

**SLUB
CORE
COLOUR SLUB
SPINDLE MONITOR
ROBO PACKING**



**OUR
PHILOSOPHY
IS VERY SIMPLE.
WE GIVE
OUR BEST
FOR PEOPLE
WHO EXPECT
THE BEST.**

RADHAAKRISHNAN

CHAIRMAN SKAAT GROUP

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SPINNING INNOVATION

With significant experience designing, developing, and manufacturing machinery for fancy yarns, SKAAT can fulfill this requirement. Therefore, SKAAT automated spinning technology plays a key role in fancy yarn production.



A wide range of models are available from SKAAT for all types of ring frames. These high-quality fancy yarn attachments ensure trepidation free performance in high-speed ring spinning. SKAAT fancy yarn attachments are the best in ring spinning and compact yarns.

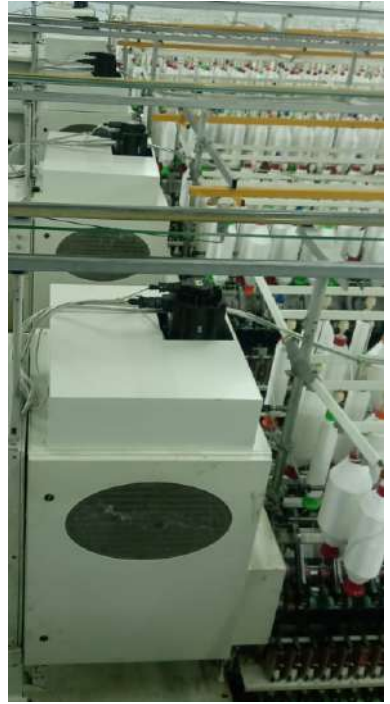
Advanced models - Fancy yarn technology

DS2 - UPTO 1008 SPINDLES.

DS2L- UPTO 1200 SPINDLES

DS3L- UPTO 1824 SPINDLES

Model DS2



With a specially designed servo drive, servo motor, and SKAAT Variator gearbox, the ring frame can be driven without slippage along its entire length. Transmission is achieved with mechanical coupling. In order to achieve effective results, our panels completely cover the gear end of the machine. Our Servo drive ,CPU, and electrical components are all contained within this panel. On the panel, a touch industrial computer with a 15" wide screen is provided for easy programming and hassle free viewing.

DS 2L - SPECIALIZED FOR LONG FRAMES

A long ring frame is nothing more than a ring frame with a Duoflex drive at the 'OFF end' (like the LR6 series up to 1200 spindles and beyond).



Duoflex drive ring frame has a 'DS2L' model, designed for slub. In this model, the middle and back bottom fluted rollers of the ring frame must be split at the middle in order to provide separate drives for both ends. To drive the middle and back bottom fluted rollers, two servo motors are used instead of machine drives.

DS 3L - SPECIALIZED FOR LONG FRAMES 1400-1824 spindles

To drive the ring frame independently without slippage, three sets of specially designed Servo motors and a SKAAT variator gearbox are used in the 'Gear end', 'Mid end' and 'Off end' of the ring frame.



Drive transmission by means of 'mechanical coupling' at Gear end and "wheel drive" at mid and off end. All the servo motors are synchronized to produce uniform quality of slub yarn. Gear end of the machine is entirely covered by our special panel. All our drive, motor and electrical components are placed inside this panel.

Touch industrial computer with 15" wide screen is provided on the panel for easy view and hassle free programming.

E-DRAFT

MULTI COUNT / MULTI TWIST / MULTI EFFECT



One can produce variety of fancy yarns from the below models.

Multi count — Different counts can occur in one yarn with the same TPI.

Multi Twist — Different Twist can be applied with the same yarn count.

Multi Effect — Combination of Multi Count, Multi Twist and slub effects in one yarn.

Short Ring frame up to 600 spindles

Medium ring frames up to 1008 spindles requires 2 Servo motor to run Multi effect yarn.

Long Ring frames having Duoflex drive at 'OFF end' needs 3 Servo motors to run the above effect yarn.

MULTI COUNT / MULTI TWIST / MULTI EFFECT

One more servomotor is introduced to drive the front fluted roller in addition to the Slub servo motor. In this way, the entire drafting drive can be controlled and governed by our special software that lets you produce fancy yarns in a variety of effects by simultaneously accelerating and decelerating all three fluted rollers. Count can be changed without changing the wheels.

