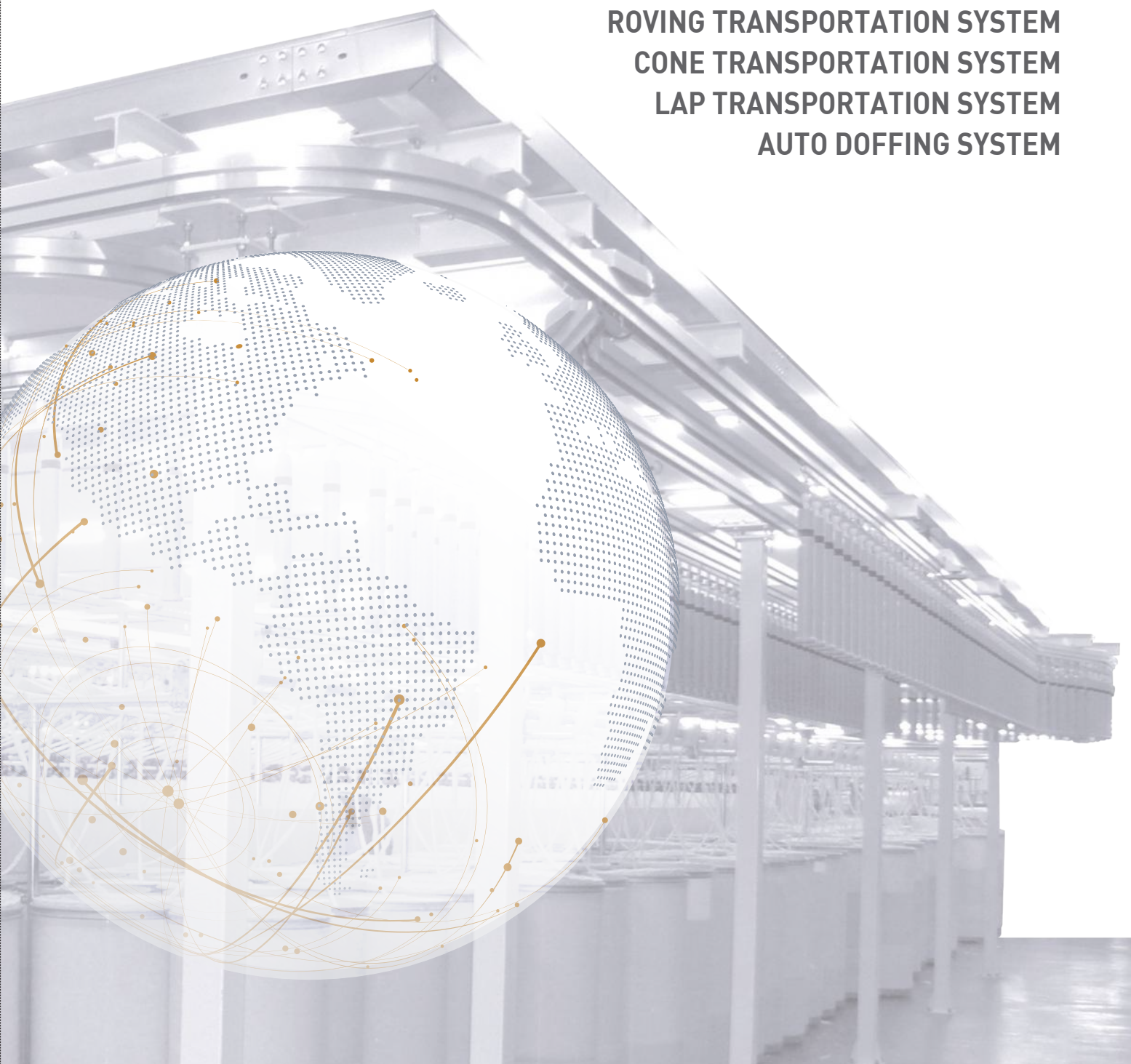




TOTAL FACTORY AUTOMATION SOLUTION

ROVING TRANSPORTATION SYSTEM
CONE TRANSPORTATION SYSTEM
LAP TRANSPORTATION SYSTEM
AUTO DOFFING SYSTEM



TOTAL TRANSPORTATION SYSTEM

+ COMPANY INTRODUCTION

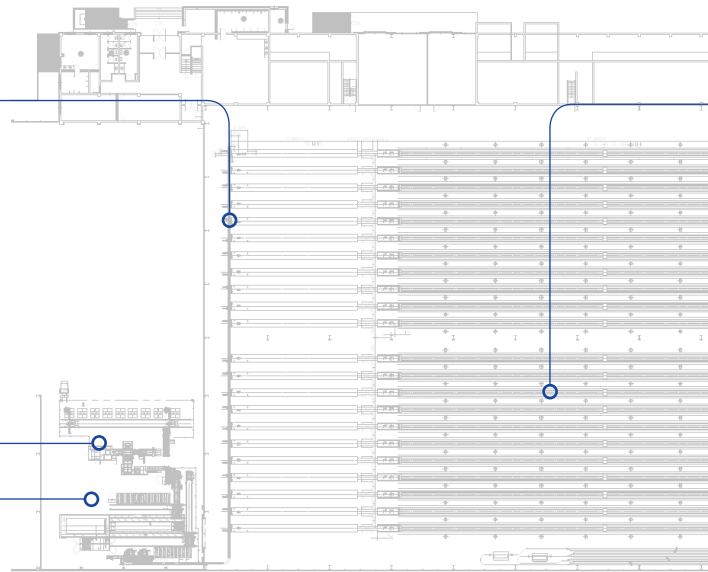
We, TECHONE, supply the factory automation system based on the long-term experience and technical researching and are leading the industries with all kinds of the factory automation.

Our factory automation system can reduce the cost and workforce.

Our product quality and technology are proudly proved by all major Korean spinning companies and even Toyota which has a great confidence in our products. In the spinning industry in South Korea, the major companies prefer our automation system to European's on account of superior quality and professional customer service.

We will serve you with our technologies for your factory's automation and will do our utmost for the successful results and performances in all ways.

