HI-TECH SOLUTIONS
FOR THE TEXTILE INDUSTRY

RE-FLEX MT

Precision cone-to-cone **winding** machines with electronic thread guide and mandrel take up arm

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OF INNOVATION

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Precision cone-to-cone **winding** machine with electronic thread guide and mandrel take up arm

This series of Winding Machines, designed to process all type of yarns, staple fibers and continuous filament yarns, represents the best expression of RITE winding technology. The highest results in terms of quality, productivity and flexibility in a single top-grade machine.

INTRODUCTION

Re-Flex range with electronic thread guide with precision crossing angle represents the maximum expression of RITE winding technology, on which the latest innovations has been applied in order to ***achieve quality, productivity and flexibility*** such as:

- Electronic thread guide system
- Innovated design on take up tube mandrel
- Brushless motor technology
- Pneumatic control of counterweight (soft packaging) pressure
- Precision digital meter counter
- Electronic yarn winding tension control with resolution of 0,1 gr.

Re-Flex MT machines in both versions for soft winding and rewinding are studied to process all types of yarns, staple fiber and monofilament yarn.

TOUCH SCREEN

On Re-Flex range of winding machines, all functions are controlled by a touch screen placed on the machine's headstock, which controls all the single winding units. On the touch screen, the operator of the machine can set up all the winding parameters regarding the package , yarn feeding and production details as:

- Type of winding (Isoangle, Precycone,Densycone)
- Crossing angle
- Coil distance
- Package pressure
- Yarn winding tension
- Package traverse
- Rounding of the edges
- Tapering
- Winding speed
- Package diameter
- Soft edges
- Anti-patterning
- Tailing device
- Acceleration/deceleration ramp
- Package metering
- Package density
- Production sectors
- Number of package to produce
- Waxing device speed
- Feeding roller over speed percentage
- Oiling device speed
- Shift/days/working hours

Memory
It is possible to save ***all working programs.*** Each time it is requested to process the same item, it is sufficient to recall the code (or name) from the memory. The memorized items may be used for each single winding unit, for sections or for the entire machine.

All data are repeatedly monitored by the touch screen where you can see all the spindle status. Optional: data storage on USB key.

ELECTRONIC TECHNOLOGY

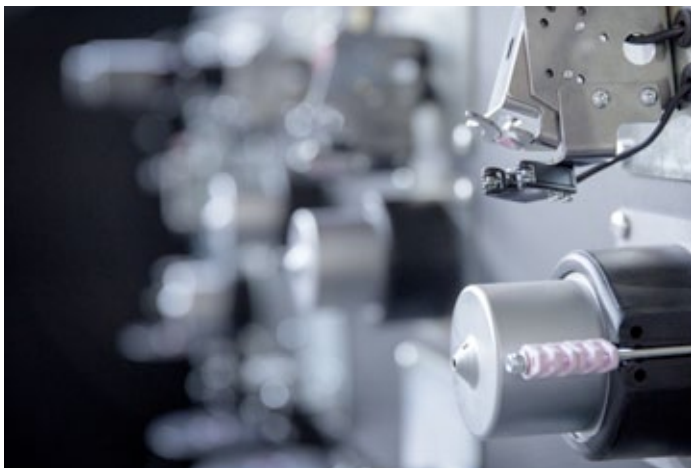
On the Re-Flex range of winding machines, the electronic thread guide system uses the step motor technology, where the yarn guide is mounted on a very strong belt, which rotates on two pulleys, led by a step motor. This solution where the entire mass involved is so small, allows ***to reach high working speed performances*** and double stroke per minute , still maintaining under control the electric energy consumption. It also permits to work under dry solutions (without oil or grease) eliminating lubrication shortening maintenance time.

