

WORLDWIDE INSTALLATION



KNITTED

FINE ART OF FINISHING



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COMPANY PROFILE

Ingeniería (Innovative engineering) is a customer-centric approach that enables Yamuna Machine Works to truly enrich and empower its customers in India and abroad with cutting-edge solutions. This unique brand of smart engineering had helped Yamuna build business and relationships on the very foundation of customer satisfaction. No wonder, Yamuna has carved a special niche for itself among the leading manufacturers for textile processing, finishing and allied industries.

DESIGN. DEVELOP. DELIVER

At Yamuna, we design, develop and deliver an extraordinary line-up of state-of-the-art textile machinery including Hot Air Stenters, Denim Finishing Range, Hydraulic Jiggers, Coating Lines, Singeing Machines, Polymerisers, Thermobonding Lines, Dye Pedders, Drying Range, Shrinking Range, Rope Scouring, Washing Range and Dipping Lines-all manufactured to global standards of excellence.

TECHNOLOGY THAT'S TESTED AND TRUSTED FOR 25+ YEARS

There's trust in every thread and our customers count on it! Some of the biggest brands in fashion fabrics, furnishing and industrial textiles emerge from the womb of Yamuna Machine Works, displaying in full glory their quality and character-be it the soft n smooth luxurious feel of chiffon, the angry ruggedness of denim, the rich texture of the carpet, the durability of the corduroy or the heavy-duty outdoor spirit of a canvas tent. With 25+ years of experience, Yamuna has developed a high level of sensibility to the special needs of customers and provides them with the right machine, at the right time and of course, the right pricing!

STATE-OF-THE-ART, STRAIGHT-FROM-THE-HEART

Yamuna's sprawling 10,000 sq mtr. modernised plant is located in the vibrant and energetic industrial town of Vapi (South Gujarat), just 170 km from Mumbai – the financial capital of India. But there's more to textile machinery than just mechanical, electrical and electronic components. The company has dynamic Design and R&D Team which is setting new benchmarks thanks to its inspired efforts to raise the bar of excellence.

Yamuna has its HO in Mumbai and a proactive sales and after-sales service network all over India. They are the real nuts and bolts who build the last mile bonding with our customers.



PRODUCT RANGE



SINGEING

SINGEING MACHINE FEATURES

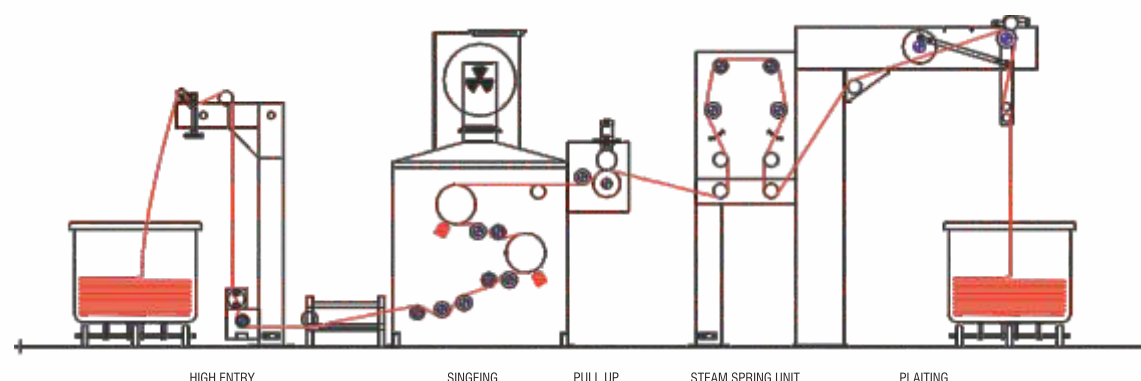
- Burner is the heart of the singeing machine and Bejimag burners are one of the best in the market for soft on delicate fabrics and removes lint from fabric surface
- Customers see the advantages of singeing machine compared to Bio polishing treatment, cost effective, faster and smoother fabric surface.
- Automatic flame width adjustment available
- Ease of maintenance and cleaning of burner body
- Safety features inbuilt in the machine to avoid fire hazard
- Complete PLC machine is added feature

SINGEING MACHINE CONCEPT

Singeing improves the wear properties of textile by the REMOVAL OF PROTRUDING FIBRE ENDS. Importance of singeing machine is well defined as it is the first step in the processing of the grey fabric. Proper quality of singeing ensures and dictates the results of subsequent steps in wet processing.

OPTION FOR SINGEING MACHINE

- (1) Singeing Head from **BEJIMAC**, Belgium and entry, brushing, impregnation and batching from **YAMUNA**, India.
- (2) Burners, gas train and controllers from **BEJIMAC**, Belgium and machine manufactured by **YAMUNA** in India.



KNIT SINGEING



FOR KNITTED FABRICS

- Driven scroll roller before each singeing position.
- Driven water cooled rollers.
- Bianco or equivalent fabric opening & spreading device at entry.
- Quenching arrangement by means of felt.

CONTINUOUS DE-OILING AND SHRINKING RANGE

FEATURES OF DE-OILING AND WASHING

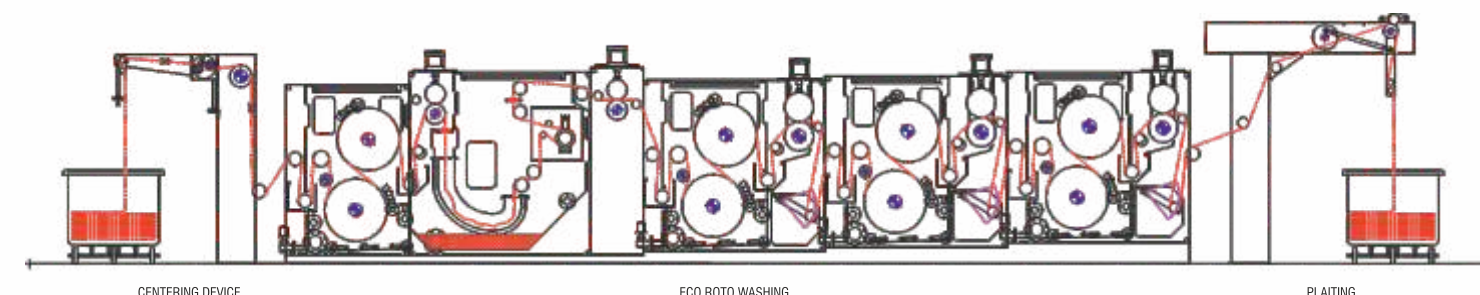
- Flushing out the oils in preparatory process before fabric is taken for further process.
- Eco Roto wash unit is specially designed for delicate, elastane and such fabrics which require tensionless fabrics traverse and support the fabric to avoid tension or sagging of fabric and avoid elongation.
- Eco Roto wash consists of higher mechanical agitation for better penetration of chemicals through the fabric substrate and enhances washing efficiency in short fabric passage.
- High water / chemical exchange takes place due to circulation of liquor enabling removal of dirt, oil and other impurities present in fabric.
- Latest technology enables tension control during the fabric passage on the range there by minimising elongation and tension on fabric.
- Eco Roto Wash offers short fabric passage during the washing system there by minimizing curling of selvedge at either ends.