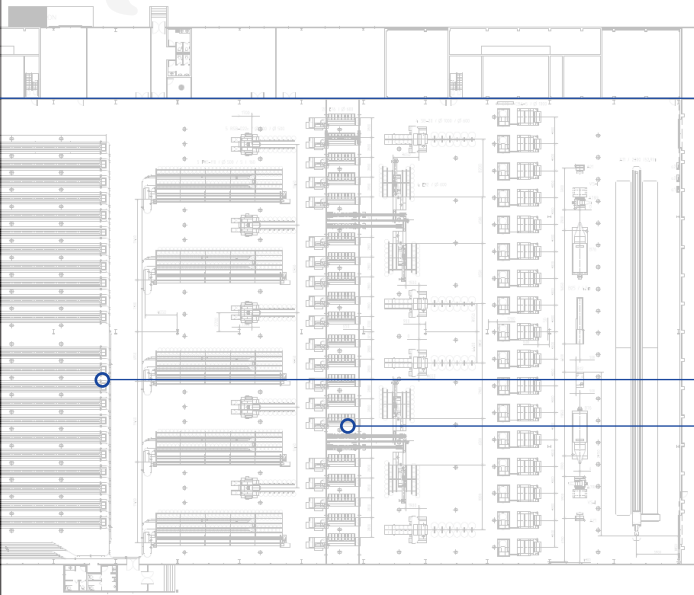
We will dedicate ourselves to build the best system to reward our customer for their precious decision.



+ Global Network Customer Support

TECHONE works for total transportation system with one step advanced and perfectly developed factory automations.

All transportation system provide immediate correction and adjustment through both ways networked LAN system for program upgrade and software errors.



AUTOMATED ROVING TRANSPORTATION SYSTEM (RTS)



The rovings being produced by the roving frames are supplying to the ring spinning frames. The remained roving yarns are treated in the roving stripper. The stripped roving bobbins are again transported to the roving frames with no insertions of man power, which leads qualification, no loss of the production and great reduction for man power.

Our roving transportation system applies to all kinds of the roving frame and spinning frames with full automatic, semi-automatic and manual type decided by customer's choice.

All major roving and spinning frame suppliers such as Toyota, Rieter and Zinser have a great faith in our technology, performance and compatibility.

+ ROVING STORAGE (Buffer) & DISTRIBUTION



Bobbin storage

+ EXCHANGER

The end user's applied exchanger is to be installing in the roving frames that have no exchanger of the doffing system.

All factories characteristics can be adopting with our specialized technology with single exchanger, double exchanger and twin exchanger.



TECHONE RTS linked Rieter & Zinser Exchanger.



TECHONE RTS linked with Toyota Roving Frame

Seperate Twin Exchanger



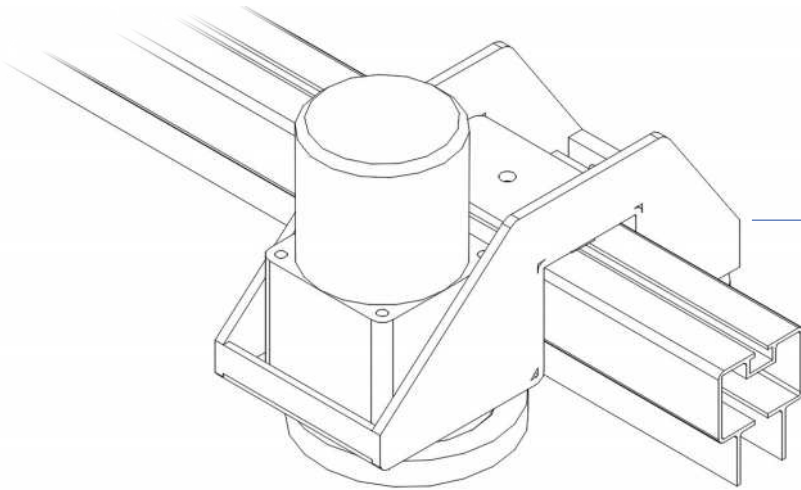
Distributing

We recommend the roving storage when the rovings are much produced than the spinning frames but we do not recommend the storage at the qualification.

The over produced rovings can be distributing to the wanting ring spinning frames after stored.

COMPOSITION OF THE SYSTEM

+ GUIDE RAIL & DRIVING MOTOR BASE



Guide rail is treated by anodizing light coating to prevent the foreign objects and no colour changing, no rustings, higher abrasion power in driving pulley, smoother and easier movement. Maintenance is easy as well.

Driving motor base has been perfectly manufactured in by us in order to maximize the feeding power for carriage And and our urethane coated pulley has the very higher durability of abrasion. Driving motor has been specially manufactured to prevent the factory from a fire hazard.

+ TOUCH SCREEN OPERATION



- Touch flow for the enrolled group of roving & spinning frames and rovings supply & exit can be seen immediately
- In case the factory produces many lots, it can be settled by one group with roving & spinning frames, which supplies to the same group all the times
- The Alarm message is showing in total layout, which makes easy location for the errors

+ AUTOMATIC STRIPPER (BOBBIN CLEANER)

Our brushing belt type stripper works with the advanced system that the bobbins are very close to the brushing belt. This makes no errors in the working actions of attaching and removing moments and the error occurrence ratios are very low in the stripping time.

Furthermore, as the operation period can be adjustable in accordance with the remained quantities of the rovings in the bobbin, any worker can operate the system easily and also the gauge settings and maintenance are simple and easy as well.

We supply the stripper machine with the specific features to the end user's requirement with bobbins yarn kinds, pitch, and numbers of the spindles.



Automatic Stripper



Supplying remained yarn bobbins



Stripping



Finished stripping

LAP TRANSPORTATION SYSTEM



The produced laps are supplying to the combers. The empty tubes (spools) are returning to the lap winders (OMEGA LAP) automatically without man powers.

This automation system makes the higher qualifications, no loss of the productions and savings for the labour costs.