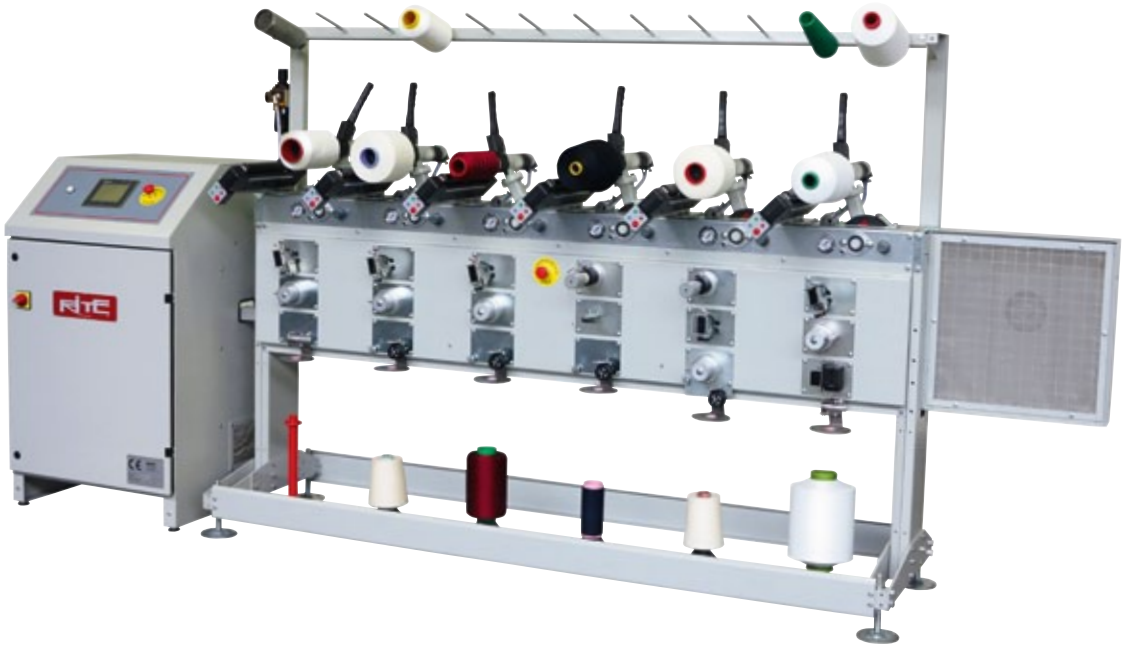
The motor step technology used to lead the yarn guide motor, permits to choose the package traverse and shape directly from the ***touch screen***, spindle by spindle, by sections or for the entire machine. This permits to produce packages with different features.

FULL PRECION WINDING MACHINE FOR HARD PACKAGE & VERY SOFT PACKAGE

The take up package, held by a mandrel, is directly led by a brushless motor connected on the same rotation axis. This solution along with the thread guide system lead by a free standing motor, defines the full precision winding machine concept. It is ***the only winding machine able to guarantee*** a perfect and controlled yarn laying without any ribbon problems.

In each winding unit a pneumatic piston controls and sets the kinematics of the package holder, so as to be able to obtain different pressures during bobbin formation and the desired softness and density.





You can also install the ***"Individual Counterweight System"*** where it is possible for each spindle to adjust the requested counterweight pressure, by individual manometers, instead of a single one that controls the entire winding units. This system allows more flexibility on the machine! It is also suitable for fitting socks on the package.

COMPUTERIZED ACTIVE ROLLER

RITE yarn electronic tension controller called "Computerized Active Roller" gives the key advantage to constantly control and set the winding yarn tension, with a resolution of 0,1 grams during the entire winding process, independently from the variation of tension coming from the feeding bobbin. On the headstock touch screen, the operator sets the desired yarn winding tension, which is constantly controlled by an electronic sensor, put on each single winding spindle. The sensor is linked to a motorized feed roller, its rotation speed is continuously synchronized and adjusted by the yarn tension controller in order to maintain the same tension in output.

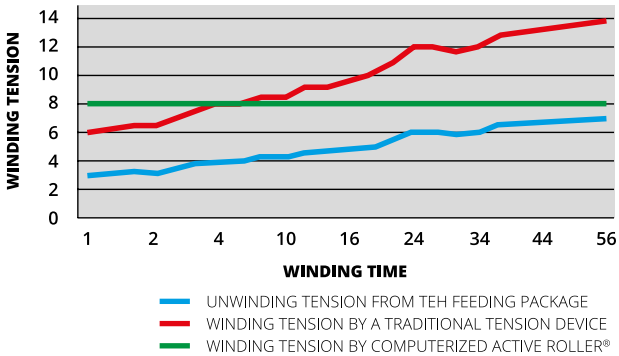
This carried on auto-regulation keeps unvaried the winding tension of the yarn, it guarantees the production of packages with unvarying tension and therefore with the same density inside and outside, from one package to the next and from spindle to spindle.

MOTORIZED WAXING DEVICE

All spindles have individual motorized waxing device where both rotation sense (clockwise/counter clockwise) and rotation speed can be selected for each spindle, each section or for the entire machine, from the touch screen. When the winding unit stops a pneumatic piston keeps the wax far from the yarn passage point, making it easier for the operator to reintroduce the yarn.

MOTORIZED OILING DEVICE

All spindles have individual oiling device where the rotation speed can be selected, for each spindle, each section of for the entire machine, from the touch screen. The device is composed of an individual roller oiling device with individual carter to collect the remaining oil. The oil supplying comes from a main hydraulic pump with filter.

