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Savio machines are equipped with safety devices in compliance with existing regulations.

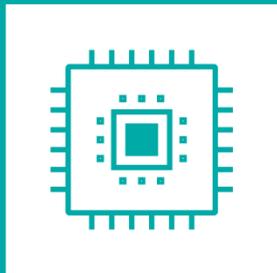
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# COSMOS

## TWO-FOR-ONE TWISTER

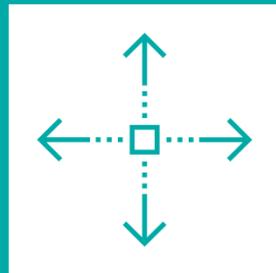




TECHNOLOGY



EFFICIENCY



FLEXIBILITY

## COSMOS

### TWO-FOR-ONE-TWISTER

#### Simple, Reliable, State of Art twisting

Cosmos represents another Savio proposal in the field of twisting to ensure maximum cost-effectiveness of the technological process through constructional solutions that allow a reduction in investment with a minimum of energy consumption.

The aim of all this is to maximize the productivity of the machine, the quality of the package and the twisted yarn, along with the technological flexibility, that is today an indispensable requirement for any textile market.

#### BENEFITS:

- Reduction in investment with minimum energy consumption.
- Wide range of feeding solutions.
- Various selection of optional.
- Tangential belt drive system for minimal twist variation.
- Compact design with less width.
- Low noise gearbox with toothed belt system.
- Robust cradle for stable running and longevity.
- Spindles upto 240 per machine

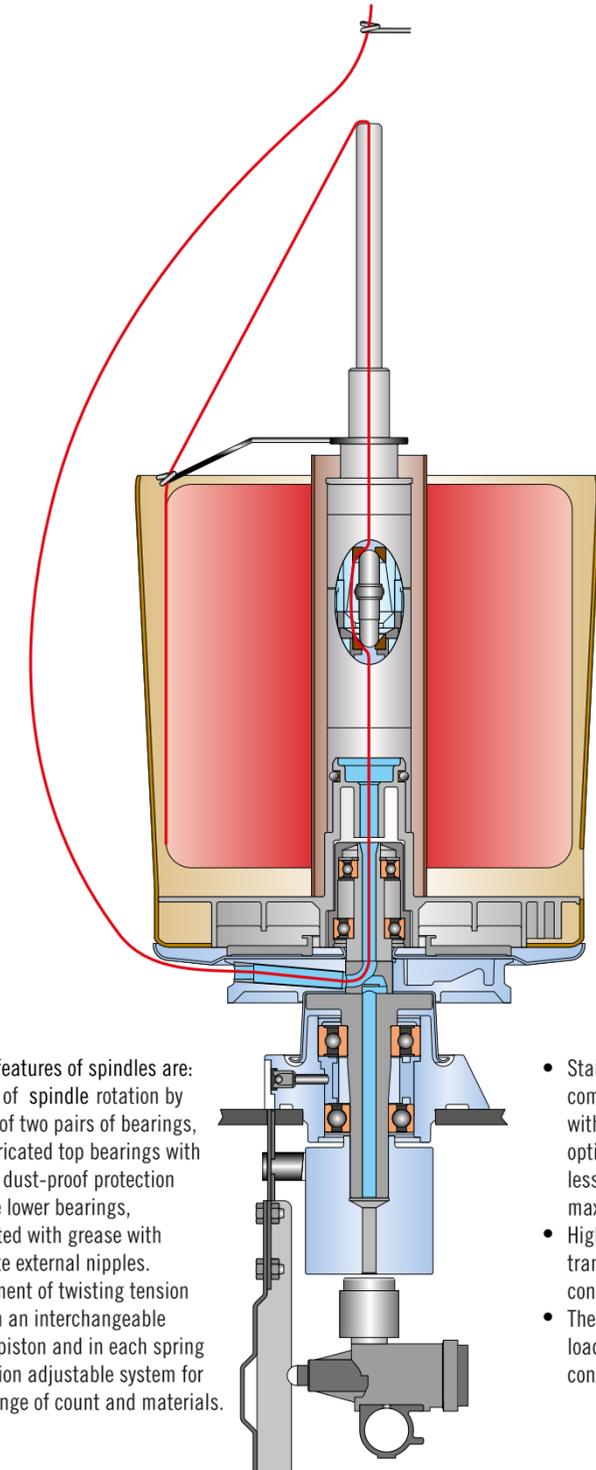


## TECHNOLOGY

Twisting technology allows, by means of a twist, to tie together two or more threads, around their longitudinal axis. This procedure produces yarn with greater resistance, greater regularity and particular appearance/hand effects.