+ OPERATION PROCEDURES



Conveyors for the produced laps



Laps are moving by the crane by the lift



Laps supplied to the combers



Empty spools are returning by combers' signal



Conveys the empty spools



Empty spools are supplying in the conveyors

CONE TRANSPORTATION SYSTEM



Cones transportation system conveys the produced cones from the winder to the packing area through conveyor

+ OPERATION PROCEDURES



Loading cones from the winder



After the cones are loaded on the table, the lift moves up



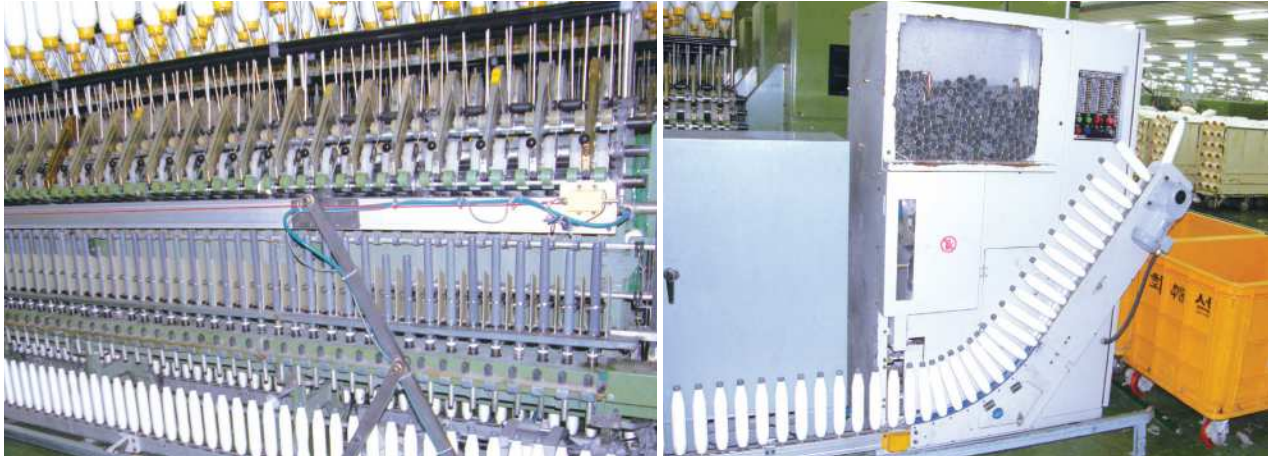
The cones loaded on the table moves to the conveyor



Transporting the cones to the packing area

AUTO DOFFING SYSTEM

+SPINNING FRAME (Auto Doffing System)



- smoother movement by precision bearing
- Study structure and innovation for other appearance
- Precise point with well-functioning motors
- Automatic doffing enables labor requirements and doffing times to be drastically reduced

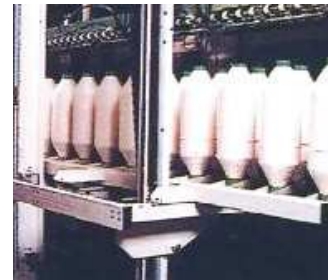
+ROVING FRAME (BOBBIN ELEVATOR TO TRANSPORTATION SYSTEM)