FEATURES

- Count changes and count corrections can be done without any wheel changes.
- Automatic incremental and manual incremental of slub and yarn length.
- Option for monitoring machine performance through a separate kiosk fitted out of the machine or compact panel fitted on to the machine.
- Wide industrial touch computer (15") with compatible software can help for Easy programming of slub patterns.
- Drive transmission by means of gears only. Chain, belts are minimize used.
- No thin faults before and after a slub (ramp).
- Retrofit with any drafting system, suitable for any make - model of ring frame.
- No ends down during power failure and doffing time.
- More than 5000 linesof program to produce the larger effects and avoid the patterning in fabric.
- Easy switch over between fancy and normal yarns without major production loss.(Required 2 minutes only)
- No maintenance required for SKAAT system.
- Produce any length of slubs.
- Up to 25,000 patterns can be stored and recall any pattern whenever required.
- Able to produce slub mass from 1 to 10 times of yarn dia.

OPEN END SLUB

In case of open end yarn the principle is the same as like ring spinning where microprocessor controlled servomotor that overfeeds with a pre-programmed textile ramp.

External Industrial PC is connected to the master card which helps to analyse the pattern and helps to produce different effect style and generates Slubs accordingly. All types of rotor machine offers tremendous flexibility in term of fancy yarn production.



Modern open-end spinning machines can also be incorporated with SKAAT attachment that can make pre-determined yarn effects. These yarn effects can be soft coarse count, soft fine count, slubs with different lengths and variable mass. Here a servo system is connected to the feed roller which is completely driven by a master card which ensures proper fiber feeding.

SKAAT ROVING INJECTION

SKAAT DOUBLE ROVING INJECTION



(1 base yarn and 1 injected roving)



(2 base yarn and 1 injected roving)

This specialized fancy yarn consists of two different materials, one for the 'Slub Portion' and one for the 'Base Yarn'. Both materials are dissimilar in nature, colour, and character. The principle behind the production of injection slub yarn is that the SlubPortion will be injected randomly over the continuous running base yarn.

In this **SINGLE ROVING INJECTION** model, two different Rovings are to be used to produce high quality injected yarn at spinning along with 'Slub missing Stop Motion'.

In this **DOUBLE ROVING INJECTION** model 'Two Base Roving' will be directly fed through the middle roller and it is continuously producing 'base yarn' by the machine drive. One set of additional roving guide will be used at the back zone to guide the injection roving. Advance Digital encoders helps to monitor the speed of Front roller and Back roller separately and act as 'Slub missing Stop Motion'. Touch industrial computer with 15inch wide screen is provided for easy and hassle free programming.