## The spindle



Savio's many years of experience in the creation of various models of twisters, and especially spindles, has allowed the development of range of spindles, with shapes and manufacturing techniques aimed at maximizing the weights of packages being fed, with different materials and counts, always giving priority to energy absorption.

The main features of spindles are:

- System of spindle rotation by means of two pairs of bearings, life lubricated top bearings with special dust-proof protection and the lower bearings, lubricated with grease with separate external nipples.
- Adjustment of twisting tension through an interchangeable spring piston and in each spring 6-position adjustable system for wide range of count and materials.

- Stainless steel plate and compensation pulley in aluminum with a ceramic coating, with optimised shape that guarantees less power absorption and maximum feeding content.
- High flexibility thanks to quick transformation from free to controlled balloon.
- The brake area ensures, reduced load on the ball bearings and consequently a longer life



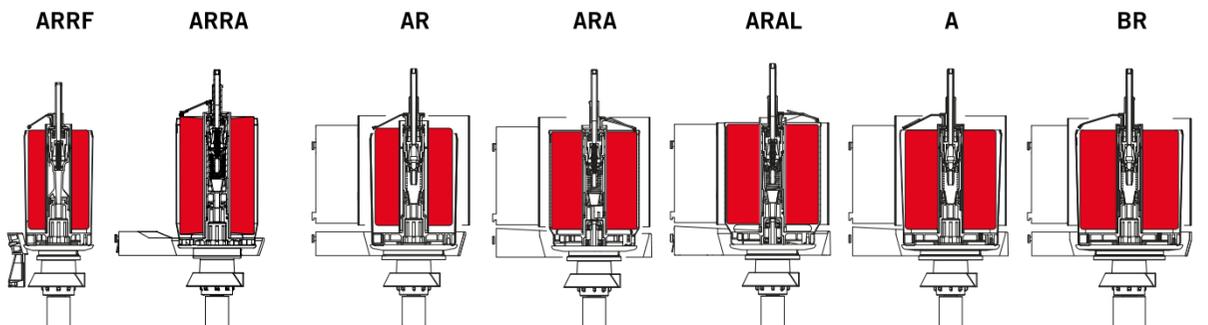
## Spindle range



You can choose the best spindle according to dimension, weight and density of feeding package.

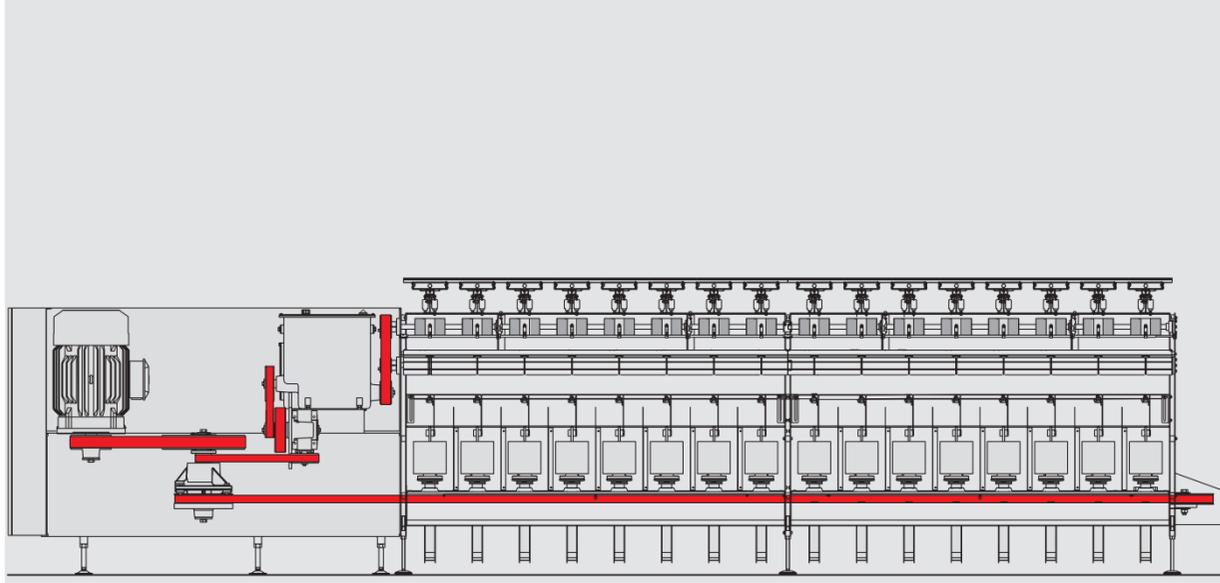
The use of the smaller diameter spindle involves: lower energy consumption, less energy per kilos of twisted yarn produced; higher twisting speed and higher productivity; lower twisting tension and better quality of twisted yarns; less noise at the same speed.