FEATURES OF J BOX

- Can't stop upto capacity of 25 to 50 kg.
- Number of scroll roll to open the fabric on regular interval.
- Centering device to keep the fabric in center after J BOX
- Closed chamber with maximum temperature achieve upto 99° C

DOSING SYSTEM

- 5 station dosing tank controlled by PLC
- To be controlled by flow meter, flow sensors & pump

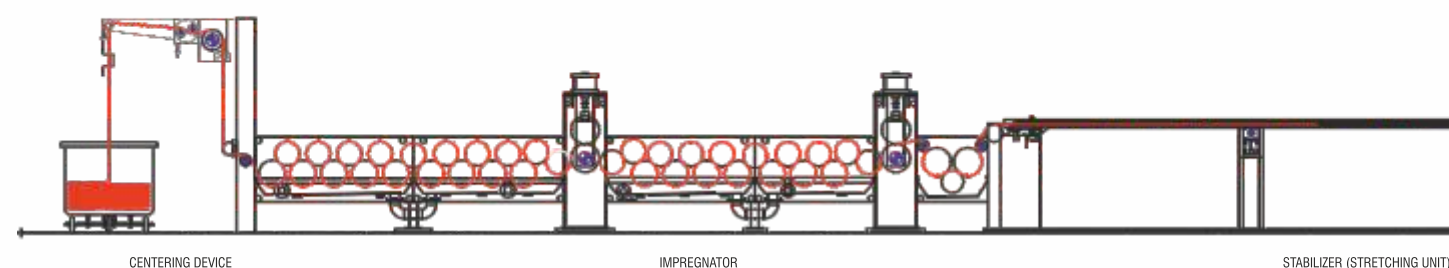


CONTINUOUS DEOILING AND SHRINKING

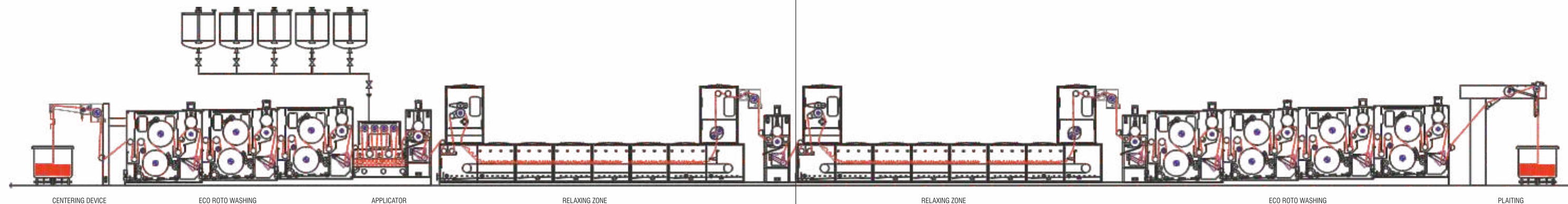
MERCERIZING RANGE

FEATURES

- To give low tension on fabric (to avoid stretch)
- Positives drives are provided in impregnating compartment
- Only Roto drum washers are provided for high mechanical wash & holding the fabrics with positive driven drums & guide roller
- Driven scroll roll assembly provided to remove creases
- Shorter distance between rollers for proper support to fabric & minimize creases and curling at edges
- Suction being provided for easily removal of caustic lye from fabric
- Highest quality mercerizing and caustification for maximum luster, dimensional stability and dye yield
- Improved dimensional stability
- Higher dye yield
- High luster
- Up to 30% lower lye, water and steam consumption
- Optimal finished width with specific residual shrinkage
- Smoother fabric appearance and softer feel
- No back staining