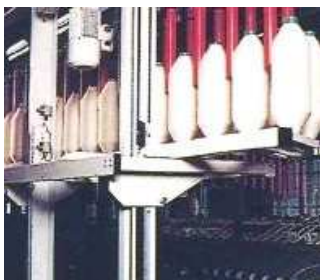
taking out full bobbins



Full bobbins on the lift



Lifting full bobbins to bobbin transportation system



Changing full bobbins with empty bobbins



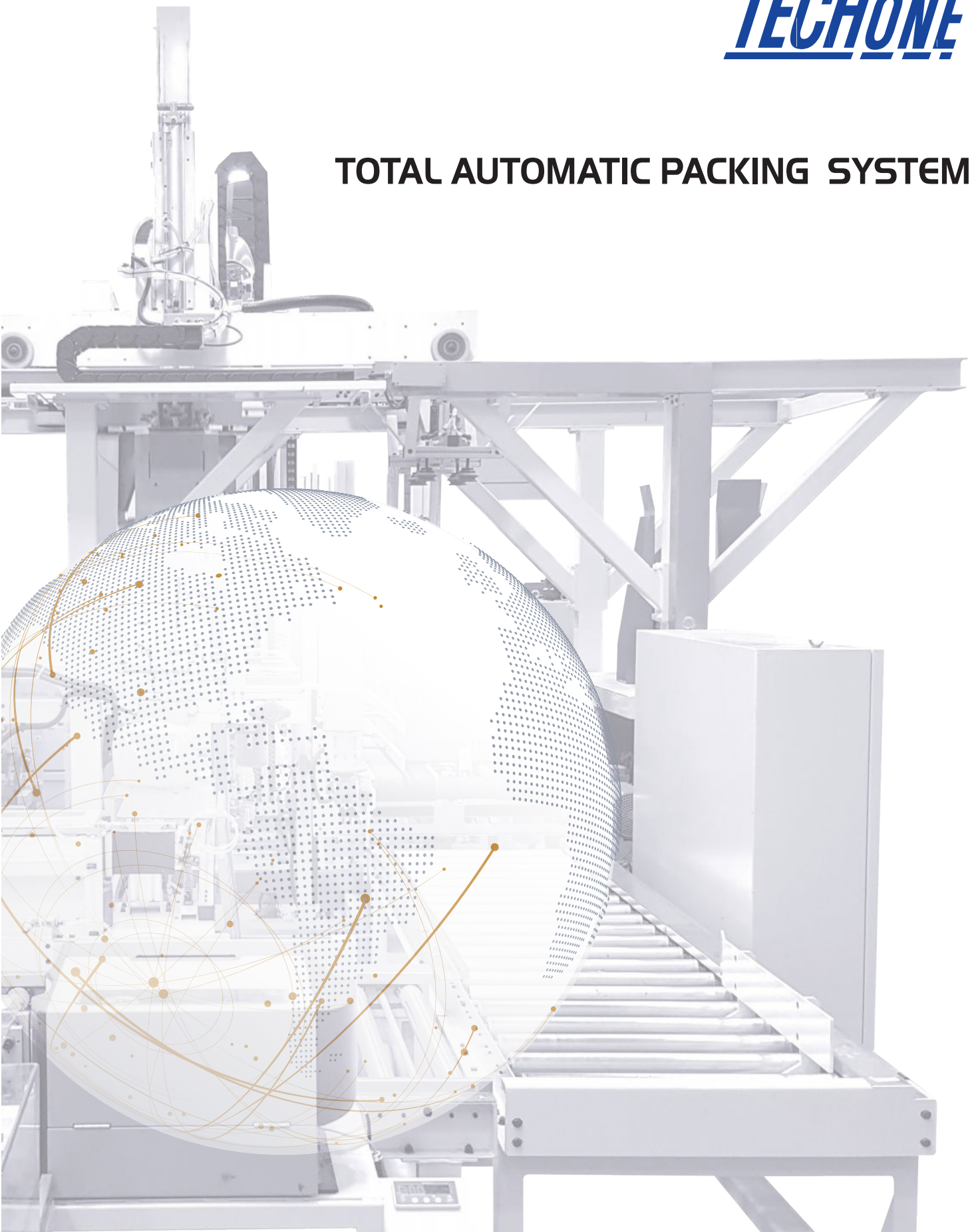
Lower empty bobbins



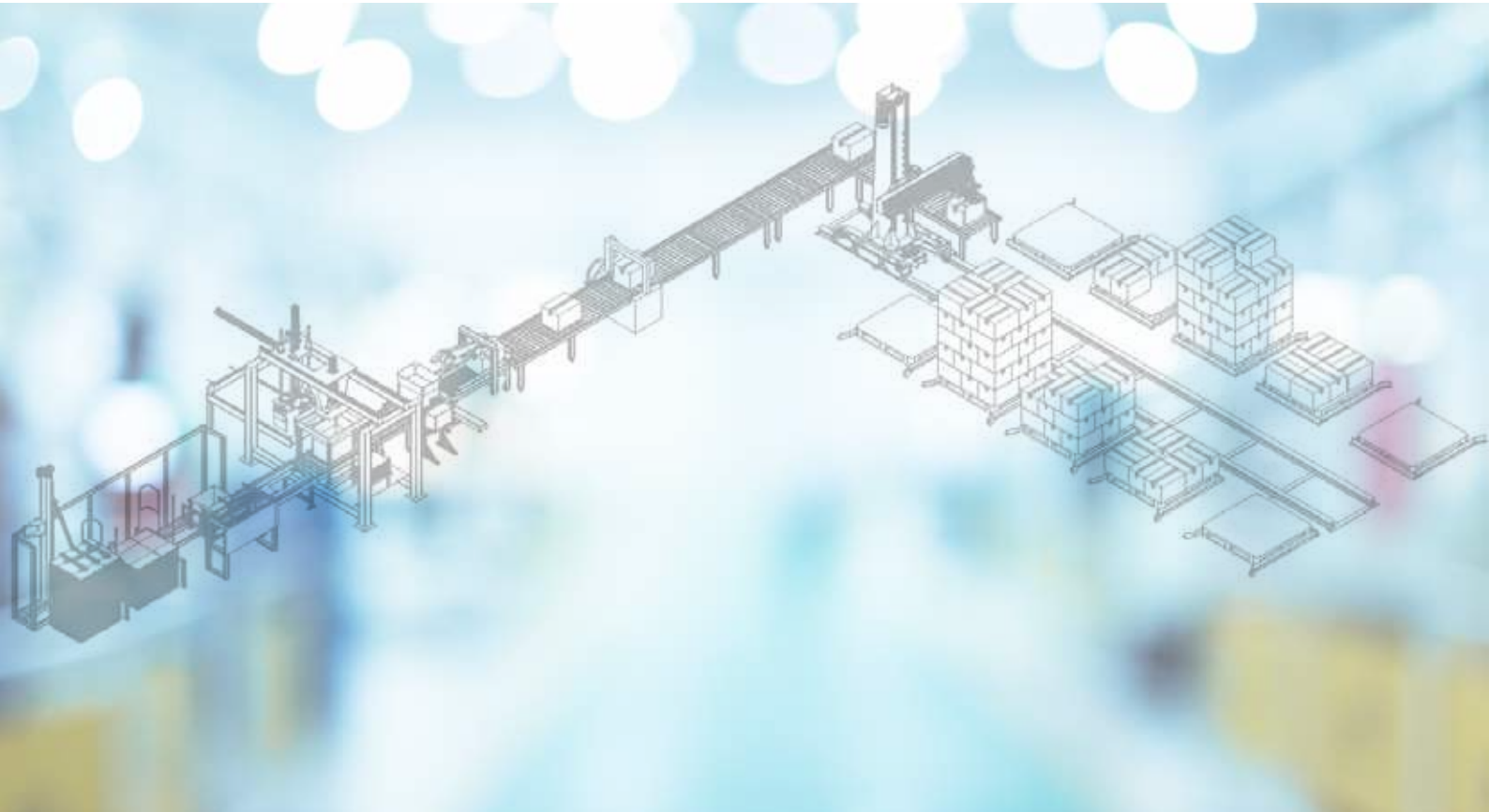
Supplying empty bobbins

TECHONE

TOTAL AUTOMATIC PACKING SYSTEM



TOTAL AUTOMATIC PACKING SYSTEM



+ HANDLING ITEM

- ① AUTOMATIC CONE SUPPLIER
- ② CONE SEALING MACHINERY
- ③ BOX SHAPING MACHINERY
- ④ BARCODE (PRINTER) MACHINERY
- ⑤ BOX TAPING MACHINERY
- ⑥ BOX STRAPPING MACHINERY
- ⑦ PALLETIZE SYSTEM

+ COMPANY INTRODUCTION

We, Techone, have been designing and manufacturing full automatic packing systems for over 20 years with high quality products and prompt, professional customer service. Applying our experience and packing expertise, we work with clients to select packing machinery and materials specifically tailored to their needs. With our attention to functionality, performance, and price we optimize the value and cost effectiveness of each customer's unique requirements.

We promise your business to gain a higher quality product, a precise packing system and reduction in workforce.

