

HI-TECH SOLUTIONS
FOR THE TEXTILE INDUSTRY



RE-FLEX A

Precision electronic **assembly** winder

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RE-FLEX A

Precision electronic **assembly winder**

The Re-Flex series stands for the ultimate solution in winding processes. The highest winding quality comes together with the best package shape and the lowest production costs. RITE hi-tech solutions for the textile industry, with the Re-Flex series have reached perfection.

INTRODUCTION

Re-Flex range with electronic thread guide with precision crossing angle represents the maximum expression of RITE winding technology, on which the latest technology 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 A machines are studied to process all types of yarn, staple fiber and monofilament. The Assembly Winder Re-Flex A, is a machine with independent working spindles with electronic yarn guide, in order to produce different traverse 5", 6", 7", 8", 10", and all kind of shapes, suitable for old and modern Two-for one-twisters.

Standard machine is equipped with precision metercounters, counters, cutters, internal creel at 2 plies with electronic sensors for yarn presence control, disc or deviation tensioners and pre-clearers for each end. The "high density" assembly winder mod. Re-Flex A is able to deposit the coils on the package in a controlled and precise way to obtain the maximum density. As it is well known, in the conventional assembly winders, coils are randomly deposited because the crossing angle remains constant compared to the diameter growth.

This produces, apart from patterns, irregular interspaces among coils deposited on the package. With RITE new machine, making the proper adjustments on the computer, the inter-spaces can be reduced or eliminated so that package produced is free from ribbons and can reach a very high density (+25-30%) with compared to the packages obtained on conventional machines. Re-Flex A is also equipped with automatic doffing device for each spindle with correspondent tubes storage and package conveyor belt. The higher density of the package obtained and the presence of individual automatic doffing device produces a remarkable increase of the worker productivity and consequently a substantial drop in twisting costs. Besides, quality is upgraded due to the lower number of knots per kg.

Upon request:

- Third ply on the internal creel;
- Various external creels up to a maximum of six plies with reserve
- Elastomer device
- Air splicer device
- Blower
- Yarn oiling device

TOUCH SCREEN

On the Re-Flex range of winding/assembly winder 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
- Packing 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
- Production sectors
- Number of packages to produce
- Package density
- 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.

STEPPER MOTOR 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 PRECISION WINDING MACHINE

The take up package, held in place by an arm with adaptors, is directly led by a brushless motor through a timing belt. This solution, along with the yarn guide system led by a free standing motor, determines the concept of "**Full Precision Winding Machine**" the **only winding machine able to guarantee** a perfect and controlled yarn laying without any ribbon problems.

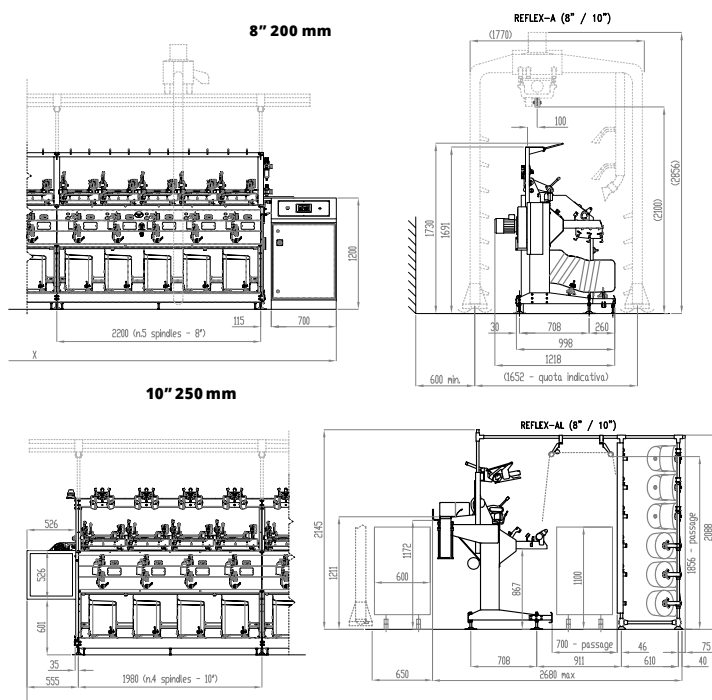
The fact that the take up tube is locked between two adaptors guarantees control and structural stability during the entire winding process, necessary in order to reach with Re-Flex A Machines the highest levels in quality, production and efficiency. You can install the **Individual Counterweight System** 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! **Automatic doffing and conveyor belt** are available on assembly winder machines.



TECHNICAL DATA	
YARNS PROCESSED	Natural fibers, synthetics or blended. Staples fibers and continuous filament.
RANGE OF COUNTS	<ul style="list-style-type: none"> • From 5 to 4.500 Dtex • From 1 to 250 Nm • From 0,5 to 200 Ne
WORKING PROCESS	Assembly winder for more than 2 plies
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 250 mm
TAKE-UP ARM	Holder arm with adaptors, 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 NI/min per machine With individual counterweight system : 1 NI/min per winding unit
CONTROL HEAD	<ul style="list-style-type: none"> • Computerized terminal • Main switch • Emergency and switches • Transformer
STANDARD CONFIGURATION	<ul style="list-style-type: none"> • Internal feeding creel for packages or cops • Balloon controller • Yarn clutch device or by deviation • Yarn sensor • Electronic yarn guide • Motorized holder arm • Individual counterweight device for RE-FLEX A optional • Precision metercounter
EXTRA DEVICE AVAILABLE	<ul style="list-style-type: none"> • Extra feeding ply in internal creel • Feeding plies from external creel up to 12 plies • Feeding plies • Feeding from elastomer/Lycra • Oiling device • Clearers
DIMENSIONS	Sections with 5 winding units, max 60 spindles per machine with traverse 8" (200 mm), single side, length of the section 2.200 mm. Version with yarn-guide (10") traverse up to 250 mm, sections with 4 winding units with section of 1980 mm.

LAYOUT



TRAVERSE UP TO 8" 200 mm

SPINDLES	X [mm]
5	3.570
10	5.770
15	7.970
20	10.170
25	12.370
30	14.570
35	16.770
40	18.970
45	21.170
50	23.370
55	25.570
60	27.770

TRAVERSE UP TO 10" 250 mm

SPINDLES	X [mm]
4	3.370
8	5.370
12	7.370
16	9.370
20	11.370
24	13.370
28	15.370
32	17.370
36	19.370
40	21.370
44	23.370
48	25.370
52	27.370
56	29.370
60	31.370



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