MERCERIZING RANGE



WASHING & CONTINUOUS BLEACHING RANGE

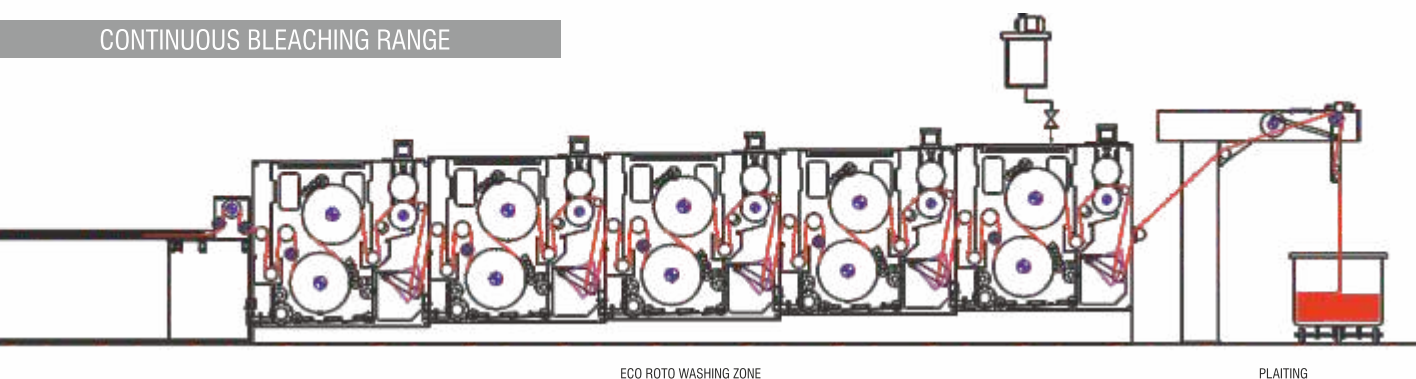
PRE-TREATMENT RANGE

FEATURES

- Scouring and bleaching steamer is uniquely designed to avoid tension and minimize elongation
- Steamer is designed to provide drives with latest tension control gadgets at each stage so necessary to provide ease of passage and softly place the fabric on the conveyor
- The lifting device from the conveyor is also very subtly lifted to avoid jerks and pulling of fabric there by avoid distortion, and physical damage to the delicate fabrics
- Due opening of fabric devices with driven scroll roll assembly helps fabric guidance in open width form throughout the range
- Eco Roto wash boxes are highly efficient in removal of chemicals, dirt and clean the fabric surface by aqua planning and enhance fabric appearance.
- Range is equipped with proper fabric entrance with opening device and also at exit proper plaiting of fabric or rolling on batch can be done with a centre winder to avoid tension and elongation and fabric rupture.
- Applicator is designed to have all upper rolls with drives enabling free flow of fabric and also dip the fabric in solution / chemicals without creating additional tension and minimize elongation. Complete dosing system is offered to avoid human error
- Complete PLC driven range with all necessary utility data can be viewed on the display monitor at the machine.



CONTINUOUS BLEACHING RANGE



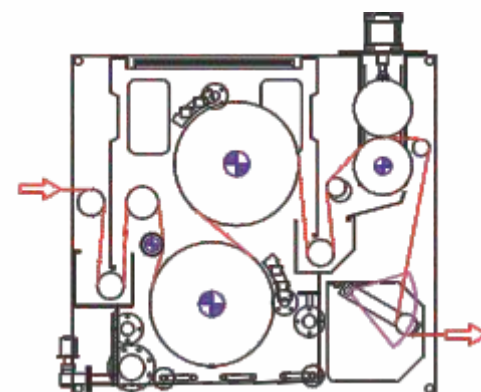
ECO ROTO WASHING ZONE PLAINTING

CONTINUOUS WASHING RANGE

WASHING TECHNOLOGY

FEATURES OF ECO ROTO WASH

- Specialize washing technology for delicate / knits /stretchable fabrics.
- Minimum tension travelling due to motorized driven top and bottom drums.
- Perforated drums allows washing though the fabric.
- Additional rotor driven for bottom drum gives turbulence effect and improves washing.
- Driven scroll rollers at entry to open the fabric.
- Heavy spray on both sides of the fabric.
- Unique temperature control upto 99 degrees.
- In Eco Roto Wash large drum positively driven helps high mechanical agitation while caressing the fabric through with care.
- Eco Roto Wash technology also has sprinklers where water falls on fabric from top to bottom while fabric moves from bottom to top for effective removal of surface contaminants and high wash liquor exchange.



ECO ROTO WASH

STATIONERY FILTER

- Highly effective filter to remove fluff from the water
- Easy removable filters made in stainless steel
- 2 filters with one core and other fine nets
- Specialized design pump for circulation and delivery from the filter



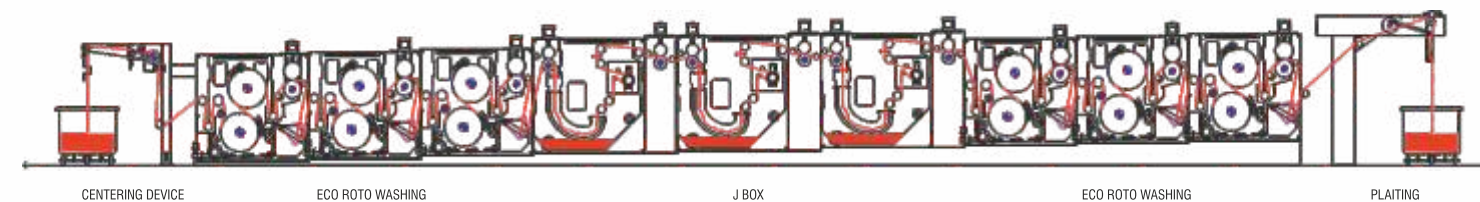
ROTARY FILTER

- Highly effective filter to remove fluff from the water automatically
- Rotary perforated drum
- Motorized brush to remove the fluff
- Pump for circulation

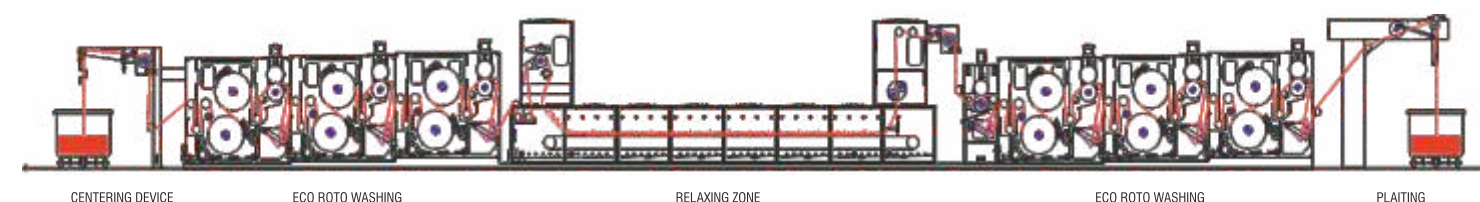


RELAXING ZONE

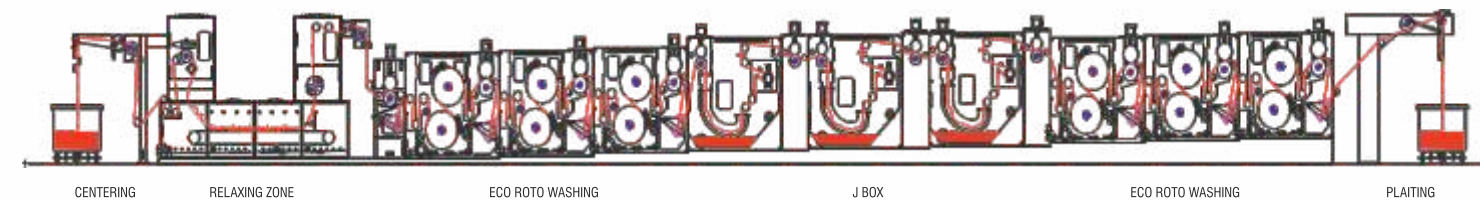
- Tensionless travelling of the fabric
- Relaxing on conveyor
- Conveyor length from 3 mtrs to 15 mtrs
- Closed chambers with even temperature in steamer
- Circulation with spray as per the requirement
- Unique design for perfect pilling of the fabric on conveyor
- Scroll rollers unit for perfect opening at exit of conveyor
- Exit equipped with specialized centering device
- Entire unit manufactured in stainless steel