The use of the bigger diameter spindle involves: lower needs of work force; less package doffing is necessary at a certain package weight; lower number of joints in the final package.





## Compact tangential drive

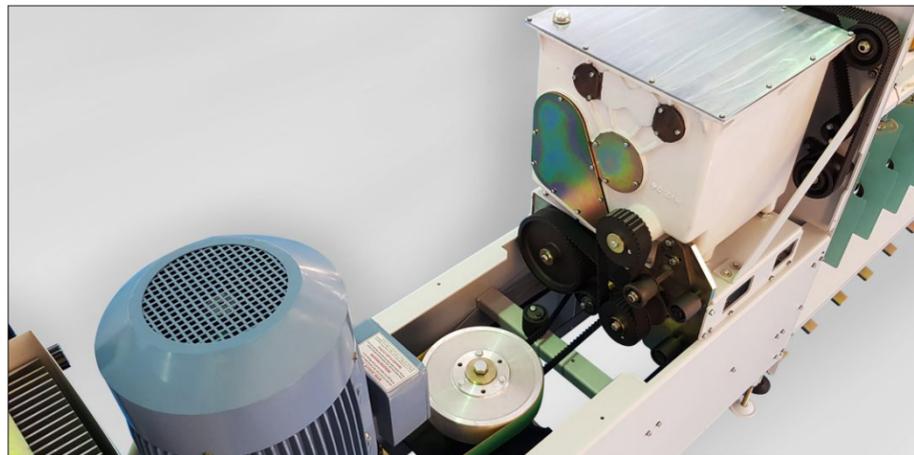


Encased tangential drive and motorization system to reduce noise, keeping free from dust and lint.

- Twist variation by means of drive pulleys positioned at the front for easy access.
- Mechanical change of S/Z twist variation.
- Headstock gears allows regulating the mechanical modulation -for antiribbing effect, and the cross winding angle variation for package density.
- The gearbox has oil level indicator and oil flow indicator bulb to check oil circulation by the pump.
- User-friendly Gears Head stock for ease of access to change places.
- High performance, low noise toothed belts.

Control unit with display for:

- Spindle speed
- Twists number
- Take-up speed
- Motor power absorption (Ampere)
- Time counter
- Yarn length meter for programmed machine stop