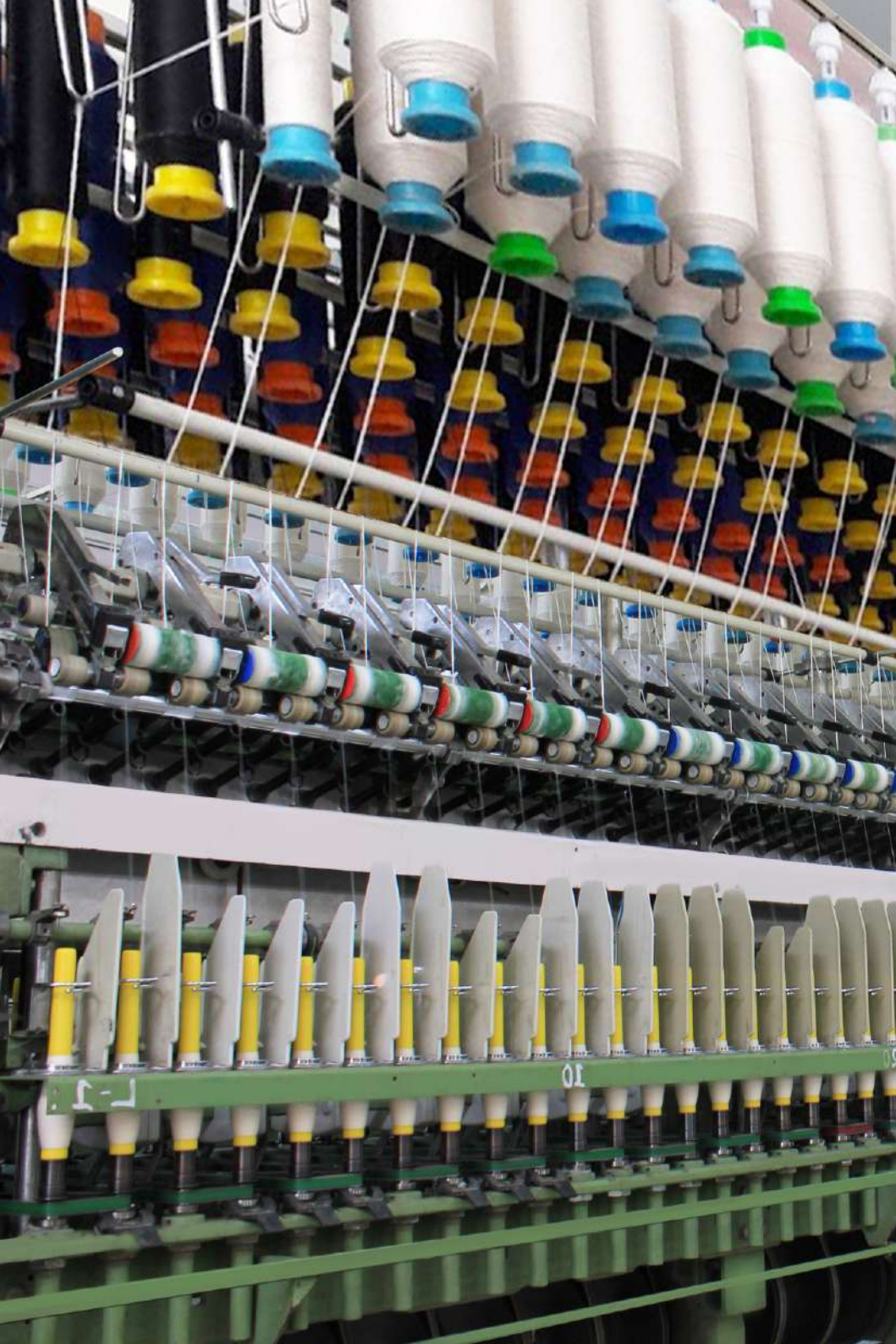
SKAAT YARN INJECTION

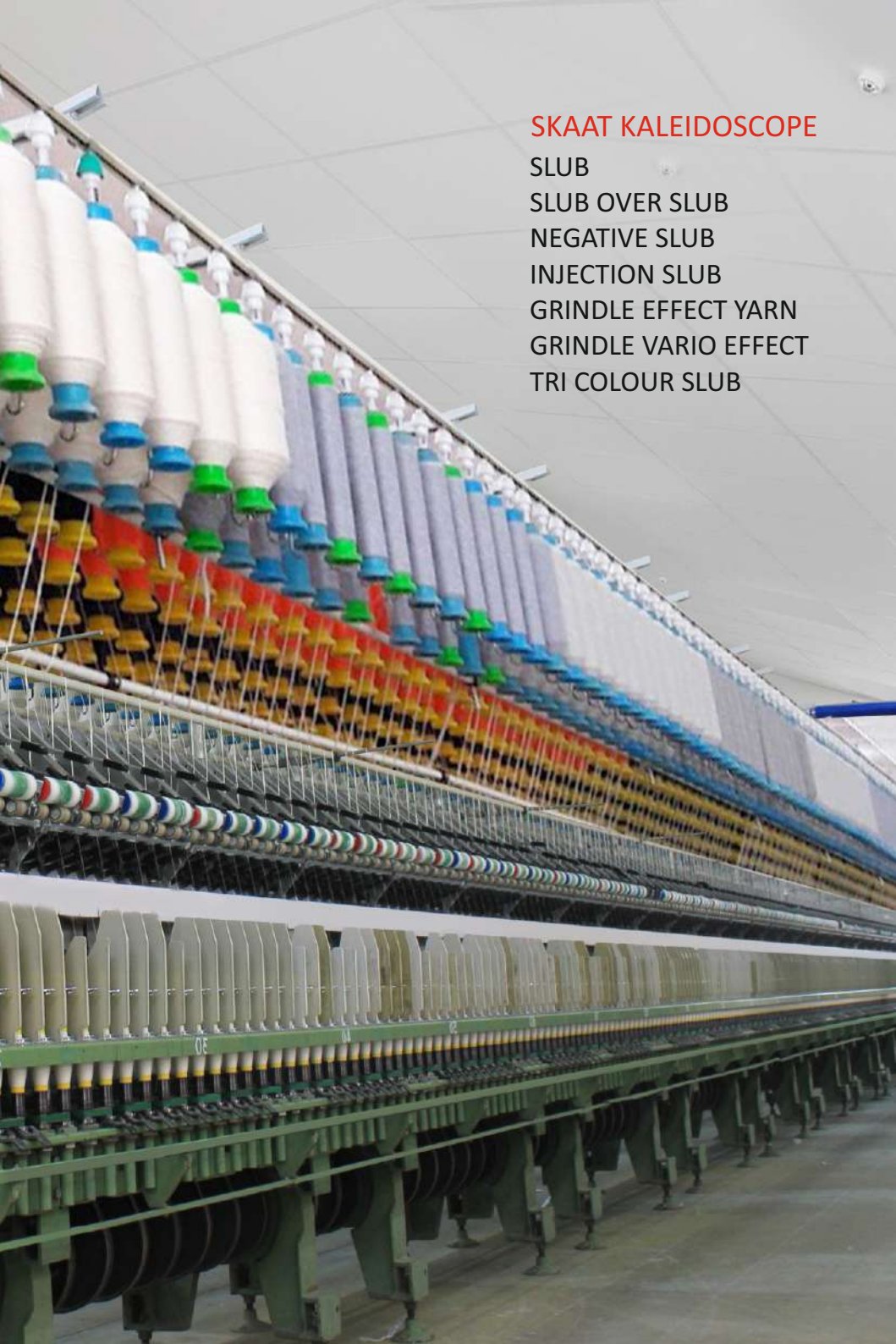


This system is a combination of Spinning and Doubling process at Ring Frame. For Base Yarn portion, two cone yarn (single yarn) and For 'Injection portion' a colour roving bobbin to be used. In this model one can produce variety of injection slub yarns such as Regular, Random, Incremental and manual slub..

YARN INJECTION PROPERTIES.

- Fully integrated system.
- Great versatility and flexibility.
- No maintenance is required for SKAAT system.
- High standard level of performance and productivity.
- Effective stop motion are provided to avoid "slub missing in the yarn"





SKAAT KALEIDOSCOPE

SLUB

SLUB OVER SLUB

NEGATIVE SLUB

INJECTION SLUB

GRINDLE EFFECT YARN

GRINDLE VARIO EFFECT

TRI COLOUR SLUB

SKAAT KALEIDOSCOPE