CONTINUOUS WASHING RANGE



CONTINUOUS DYED WASHING RANGE



CONTINUOUS PRINT & DYE WASHING RANGE



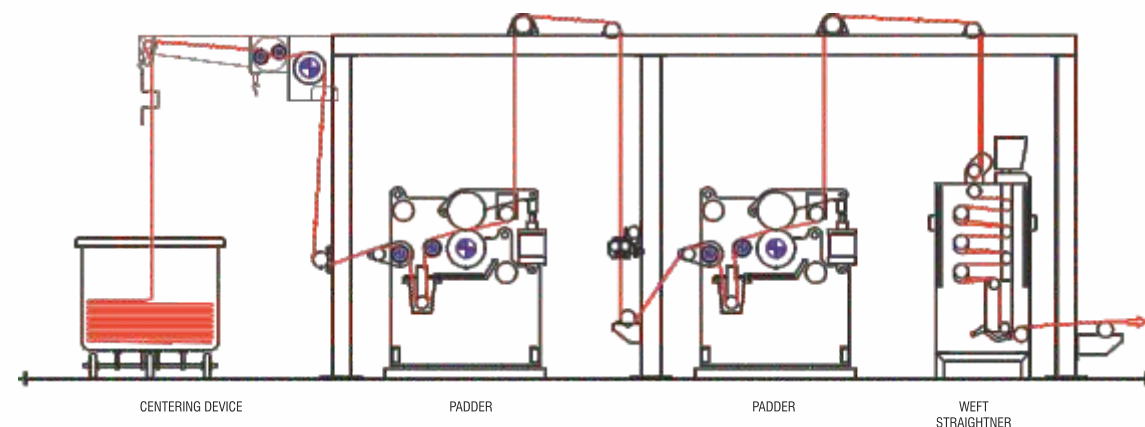
CONTINUOUS PRINT WASHING RANGE

STENTER

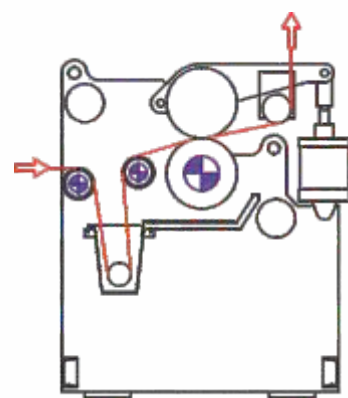
FEATURES AND TECHNICAL DETAILS

- Operate with variable linear pressure for top & bottom squeezing with R-E-R & R-R-R combination.
- Hydraulic deflection rollers for specialized squeezing purpose.
- Mechanical or Pneumatic arrangements for lowering & lifting of the tank with heating and cooling possibility of liquor trough.
- Bow or scroll rollers before entering in the padder.
- Shore hardness up to 100° are available.
- Maximum linear pressure: 500N/cm.
- Working width range 1200 mm - 4200 mm.
- Entire body frame from MS with SS cladding inside the wall.
- Rubber coated roll, assembled vertically 0 305 mm up to 2400 mm & 0 355 mm up to 4200 mm working width.
- Liquor circulation with auto level controlling.
- Compensating roller with pneumatic tension regulation & load cell control for different kind of fabrics.

MULTIPLE ENTRY OPTION WITH MANGLE FOR DIFFERENT KNITS FABRIC



WET ON WET PROCESSING FOR KNITTED FABRICS



2 BOWL PADDER



FEEDING SECTION

- Individual driven overfeed, underfeed, selvedge LHS & selvedge RHS controlled by PLC & TOUCH SCREEN.
- Overfeeding from -15 to 70 % directly adjustable to PC/TOUCH SCREEN.
- Specialized driven SS scroll rollers for woven as well as knitted fabrics.
- Gumming & Pre Steaming options.
- 3/4 FINGERS UNCURLERS or EDGE SPREADERS from TEFLON make for proper selvedge decurling.
- Pneumatic operations for selvedge pinning wheel + Multiple self driven pinning brush options.
- Infra red sensors for fabric infeed with fabric safety options for fabric pin out.
- Fabric support at feed end with separate drive synchronized with chain drive.