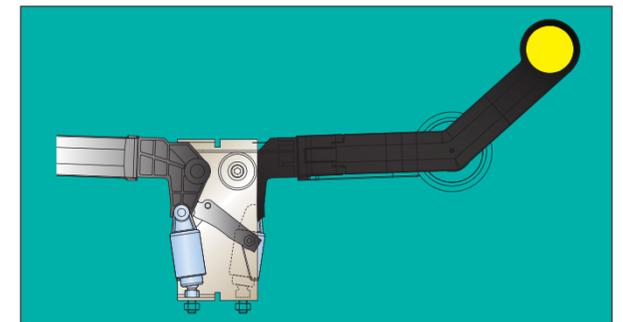


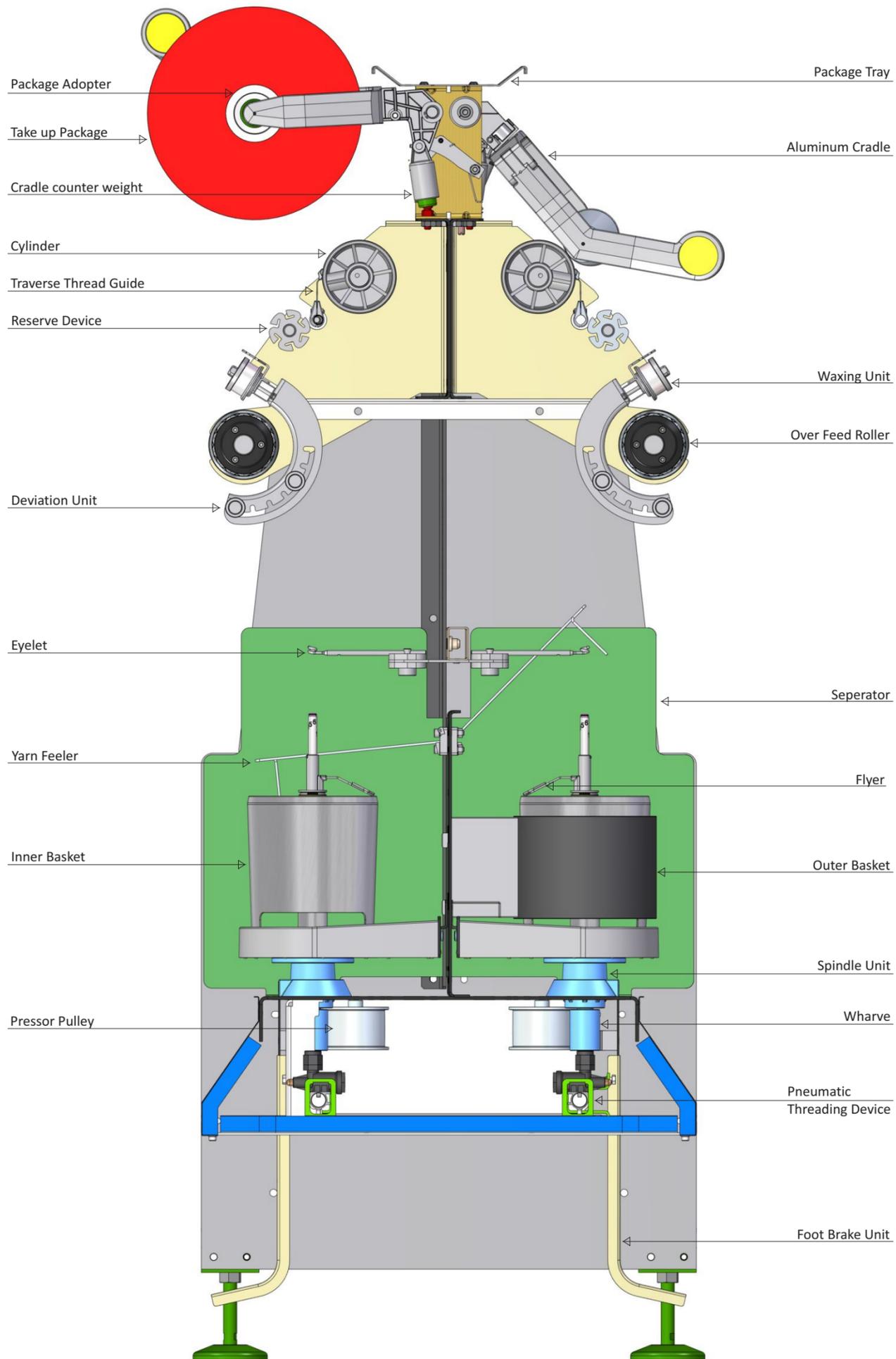
## Package cradle



The package cradle, specifically designed to perform a simple manual package doffing, is equipped with:

- Rigid aluminum cast cradle with spring, ensures stable running and yields excellent package
- A spring loaded piston ensures the proper weight compensation for any package with two different available springs for changing the compensation

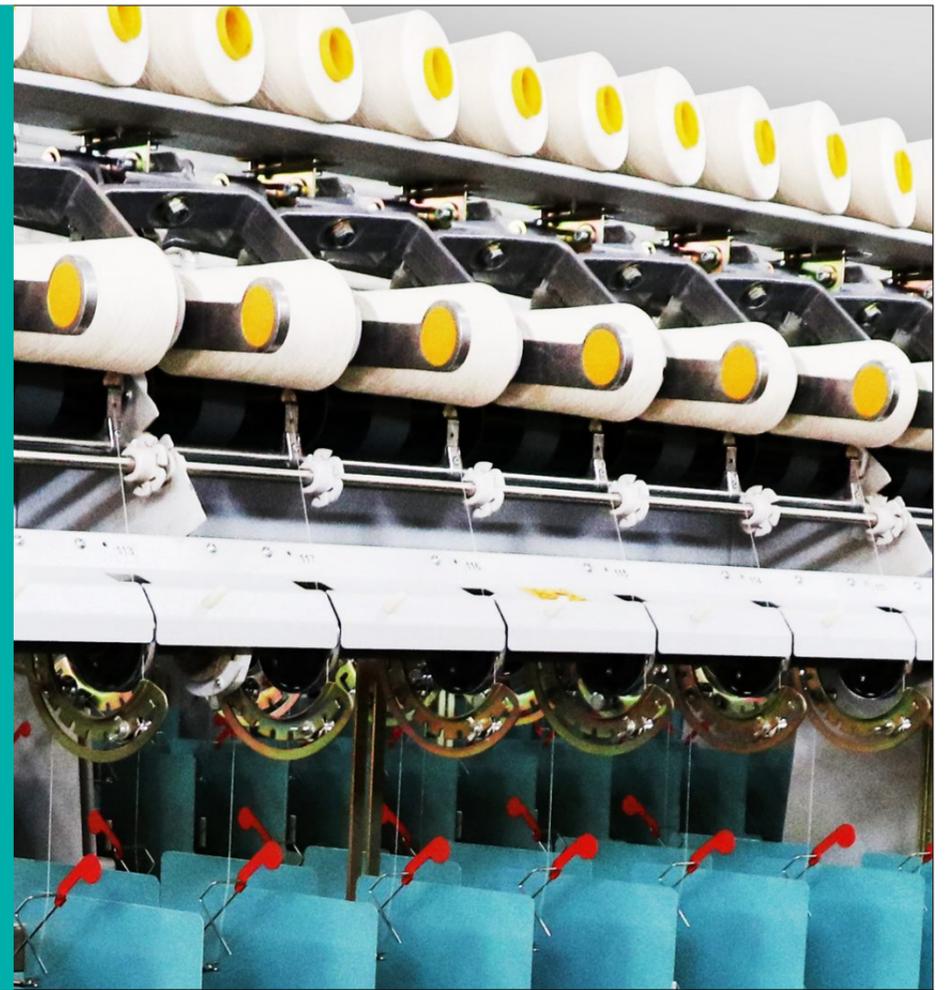




## EFFICIENCY

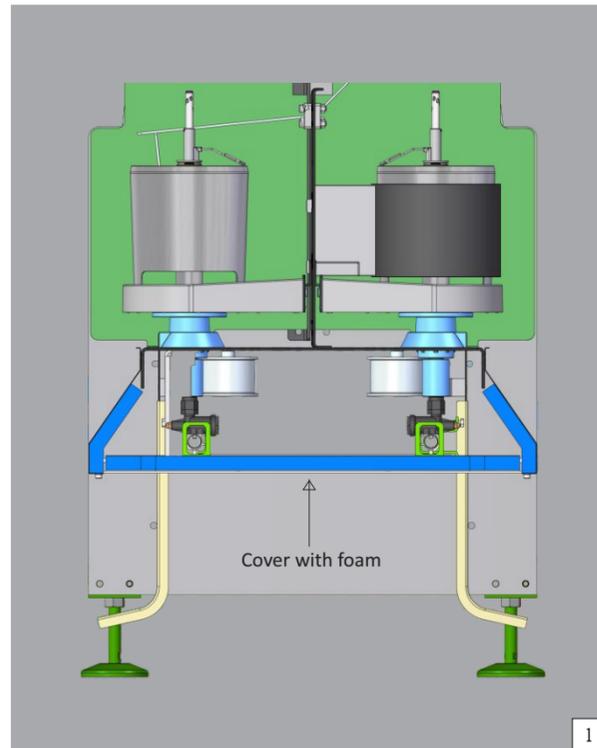
The simplified and user-friendly gear head stock with ease of access to change places and fewer settings reduces the set up time.

This simplifies the use and maintenance of machine ensuring higher up time and availability of the machine.





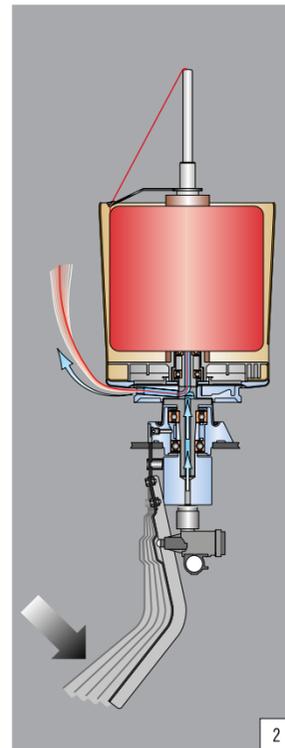
## Many optionals available to reach the maximum technological flexibility



### Noise reduction for Two For One Twister (1)

Spindle wharve and belt area is completely covered with and bottom covers and foam to reduce noise.

- Covers can be removed during regular maintenance work.
- Reduces the arial noise level of the machine.
- Quieter department improves work environment and less worker fatigue.



### Pneumatic Threading (2)

Both spindle brake and pneumatic threading are operated via the pedal at the bottom of the machine.

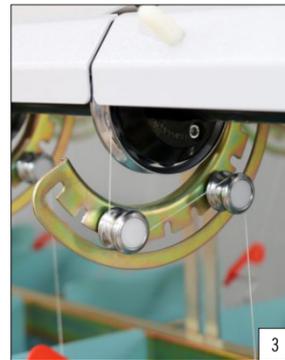
When yarn breaks, the operator brakes the spindle pressing on the pedal, picks up the package yarn end and, by pressing the pedal right down, effects threading easily.

### Second overfeed roller (3)

Allows optimizing yarn path in any overfeeding condition.

### Second counterweight spring for soft packages

Allows increasing the counterweight effect over the package.



### Yarn reserve (4)

As required by down stream process like weaving to enhance the running efficiency of the process, the yarn reserve can be installed for uniform tail end preparation.

### Waxing device (5)

Thanks to magnetic compensation, waxing device grants a constant wax distribution over the yarn.



### Pulleys for complete speed range

Allows using the complete speed range available for the chosen spindle.

### Emergency stop

A secure and immediate way to stop the machine in case of emergency.

### Travelling blower

Total programmable cleaning of machine.

### Inverter

Elimination of man power to change pulley for spindle speed with user friendly change of speed directly from the panel at the touch of button.

- Fine adjustments can also be done to get small extra productivity.
- Quick and easy change of speed, indirectly benefits on machine uptime.

### Lycra kit (6)

Special flyer for twisting elasticized yarns.

