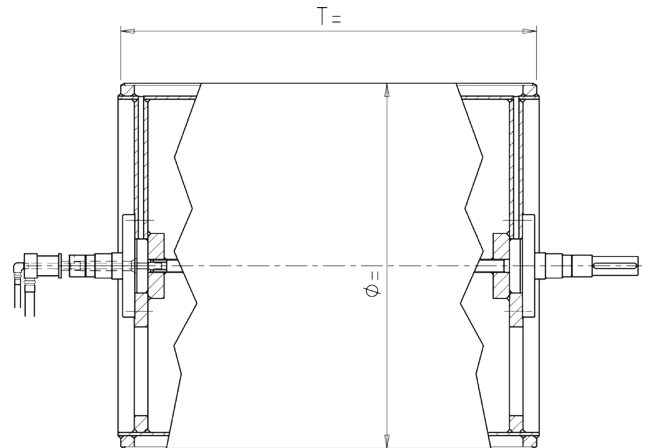
Stainless steel
Steam
Ø 570-960 mm
T 1000-6000 mm

Stainless steel
Steam
Ø 320-960 mm
T 300-6000 mm



Stainless steel
Water, Oil
Ø 320-960 mm
T 300-6000 mm

Steel
Water, Oil
Ø 800-220 mm
T 1000-6500 mm



STEAM, OIL
PRESSURE
WATER

We produce cylinders for woven fabric, nonwoven, warp, fabric, plastic sheets, rubber for many different applications where a reliable and efficient solution for drying is requested.

The heating systems can be steam, oil, pressure water.



COATING

The machine has been designed to provide coating of the fabric produced by a weaving loom in order to give stability and special features to the fabric itself.

For mentioned purpose the fabric produced by the loom is dipped into proper chemical bath, is squeezed by a couple of cylinders and finally dried with infra-red radiant panels, electrically heated.

All the operations are done in-line with the loom.

Due to special drawing of the equipment, space required for the installation of the equipment is very limited.

The section for impregnation and squeezing is located in the lower part of the group and includes a strong frame in steel.

Fabric produced by the loom is dipped into the pan of chemicals by mean of 1 guide roll and 1 dipping roll.

The box is in stainless steel quality AISI 304 and, for cleaning purpose, it is equipped with four wheels to remove it from the operation position.

Squeezing cylinders are located at outlet of coating box.

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One cylinder is manufactured in steel pipe, chromium coated, the other squeezing cylinder is manufactured in carbon steel and it is covered with rubber.

Working pressure between cylinders can be adjusted by two pneumatic pistons up to maximum squeezing pressure of 500 kg.

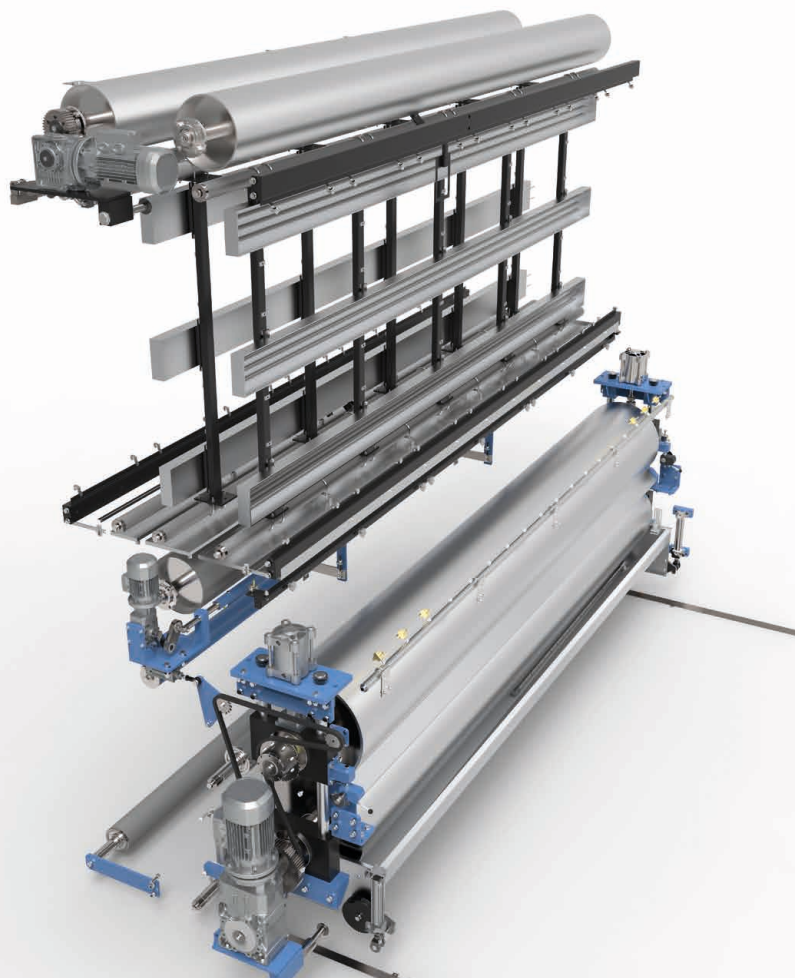
Servomotor is of AC type, installed power 1,5 kW approximately, loop controlled by inverter.

A guide roller is located at inlet, to set the threading of squeezing cylinder.

The drying section is mounted on the upper part of the frame and consists in one chamber duly insulated. Fabric coming from the squeezers, enter into chamber from the lower side and comes out from same part having been threaded by 2 guide rolls.

Total run of the fabric inside the oven is about 3.160 mm approximately. At each side of fabric are located IR panels electrically heated. Total installed power is 90 Kw.

For temperature control there are 2 infrared pyrometers located at each side of fabric.



A wide-angle photograph of a large industrial factory. The ceiling is high with a complex steel truss structure and large skylights. The floor is concrete with orange safety lines. Various pieces of industrial machinery, including a large blue machine on the left and a green forklift in the center, are visible. Two workers in blue uniforms are seen in the distance. Two large blue circles with white text are overlaid on the image.

0%

DEFECTS

In all our processes
we aim to the continuous
improvement

100%

EFFICIENCY

Our goal is the highest
performance with
the lowest resources



Ramallumin srl

Via E. Ferrari 7 - 20020 Magnago (MI) - ITALY

Tel: +39 0331 657678

info@ramallumin.com

Ramallumin INDIA

701, Park Ave., New Palace Area,

Kolhapur - 416 003 (M.S.) INDIA

ajay.pise@ramallumin.com

www.ramallumin.com