SKAAT has been conducting continuous research and developed the color slub, "SKAAT KALEIDOSCOPE" an imaginative yarn with different colors. Using this system, 3 rovings are fed through 3 or 4 rollers. In this case, the base yarn roving is fed through the second roller, where the injected roving is inserted separately into the back roller and the extra roller is synchronized independently by Servo drives.

It's an art of producing different types of yarn at a ring frame.

- SLUB OVER SLUB**
- NEGATIVE SLUB**
- INJECTION SLUB**
- GRINDLE EFFECT YARN**
- GRINDLE VARIO EFFECT**
- TRI COLOUR SLUB**
- VARIO-GRINDLE YARN**

VARIO-GRINDLE YARN

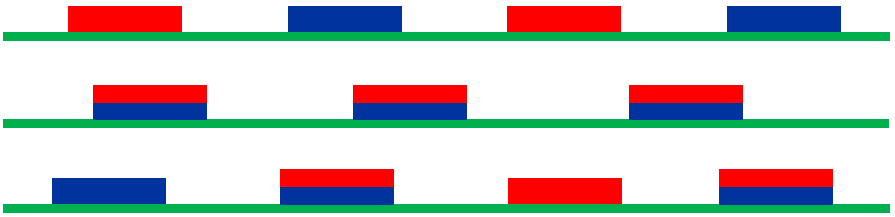
A vario-grindle yarn is produced by continuously feeding two rovings at different speeds in a ring spinning frame. By changing the feeding speed of the two rovings, the mean thickness of fiber strands entering the main drafting zone remains the same. This results in yarns of varying color compositions and uniform linear densities.