### Jointair (7)

System with trolley moved manually along the machines fronts. The following versions are available according yarn type:

- Jointair 115 A (Airsplicer)
- Jointair 4923B (Watersplicer)

### Yarn break alarm lamp indicator (8)

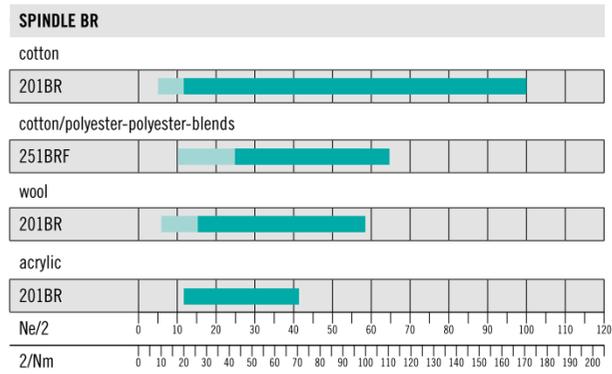
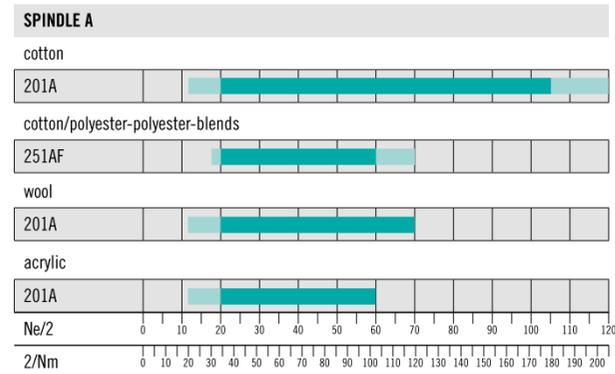
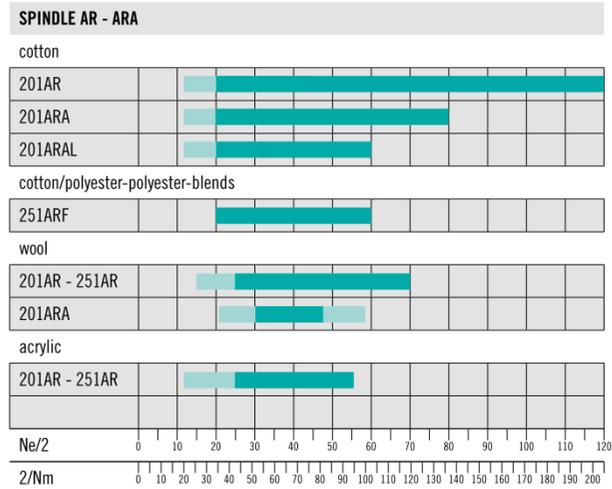
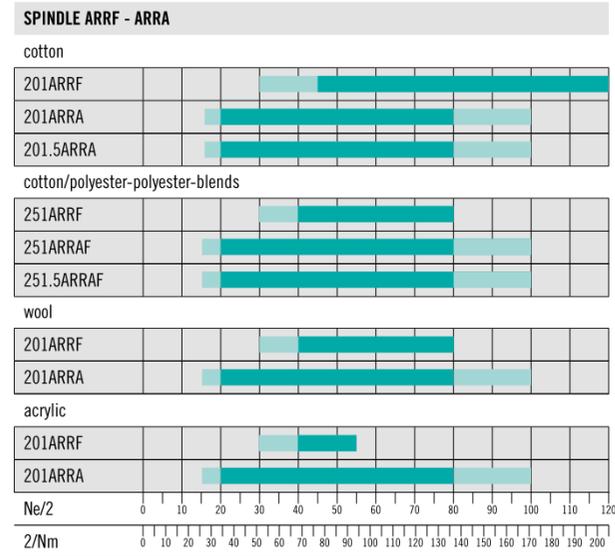
Alarm Lamp Indication for yarn break for fast identification, operator ease and reducing patrolling time.

### Package creel (9)

For placement of feed and take up packages in addition to the top tray arrangement