Carton Sealers

We offer a full line of carton sealers that can improve productivity and reduce operating expenses. With everything from semi-automatic manually adjustable systems to fully automatic random systems, Our carton sealers are consistent and durable, require low maintenance and help your carton sealing operations run smoothly and reliably.

+Taping Machine



+Strapping Machine



+Pallet Sealing Machine



Cone Sealing Machine & Cone Supplier

+ Sealing Machine

Sealing (Packing) individual cones produced from the winder manually is labor & cost intensive and often results in damage to the cones. The answer to this problem is TECHONE's new advanced sealing system.

- _ Elimination of manual cone packing.
- _ Elimination of intermediate storage, which can result in damage, soiling and aging of the cone.
- _ Quality assurance and enhancement.
- _ Labor and the cost of plastic bag savings.
- _ A machine can handle 55 tons a day.

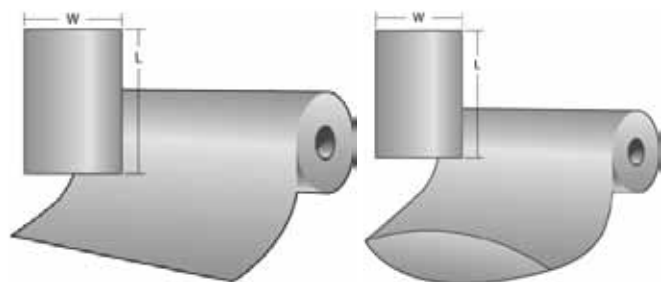


+ Supplier (Feeder)



This system allows to accumulate up to 144 bobbins loaded quickly by the operator and to deliver the same with regular cadence to the sealing machine.

+ Reduction in plastic bag cost



Compared with tubing type plastic bag system or sealing cone with individual tubing type plastic bag, our sealing machine can save the bag cost up to 150~250%.

+ System Progression



Feeding cones from the supplier



Sealing (Packing) the cones by using flat type plastic bag

PALLETIZE SYSTEM

+FIXED TYPE PALLET

Reasonable price and furtherly smoother aspects by the robot which is possible to load it makes various methods for the loadings.



Pinching the box out of the conveyor

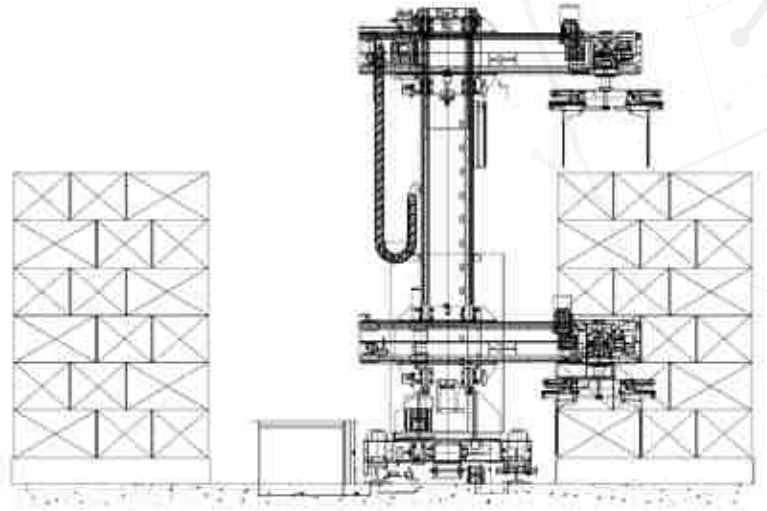


Transporting the box to the particular pallet spot



Palletizer places the boxes on pallet as per programmed

+ MULTI-PLATFORM TYPE PALLET



'Multi-Pallet effectiveness by maximized aspects of both ways multi-platform type'

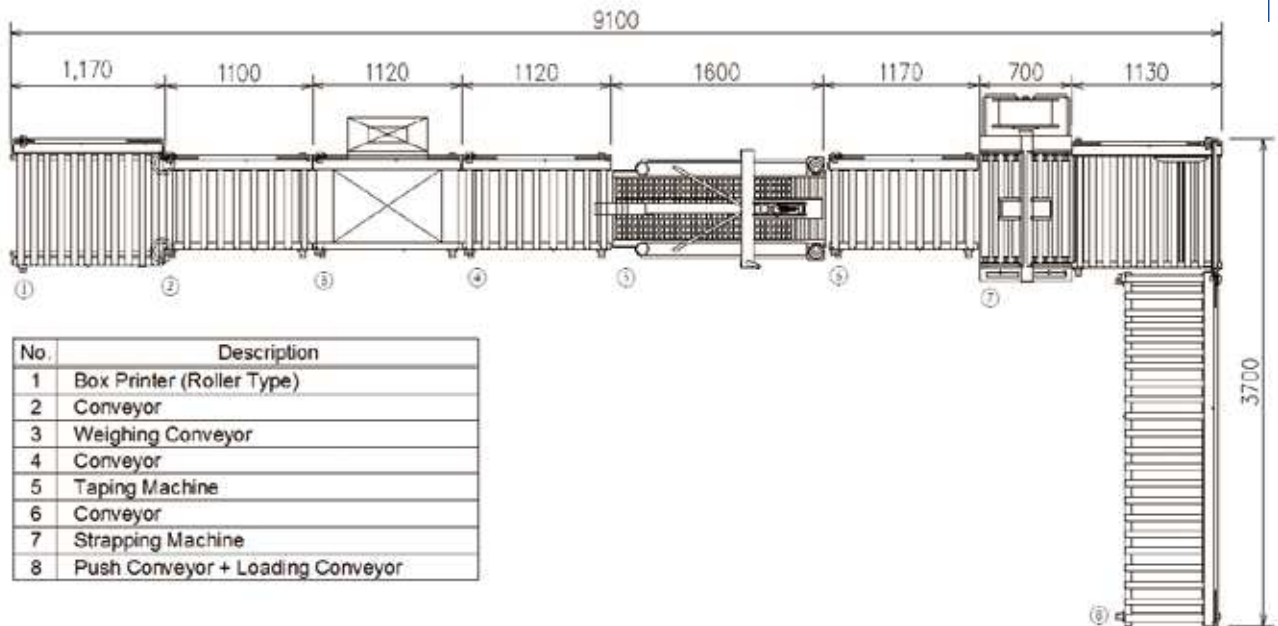
'It applies to any field by multi-platform type of one or two way directions'