SPREADERS FOR KNITTED FABRIC



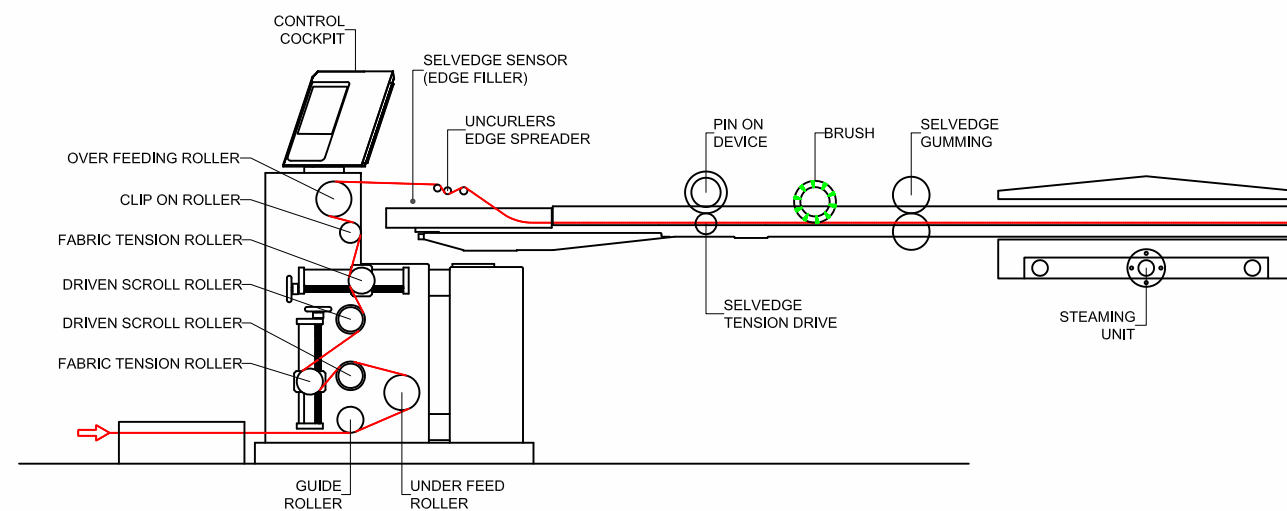
GUMMING FOR KNITTED FABRIC



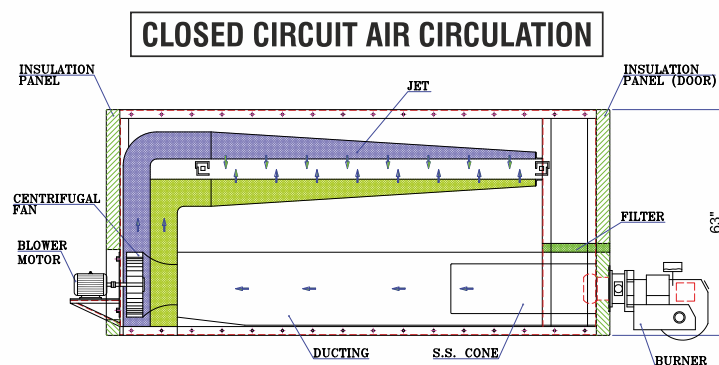
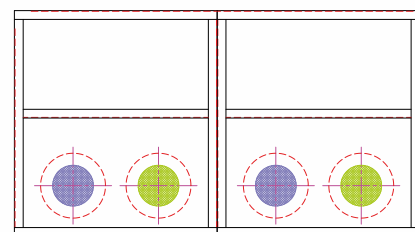
TRIMMING FOR KNITTED FABRIC



FEEDING DESK



CHAMBER DETAILS



INDEPENDENT AIR FLOW SYSTEM

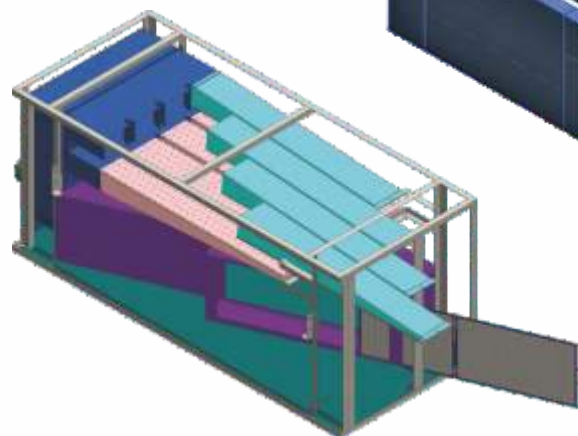
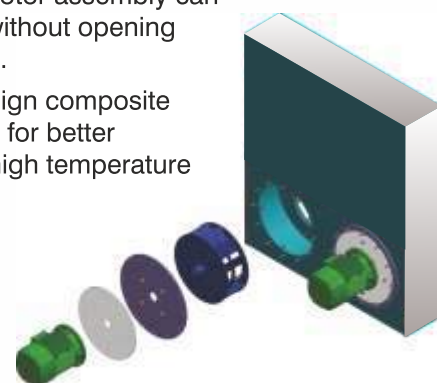
- Individual blowers for top & bottom jets.
- Air ratio between top and bottom jets can be controlled and adjusted easily at fingertip through touch screen at the central control unit.
- Special application for finishing TECHNICAL TEXTILES - If desired only top or bottom air can be used individually.

ENERGY SAVING

Energy savings and increased production up to 8% to 15% obtained through higher efficiency of fan system arrangement as well as unique chamber insulation performance of machine compared to the traditional machines.

EASY MAINTENANCE & OPERATION

- Entire blower motor assembly can remove easily without opening insulation panel.
- Specialized design composite insulation panel for better insulation and high temperature application.



EASY MAINTENANCE & OPERATION

- Easy removable individual fingers for cleaning purpose.
- Openable covers for individual fingers.

MULTIPLE FILTERS

- Online filter cleaning without stopping the machine.
- With option for one core and another fine filters net.



HEAT EXCHANGER MODULE OIL OR STEAM

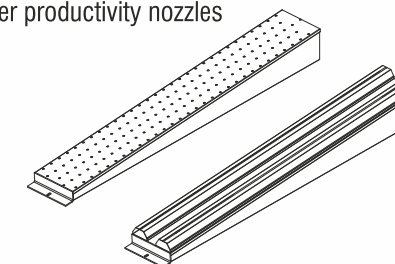
1500 mm long finned type radiator with multipass arrangement of FLOW.



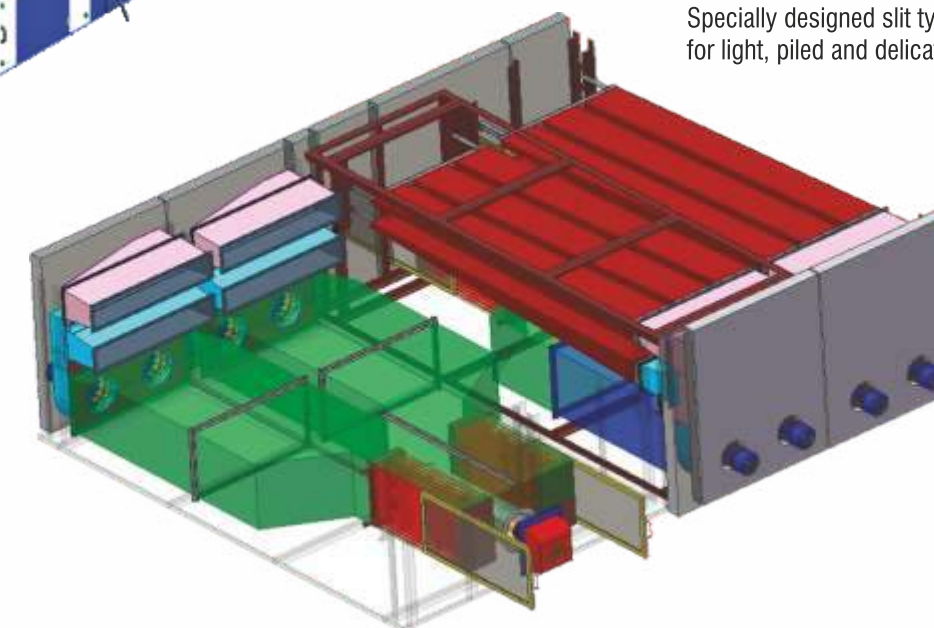
INDIVIDUAL WIDTH CONTROL

Maintenance free width adjustment motorized spindles with directly coupled geared motor with encoder

Higher velocity and
Higher productivity nozzles



Specially designed slit type nozzles for light, piled and delicate fabric



MULTIPLE HEATING PROVISION

Variable Heating Media :

- Gas Heating- Modulating type GAS burners for better temperature control for heavy & light fabric.
- OIL Heating - Proportionate control through PLC for PNEUMATIC or MOTORIZED valves for accurate controlling.
- STEAM Heating - Heating with FINNED TUBES & condensate removal system.
- ELECTRICAL HEATING - Heating with VOLTAGE CONTROL.
- Dual Heating-combination of Steam and Gas heating system.