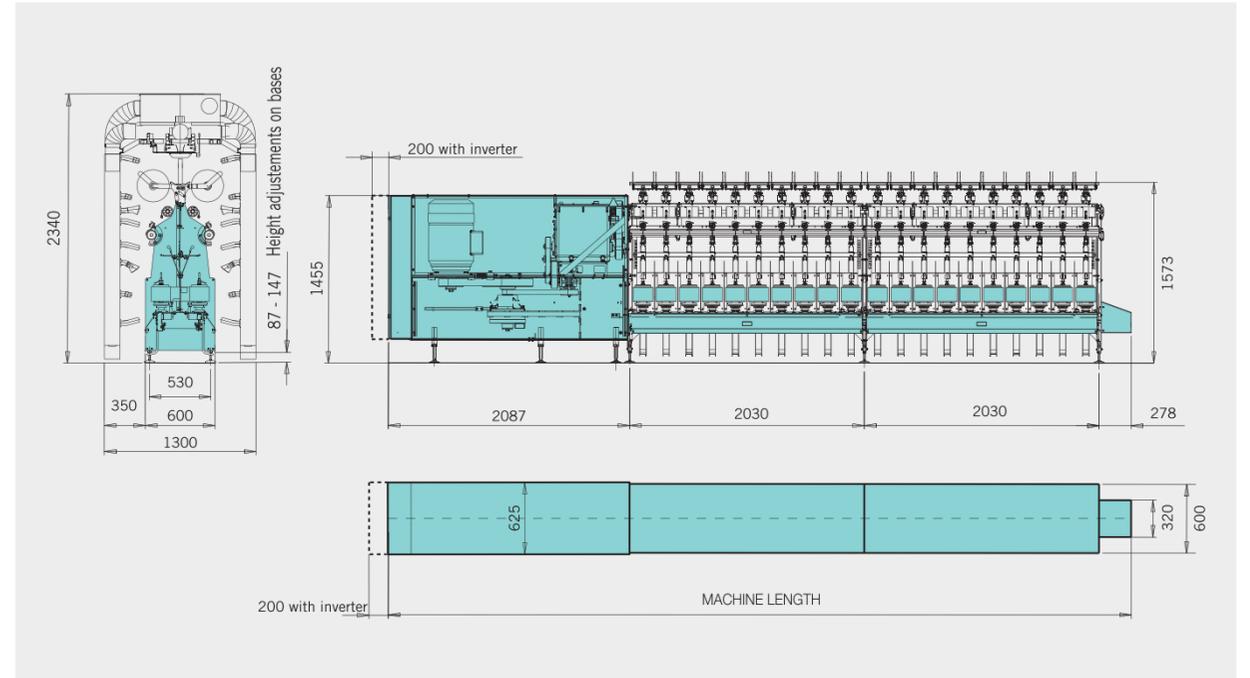
### Possible working range

Recommended working range  
Possible working range



Spindle	Inner Pot Type	Feeding	Machine model	
			Controlled balloon	Free balloon
ARRF	1	155 x 94		201 ARRF
ARRA	1	155 x 115	201 - ARRA	201 - 251 ARRAF
ARRA	1.5	178 x 115	201.5 - ARRA	201.5 - 251.5 ARRAF
AR	1	155 x 125	201 - 251 AR	201 - 251 ARF
ARA	1	155 x 135	201 - 251 ARA	201 - 251 ARAF
ARAL	1	155 x 141	201 - ARAL	
A	1	155 x 141	201 - 251 A	251 AF
BR	1	155 x 151	201 - 251 BR	251 BRF

### Overall dimensions and installation layout



Sections	1	2	3	4	5	6	7	8	9	10	11	12
Spindles (gauge 250 mm)	16	32	48	64	80	96	112	128	144	160	176	192
Spindles (gauge 200 mm)	20	40	60	80	100	120	140	160	180	200	220*	240*
Machine length (mm)	4395	6425	8455	10485	12515	14545	16575	18605	20635	22665	24695	26725
Machine length with inverter (mm)	4595	6625	8655	10685	12715	14745	16775	18805	20835	22865	24895	26925

\* Except 1 BR

#### Installed power on Cosmos (kW)

Spindles	Sections	From 1 to 7					8	9	10	11	12	
		ARRF gauge 200	22									
ARRA-AR-ARA gauge 200	22							30				
ARRAF-ARF-ARAF gauge 250	22									30		
A-ARAL gauge 200	22						30			30**		
AF gauge 250	22									30		
BR gauge 200	22						30			Not available		
BRF gauge 250	22									30		

\*\* 201 A possible length with limited speed 10.000-11.000 RPM depending of the yarn count