+ ROBOT TYPE PALLET

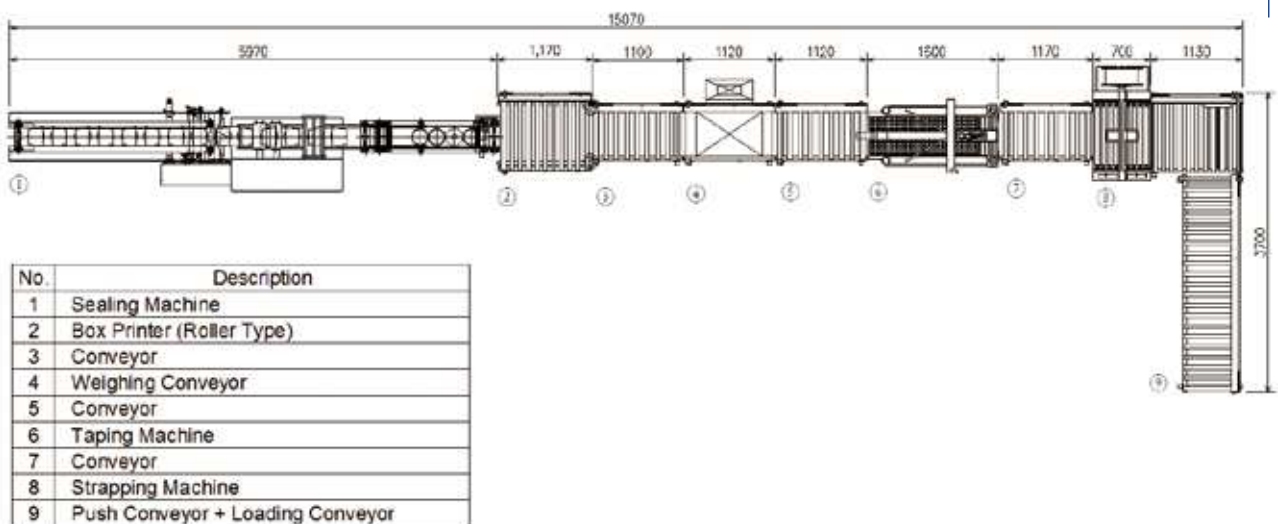


+ Various Packing Line Options

Packing System Option #1

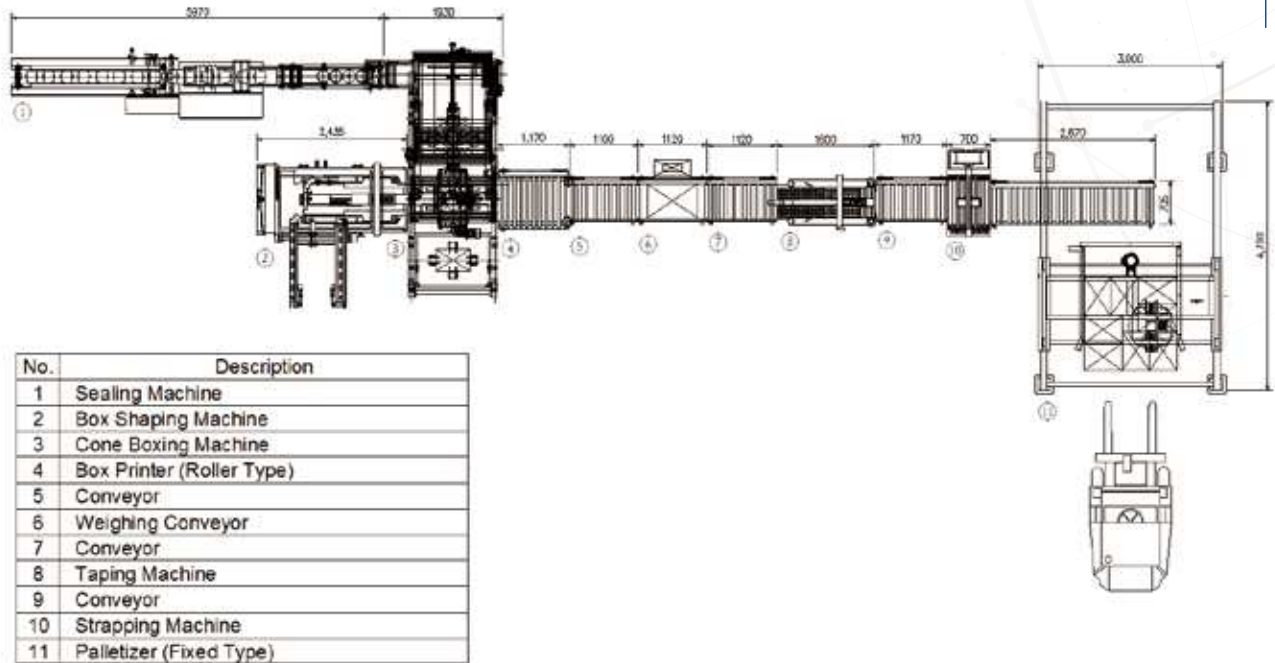


Packing System Option #2

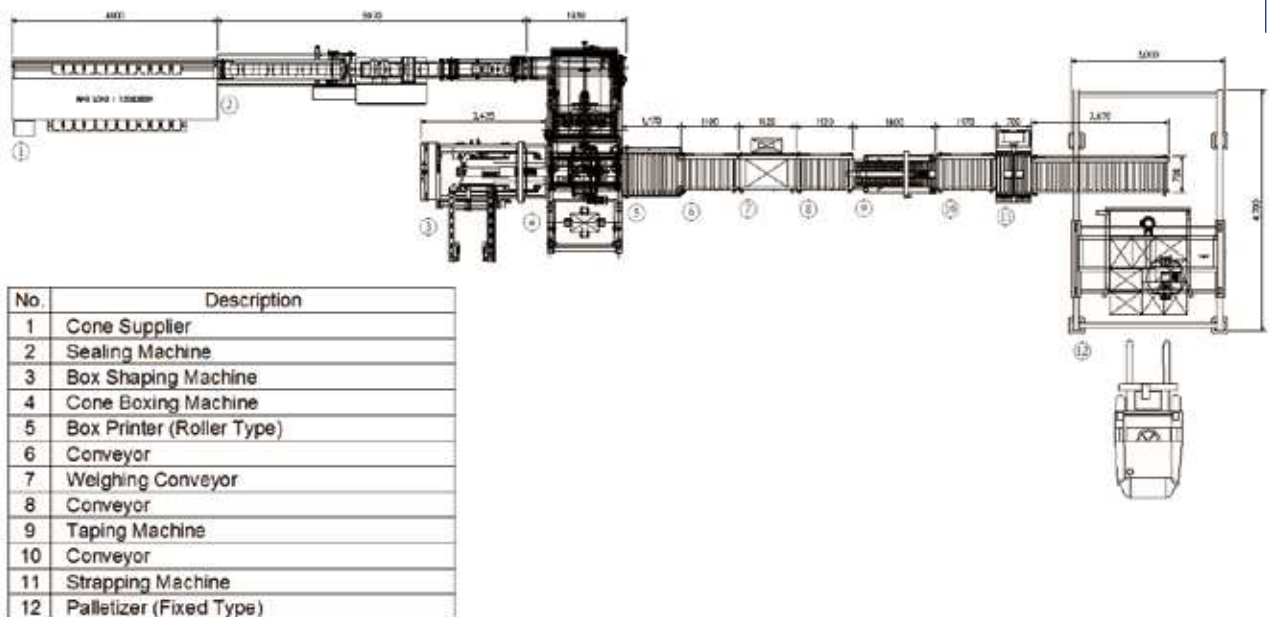


- _ The above layout is adjustable to fulfill the customer's preference.
- _ Actual machine measurement can be changed due to improvement.
- _ Push Conveyor and Loading Conveyor can be upgraded to palletizer on request.

Packing System Option #3



Packing System Option #4



- _ The above layout is adjustable to fulfill the customer's preference.
- _ Actual machine measurement can be changed due to improvement.

Cone Collecting Palletizing System

Installing a Cone Collecting Palletizing System means a considerable turning in Spinning Automation Process. The automation interfaces to productive line and involves Cone handling and packaging in a full autonomous way, after designing properly the industrial automation.



A Centralized Palletizer is equipped with several palletizing stations. The number of stations can be chosen according to the manufactured products or the number of productive machinery. The Palletizer size depends on the number of palletizing stations.



A direct palletization can compose pallets in front of Production Textile Machinery such as Winder, Open-End, Vortex, etc... Palletizer moves in front of machines and directly interfaces to them.





Collecting cone from winder



Palletizing on the board



Cone collected pallet



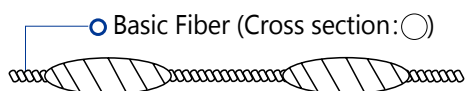
Re-usable board

Multi-Effect Yarn System

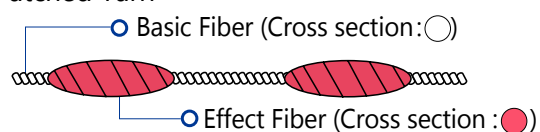
Multi-Effect Yarn System which is developed by TECHONE and KOTITI Testing & Research Institute offers a wide range of products by feeding the different color (or material) rovings in the drafting system. Our new revolutionary system produces not only Slub, Patched, Mosaic yarn, but also Gradation yarn which is exclusively produced by us.