GRINDLE EFFECT YARN



Tri colour Yarn



Continous Injected Yarn



Continous Injected with Slub Yarn



Injection slub Yarn



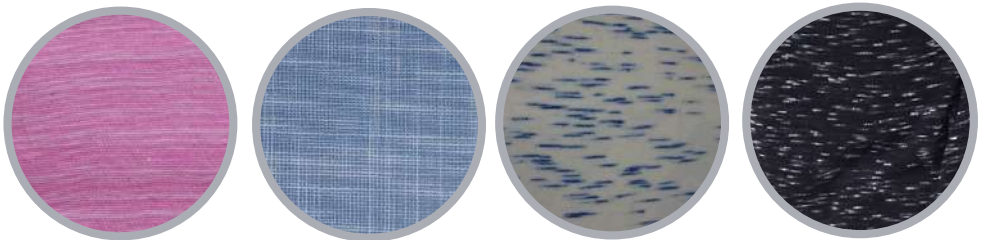
Discontinous Injected with Slub Yarn



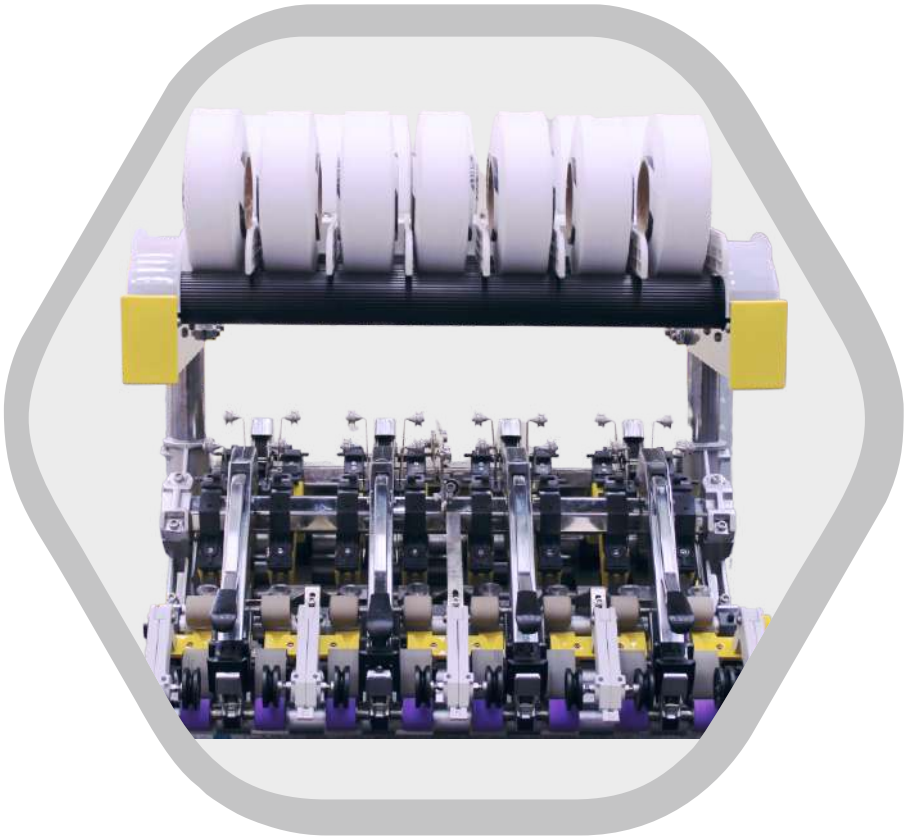
Slub over Injection.



Discontinous Injected with Slub Yarn (Inject in pause length of base yarn)



SKAAT CORE - PLATINUM



SKAAT CORE - PLATINUM

In order to enhance the qualities in the yarns, researchers have continuously blended natural and synthetic fibers to amplify their stretch, comfort, feel, and absorbency. Highly stretchable fabrics are in high demand because of their good properties. Generally, a core spun yarn is a yarn whose sheath fibers surround a core completely.



CORE FORMATION STRUCTURE.

FEEDING UNIT

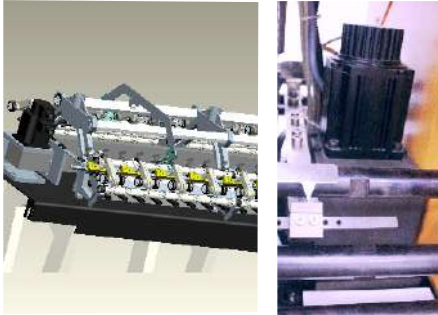
A pair of aluminum anodized feed rollers with special profile and coated with antistatic finish to avoid static charges, rollers are driven by servo motor, which allows the speed regulation accurately and constantly maintain the desired lycra stretch

GAITING UNIT

A specific "V" Grooved ceramic / special ring is used in gaiting rollers to insert the core material exactly at the center of fiber.



TRAVERSING DEVICE



For smooth traversal, the new Traverse Rail System is assembled and the Traverse Rail is rested over the bearing. The Traverse system governed by servo motor for accurate traverse.

CONTROL UNIT



A 7" touch display is supplied along with control unit to create different draft and elongation pattern.

ROVING STOPMOTION (SKAAT MAGNO CUTTER)

When a filament break is detected or missing, the "SKAAT Magno cutter" a magnetic based cutting and clamping device will automatically stop the roving supply.