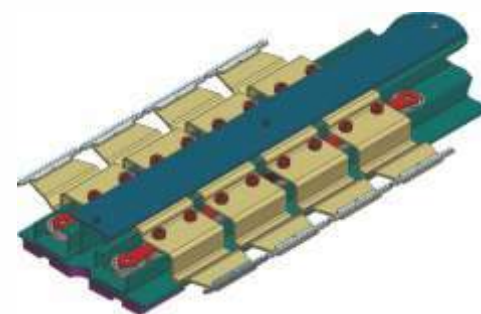
CHAIN AND CHAIN RAIL SYSTEM

Horizontal type fabric transport chain system are available depending on the fabric to be processed. Chain system is available with pin, clip or combination of pin and clip. Specially designed pin bars and clips ensure the safe handling of even most delicate fabrics. Heavy and longer pin bars are available for finishing thicker fabrics like carpets, canvas and blankets.

MODEL PREMIUM



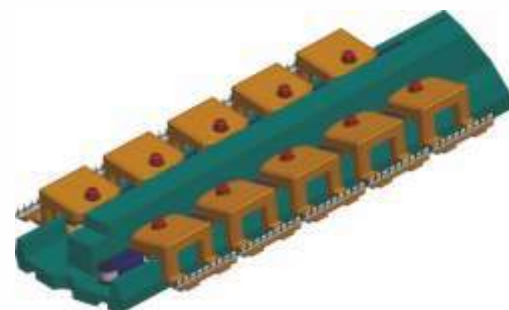
- Rail & pin block from Alloy steel & clip block from aluminum with synthetic liner.
- Special design ball bearing type chain with automatic lubrication.



MODEL QUADRA



- Cast iron rail with aluminum pin & clip block with Bronze liner.
- Automatic lubrication system.



MAIN DRIVE SYSTEM



Individual drive for L.H.S. & R.H.S.

Two options are available - in standard version common drive to LHS and RHS chain, connected through shaft and bevel gears. Optionally individual drive to LHS & RHS with servo controlled system.

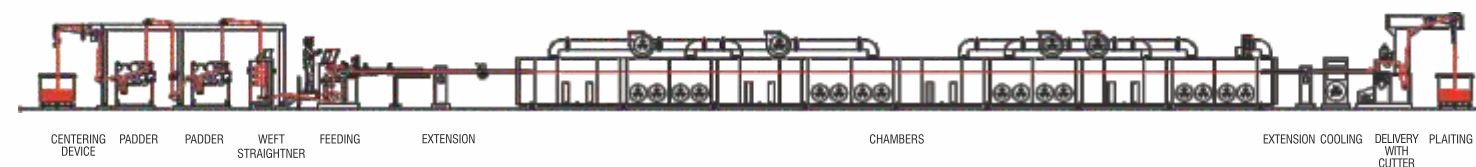
Exit of the machine can be with plaiting, big batching, surface batcher and center winder with non stop options of J Scray and Accumulator.

OPTIONS FOR COOLING

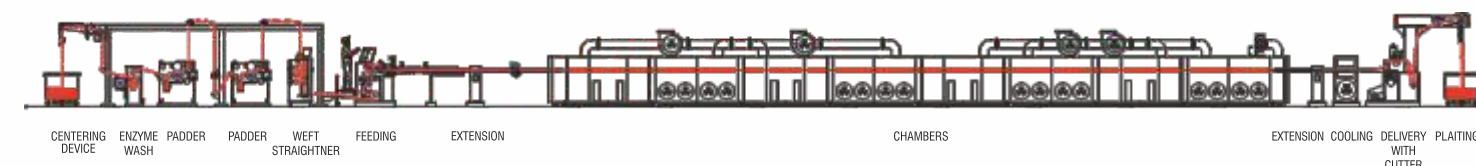
- A) Cooling zone with Air Circulation.
- B) Cooling zone with Chilled Water Circulation.



Common drive for L.H.S. & R.H.S.