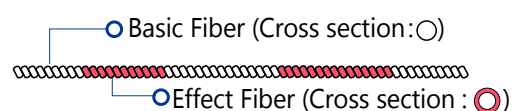
• Slub Yarn



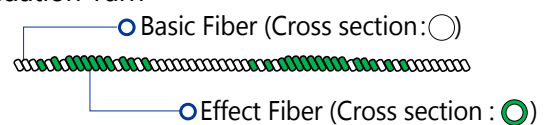
• Patched Yarn



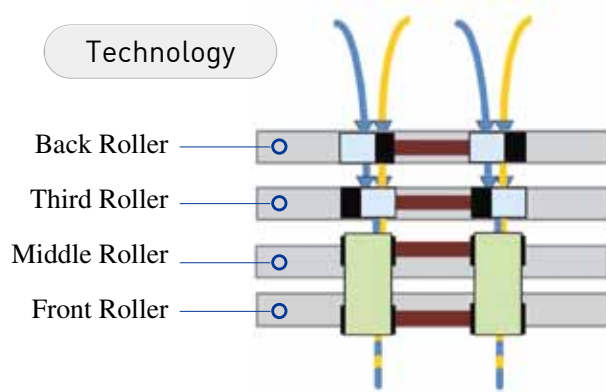
• Mosaic Yarn



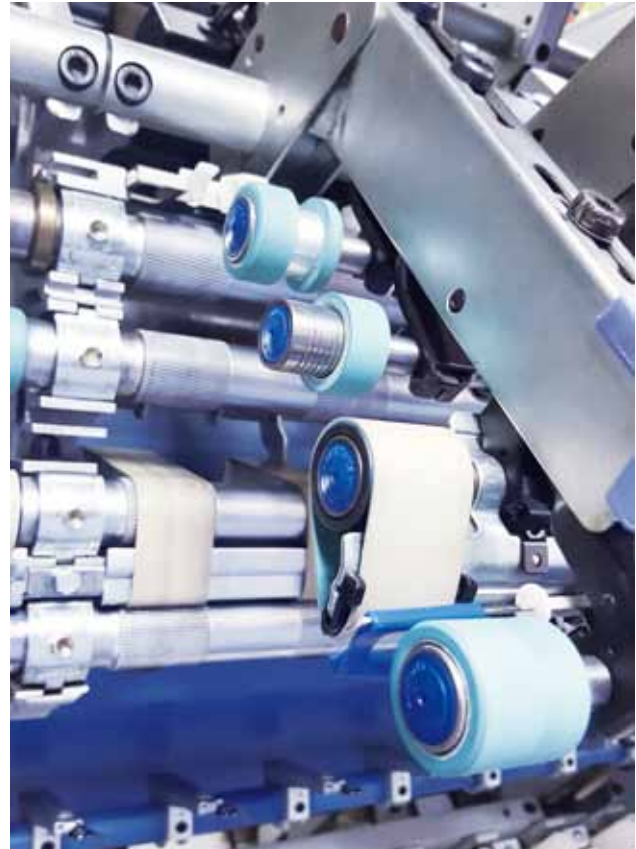
• Gradation Yarn



+ The Keys of Multi-Effect Yarn System



The different color (or material) rovings are fed in the drafting system. One is fed at the back roller and the other roving is fed at the third roller. The first roving is not affected by the speed of the third roller and the second roving is not affected by the back roller. The two rovings are thus drafted without any break draft. When one roving is stopped the other has to start immediately after, otherwise the yarn would break. We can control the speed and timing of the back and third roller independently so we can feed any of the two roving at will. Compared yarn producing RPM with competitors, our system is much higher, 18,000 RPM.



Touch panel control board which incorporates a full range of features including selecting the type of multi-effect yarn and controlling speed of the rollers enables user to produce numerous patterns.

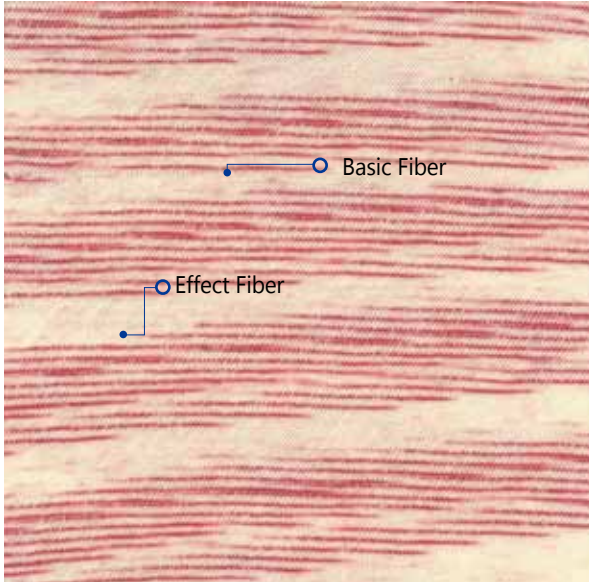


Ring frame's creel has to be modified in order to allow the placement of both type of roving (base and effect). TECHONE can carry on this modification and supply all necessary components, including creel bars and bobbin hangers (optional under request) as well as the design of the new optimized creel.

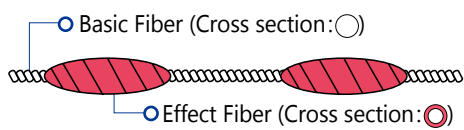


High precision brushless servomotor of low inertia and constant pair, with very direct transmission to machine drafting roller for a faster reaction.

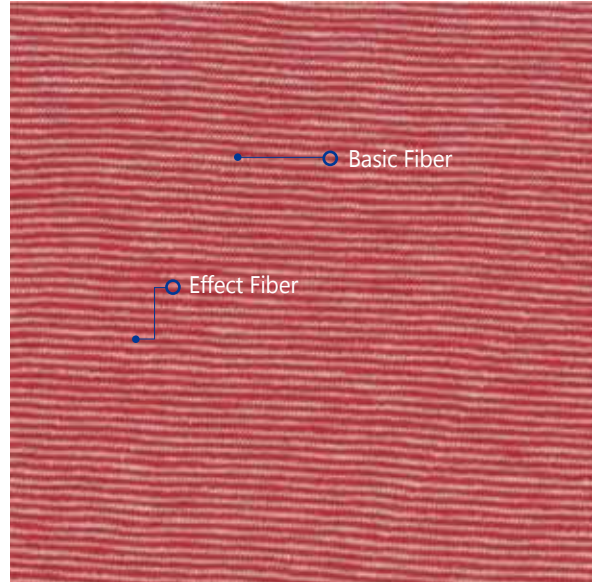
Patched Yarn



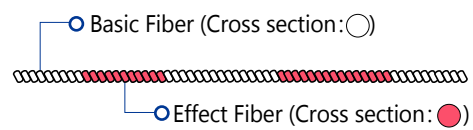
+ Patched Yarn Structure



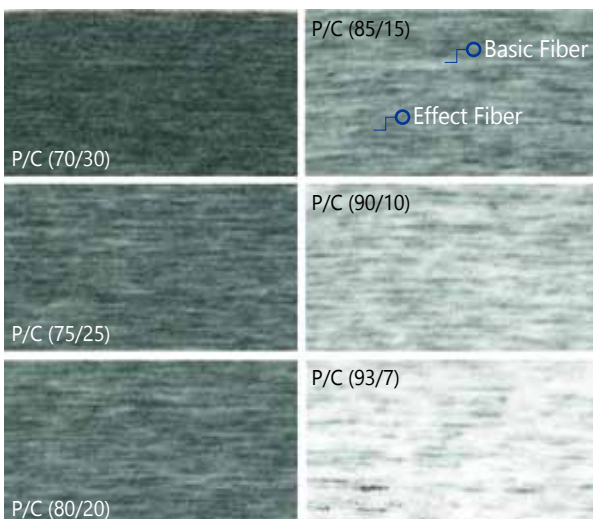
Mosaic Yarn



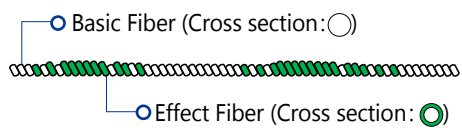
+ Mosaic Yarn Structure



Gradation Yarn



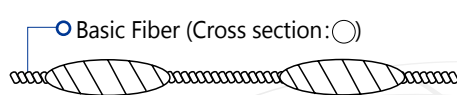
+ Gradation Yarn Structure



Slub Yarn



+ Slub Yarn Structure



+ Samples produced by Multi-Effect Yarn System