STOPMOTION

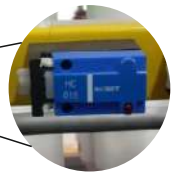
Features

- o Adapted magnetic based roving stopper technology.
- o SKAAT Roving stop motion developed for both single as well as double roving.

Advantages

- o Minimize roving wastage.
- o Suitable for any make of ring frames.

RIGID CORE



Filament Retainer

In SKAAT Rigid core process, a special creel is supplied to hold rigid core materials, whose stretch is controlled by an external tensioning device. An effective stop motion with cutting device to stop the roving whenever the core material cuts or exhausts.

DUAL CORE



SKAAT-Dual Core is one of the most versatile systems of core yarn manufacturing, to produce special fabric for different end use. It is a combination of Soft core and Rigid core systems incorporated in one ring frame.

With dual core spun yarns, the product has good elastic recovery, better shape fitting, facilitating easy movement, and high dimensional stability. The effects of parameters such as yarn count, twist, and polyester/lycra content in the core on the tensile, stress decay, and elastic recovery properties of the yarns are investigated and compared with conventional yarns.

ADVANTAGES OF SKAAT CORE

- Production of CORE yarn with highest quality.
- Efficiently controlled production, precise insertion and centering of filament
- Adaptable into most spinning frames.

SKAAT OPTIK (SPINDLE MONITORING)

SKAAT Optik, an spindle monitoring system successfully developed by SKAAT, to analyse the complete machine performance and to attain International yarn quality were to get complete ring spinning datas by using the latest technology with lower manufacturing costs. SKAAT Optik can be installed to any make of ring frame.

**Benefits of SKAAT Optik includes**

- ✓ Less maintenance.
- ✓ Easy piecing technology.
- ✓ Optic sensor for each spindles.
- ✓ Proper supervision and control with limited indication.
- ✓ Operator with minimum qualification can identify and operate the system.

SKAAT Optik provides below information.

- Production Report
- Doff delay analysis reports
- Stop summary
- End break analysis report.
- Yarn Breaks.
- Rogue Spindle.
- Idle Spindle
- Power consumption.
- Ukg
- Roving Stop Motion.
- Control the speed of the suction motor through inverter.(Optional)

Online Indication

- EMAIL / SMS ALERTS
- E-mail alert to the clients on every day
- SMS alert on mobile at the end of every shift
- Mobile application



Energy Monitoring /Draft Monitoring

- Draft monitoring helps out in highlighting the draft variations in the ring frame.
- Monitor draft variations
- Identify the ringframe with wrong draft wheels

Overall Resources Report Indication

User gets complete details and analysis report from the computer

System Reports

- Production Report – Frame and Side wise
- End Break Report – Frame and Side wise
- Operator Performance
- Idle Report
- Rogue Report
- Slip Report
- Repeated Spindle Report
- Doff Numerical Report

Data handling and utilization

- Centralised system with comprehensive reporting software.
- Doff wise, doff pattern wise, machine wise and count wise.
- Power and break analysis
- Machine wise, count wise, group wise and operator wise – production, end break, power and maintenance reports



SKAAT ROBO- PACK

The system can be designed according to different packaging requirements with customization.



This process includes following

- Connecting all the conveyors in a single line.
- Count identification.
- Cone weighing.
- Cone sealing
- Cone labeling / printing
- Cone Packing (Bag/Box/Pallet)