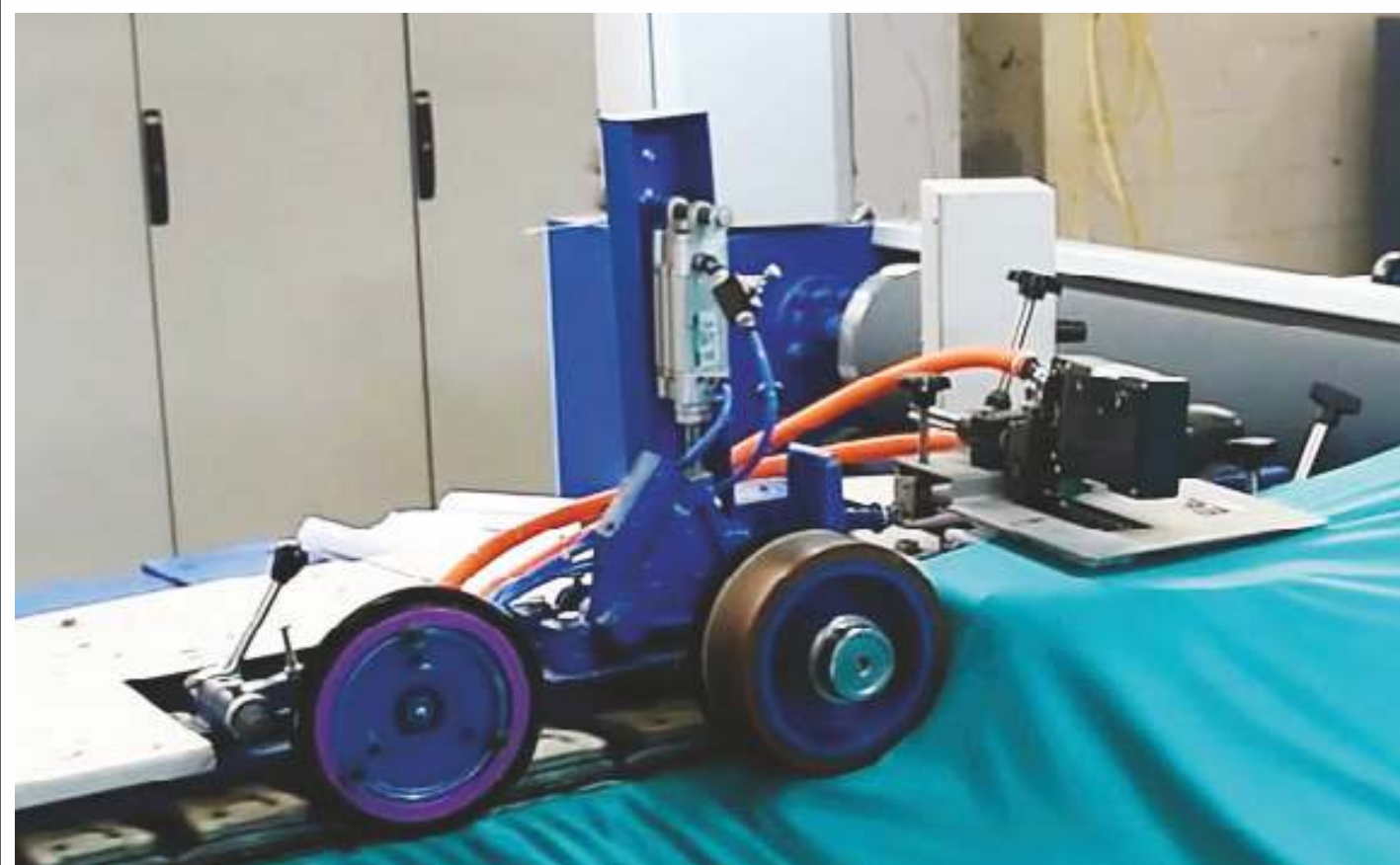
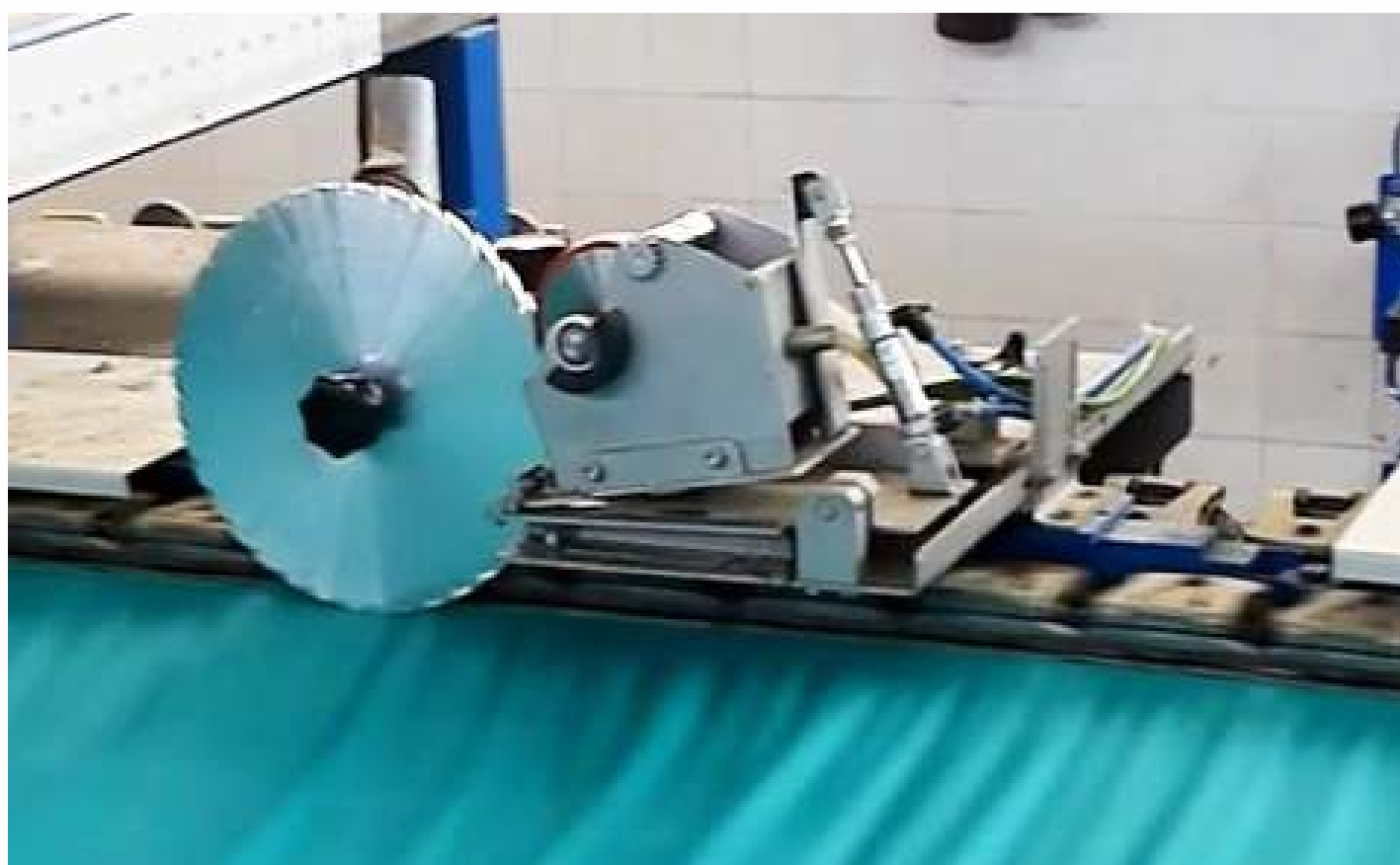
STENTER LINE FOR KNITTED FABRICS



STENTER WITH ENZYME WASH FOR KNITTED FABRICS



FEEDING BODY WITH KNITS ACCESSORIES



COMPACTOR MACHINE

FEATURES FELT COMPACTORS

Compactors are available in different configurations to achieve desired results:

With 2 felt compactor units as standard but with 3 felt compacting units also available for higher speeds.