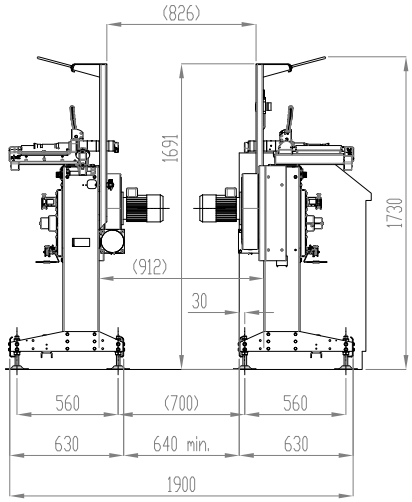


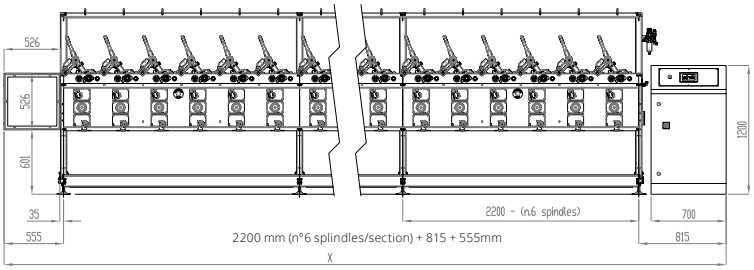
TECHNICAL DATA

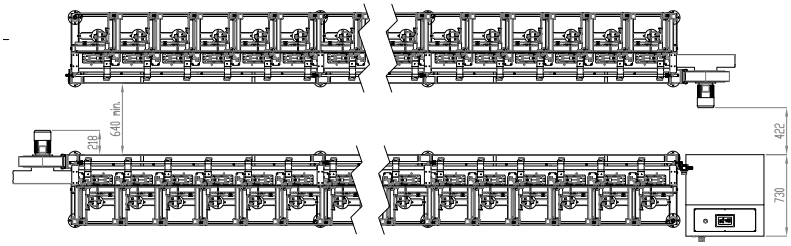
YARNS PROCESSED	Natural fibers, sinthetics or blended. Staples fivers and continuous filament.
RANGE OF COUNTS	• From 5 to 4.500 Dtex • From 1 to 250 Nm • From 0,5 to 200 Ne
WORKING PROCESS	Soft winders and re winders
MECHANICAL SPEED	Up to 1.700 mt/min
WINDING SPEED	Up to 1.500 mt/min
TRAVERSE SPEED	Up to 900 ds/min
INSTALLED POWER	250W per winding unit
ABSORBED POWER	500mt/min – 37W 1.250 mt/min – 83W
YARN-GUIDE TRAVERSE	From 25mm up to 210 mm
TAKE-UP ARM	Mandrel driven by brushless motor
YARN-GUIDE	Electronic yarn guided system by step motor
WINDING STYLE	ISOANGLE: constant crossing angle for the whole process. PRECYCONE: constant pitch but decreasing crossing angle DENSYCONE: variable pitch following the diameter and constant crossing angle (+/– 1°)
TAKE-UP TUBES	Cylindrical or conical tubes, plastic paper or spring (0° - 3°30' – 4°20' – 5°57')

PACKAGE COUNTER WEIGHT SYSTEM	By pneumatic devices with a centralized manometer or by individual manometer one for each winding unit.
AIR COMPRESSED CONSUMPTION (PRESSURE 4 BAR)	With centralized counterweight system: < 5 Nl/min per machine With individual counterweight system: 1 Nl/min per winding unit
CONTROL HEAD	• Computerized terminal • Main switch • Emergency and switches • Transformer
STANDARD CONFIGURATION	• Internal feeding creel for packages or cops • Balloon controller • Yarn clutch device • Yarn sensor • Electronic yarn guide • Holder arm by motorized mandrel • Centralized counterweight device
EXTRA DEVICES AVAILABLE	• Computerized Active Roller ® • Driven waxing device • Driven oiling device • Individual counterweight • Over head cleaner • Joint-air splicer and water splicer • Pre-arrangement for electronic clearers
DIMENSIONS	Sections with 6 winding units, max 120 spindles per machine, single side, length of the section 2.200 mm Double side also available, with max 120 units (240 units for each side)

LAYOUT







MEASURES

SECTION	WINDING UNITS	LENGTH (mm)
1	6	3.570
2	12	5.770
3	18	7.970
4	24	10.170
5	30	12.370
6	36	14.570
7	42	16.770
8	48	18.970
9	54	21.170
10	60	23.370

RICAMBI TESSILI - RITE S.R.L.
Via S. Martino, 2 - 33081 Aviano (PN), Italy
T +39 0434 651211 F +39 0434 651212 - info@ritespa.it - www.ritespa.it

ACIMIT ITALIAN TEXTILE MACHINERY

CE RITE PRODUCTION HAS BEEN CERTIFIED