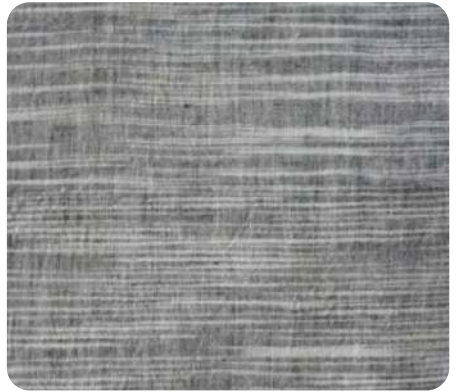


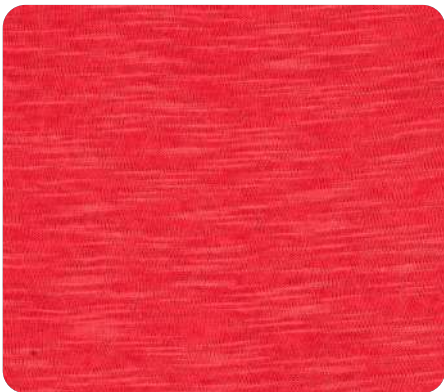
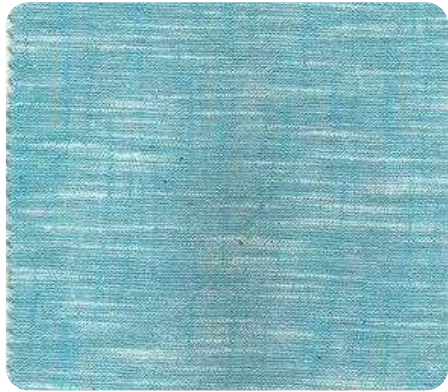
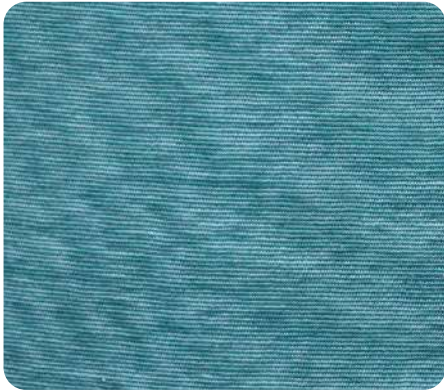
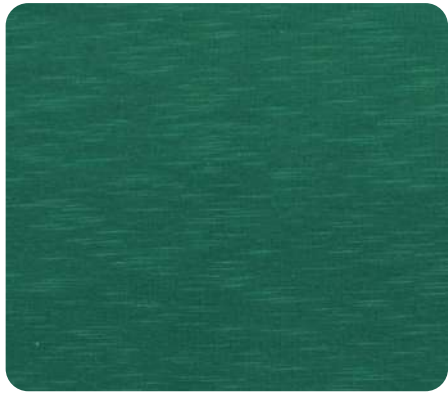
Benefits

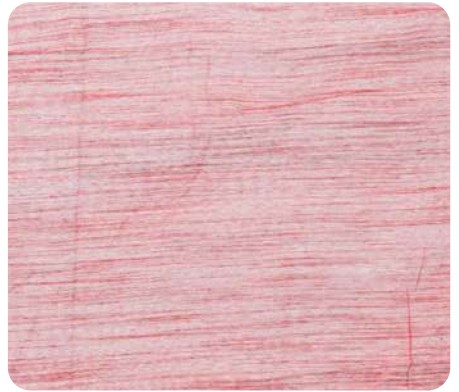
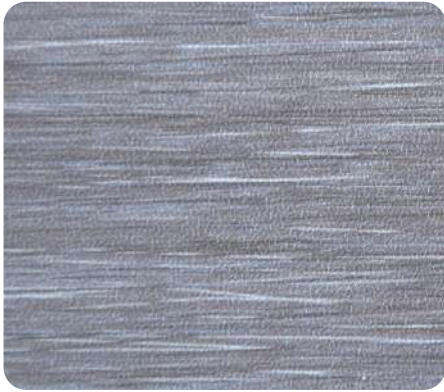
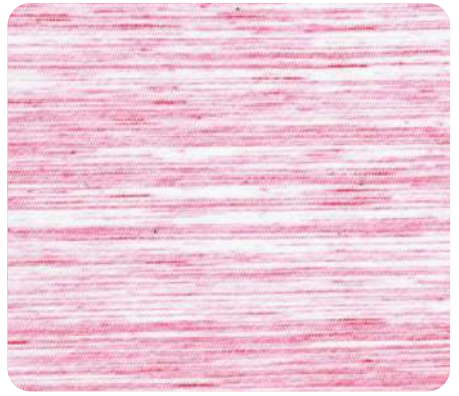
- Weight accuracy.
- QR code tracing system.
- Sealing and shrinking are moisture free added advantage.
- Minimize work force.