The hybrid version with mechanical blade compacting module perfectly synchronized with the 2-felt compactor gives maximum compaction on the most difficult fabrics, while enhancing soft hand and maintaining 3D effect of fabric structure.

As with all Yamuna Machines, the management of fabric tension is fundamental but even more so in compactors.

The short fabric segments avoid fabric elongation and the operating programme automatically manages the fabric tension with maximum precision along with all other functions.

New compaction mechanisms perfected by YAMUNA allow impressive compressive action for best dimensional stability.

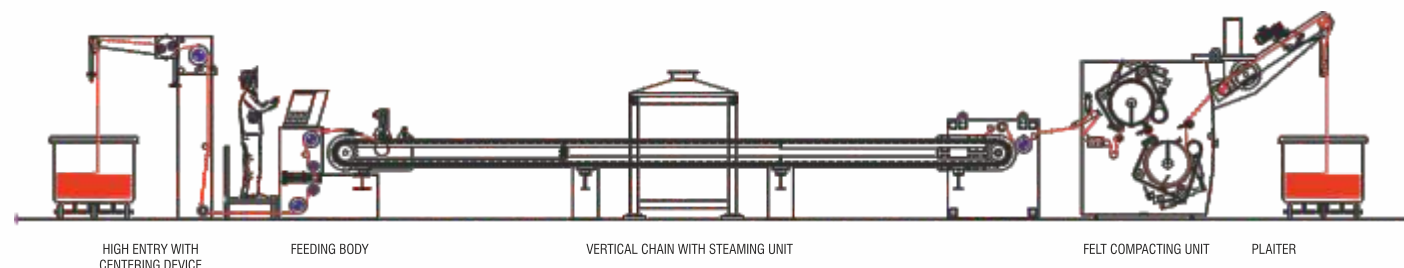
2 - RUBBER + FELT COMPACTORS

Hybrid open width compactor with rubber and felt belts for higher compacting potential (than standard felt version).

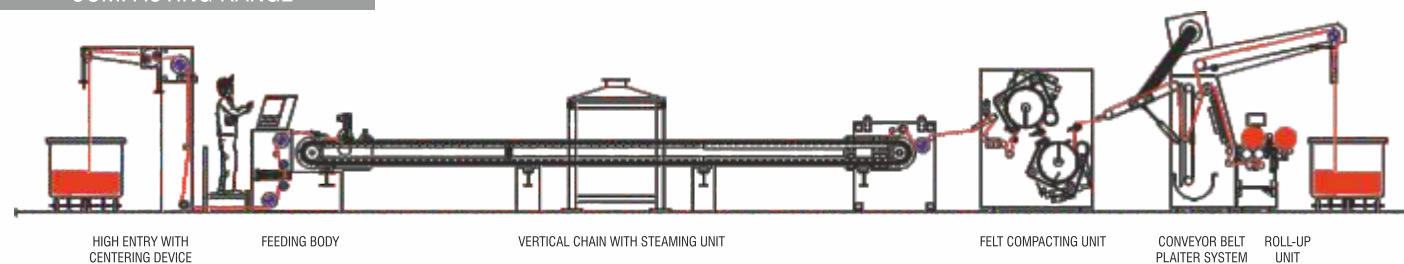
Will produce a flatter fabric with more luster since compacting is achieved by pressurizing the rubber belt on fabric. Superior softness will be generated so ideal also for printed fabrics.

The Rubber belt sanforizing unit and felt compactors are integrated in one module to minimize fabric elongation.

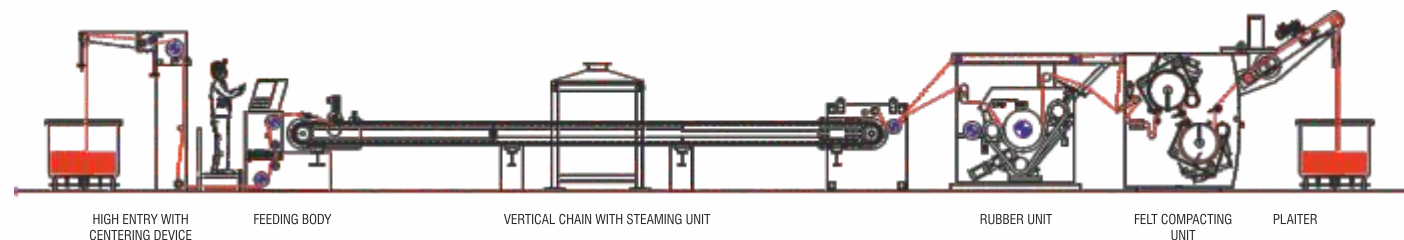
If fabric with more luster and pressed surface is preferred then the hybrid machine with rubber + felt compacting system can be the right solution.



COMPACTING RANGE



COMPACTING RANGE



COMPACTING RANGE WITH RUBBER UNIT

RELAX DRYER

FOR KNITTED / DELICATE FABRICS

YAMUNA relax dryers are suitable for drying, relaxing and shrinking of dyed or bleached knitwear and delicate woven fabrics from cotton, synthetics or wool and its blends. Fabric is allowed to achieve shrinkage nearest to residual shrinkage value, bringing soft and voluminous feel.

- Overfeeding arrangement is provided with a driven roller at the entry. Overfeeding up to 80% can be easily achieved. Fabric opening and centering device can be installed at the entry for open width fabric. For tubular fabrics, special guiding arrangement is provided to guide and feed the fabric in single end or side by side tubular ends.
- Fabric passes through two layers of wire meshes glass fibre conveyors. A large volume of hot air is circulated with the help of specially positioned well designed jets, with removable nozzles, such that the fingers of bottom nozzles comes in between the fingers of top nozzles giving a tumbling action as well as beating arrangement to the fabric.
- Intermediate beaters can also be provided to give mechanical to the fabric.
- Working width 0 : 1600 - 3600 mm
- Heating Media - Steam / Themic Oil/ Gas/ Electrical
- Chamber length 3 mtrs. each.
- Suitable for both open width and tubular fabrics.
- Entry combination can be with Padder, vertical stenter frame or direct entry into the dryer.
- For open width Knits and delicate woven fabrics complete range is provided with driven scroll rollers at entry, Padders; overfeeding device; Vertical inclined pin chain with gumming and steaming; relax dryer with two conveyors and plaiting.
- Can be equipped with residual moisture controller, exhaust humidity controller and microprocessor for process control and automation.