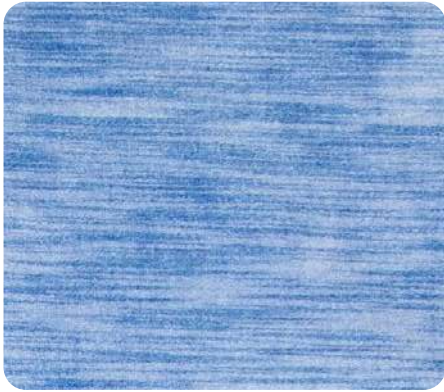
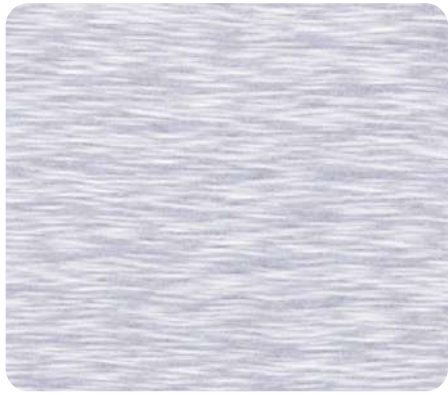
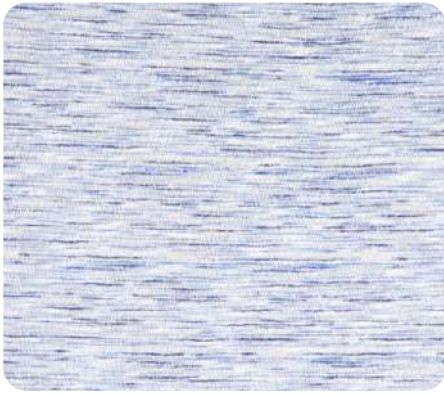


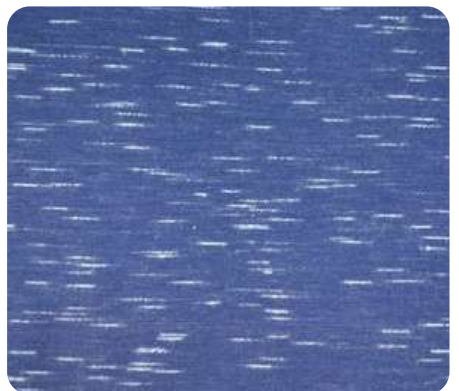
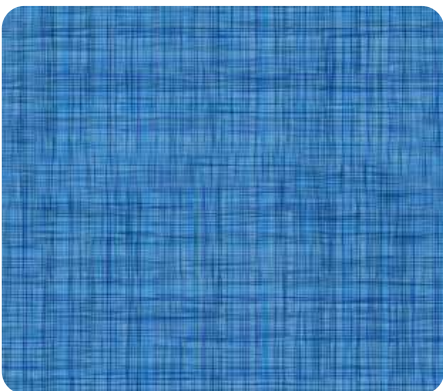
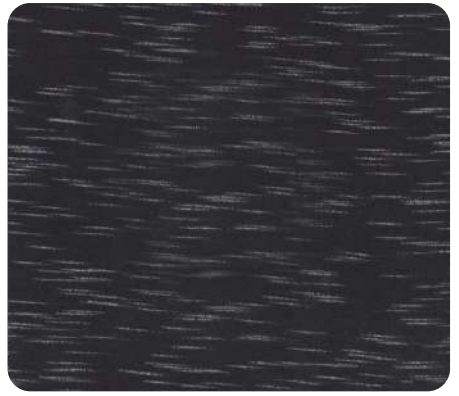
SKAAT FABRIC SAMPLES

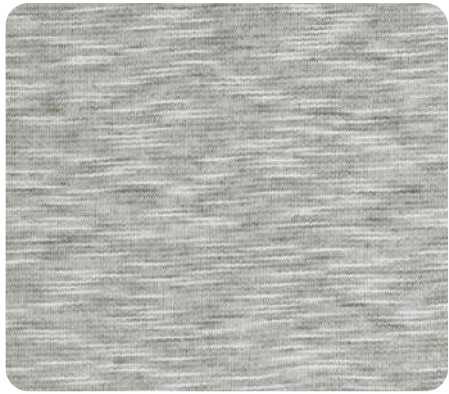
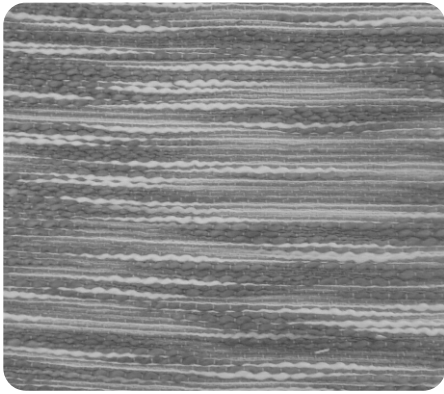












SIKAATR



PLATINUM CORE

SKAAT®

Adding Values

23 YEARS OF EXCELLENCE



TEXTILE



SOLAR



MEDICAL



ROBOTICS

www.skaatgroup.com

WHERE INNOVATION BEGINS

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