

SWASTIK

ESTABLISHED 1937

KNIT FABRIC COMPACTORS



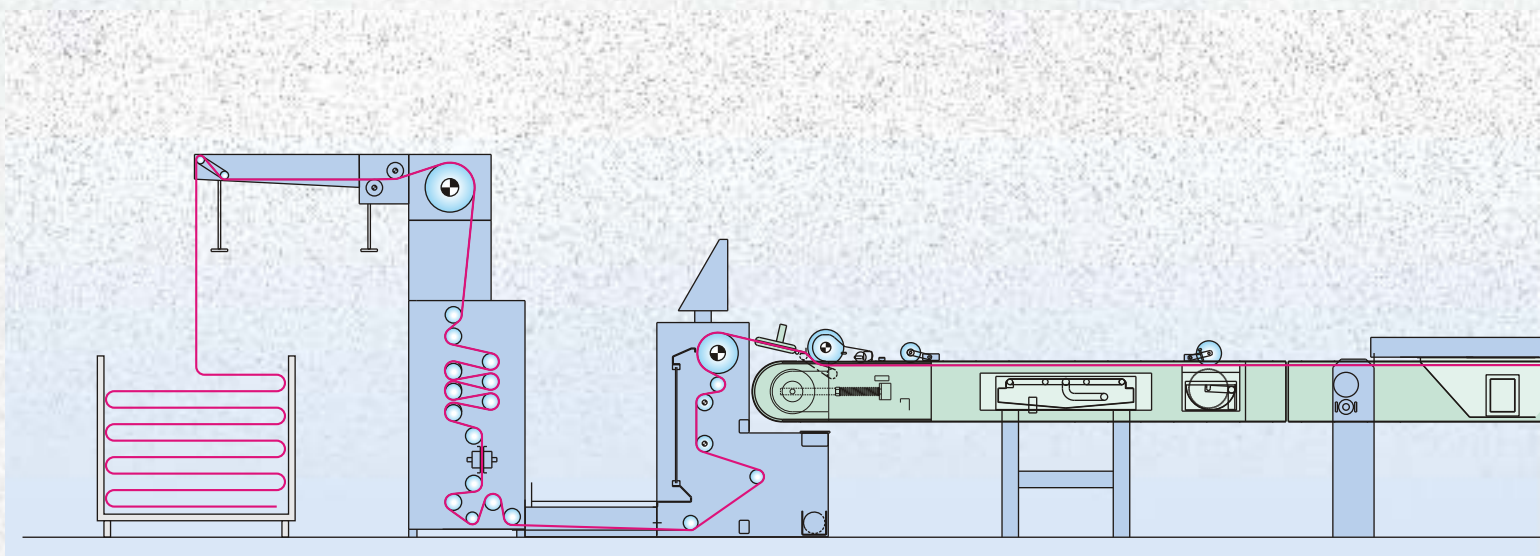
SWASTIK TEXTILE ENGINEERS PVT. LTD.

Swastik Premises, Amraiwadi, Ahmedabad - 380 026. INDIA

Tel. : (+91)(79) 6543 5017, 2274 3553, 2274 9068, 2274 8551, (+91) 99245 12299 **Fax :** (+91) (79) 2274 9131, 2630 8238

e-mail : info@swastiktextile.com : swastik.intl@rediffmail.com

www.swastiktextile.com



The **Open Width Compactor** for Knitted Fabrics model OC-400, ensures optimum dimensional stability, an excellent handle and feel in fabric with the help of powerful uniform steaming and two compacting cylinders. All parameters are strictly controlled to ensure complete reproducibility with the help of electronic controls.

The fabric is fed to the machine through a swivel tension device, a pair of positively driven stainless steel scroll expanding rollers and a slatted centering device driven by a variable frequency drive.

WEFT STRAIGHTENER

The weft straightener corrects the bow and skew type distortions in the fabric weft. The bow corrections are done by a set of motorised bow rollers while skew corrections are done by a motorised skew roller assembly. In the Automatic Correction mode, the distortions are sensed by a set of special cameras and corrective signals are given to the motor controls. Usually, these are of European origin.

STENTER FRAME

Equipped with entry frame housing the overfeed roller driven by a variable frequency drive, a pair of positively driven stainless steel scroll rollers, a manual skew correction device and guide rollers.

It is also equipped with an In-feed device, a pair of mechanical selvedge uncurlers, Infra-Red edge sensors, individual inverter controlled motor driven pinning device for left and right side with a brush belt pinning arrangement and an additional post-pinning brush.

The stenter chain is made from stainless steel, the sliding parts are in special anti-friction material, the pin plates are in nicked brass while the pins are in stainless steel. Two centrally supported belts are provided in middle. A lubrication pump is provided for periodic drip feed lubrication for chains.



VERTICAL RETURN PIN CHAIN

At the delivery end of the stenter frame an exit box is provided, consisting of an inverter driven exit roll and two load-cell controlled compensating rollers to regulate the fabric tension.



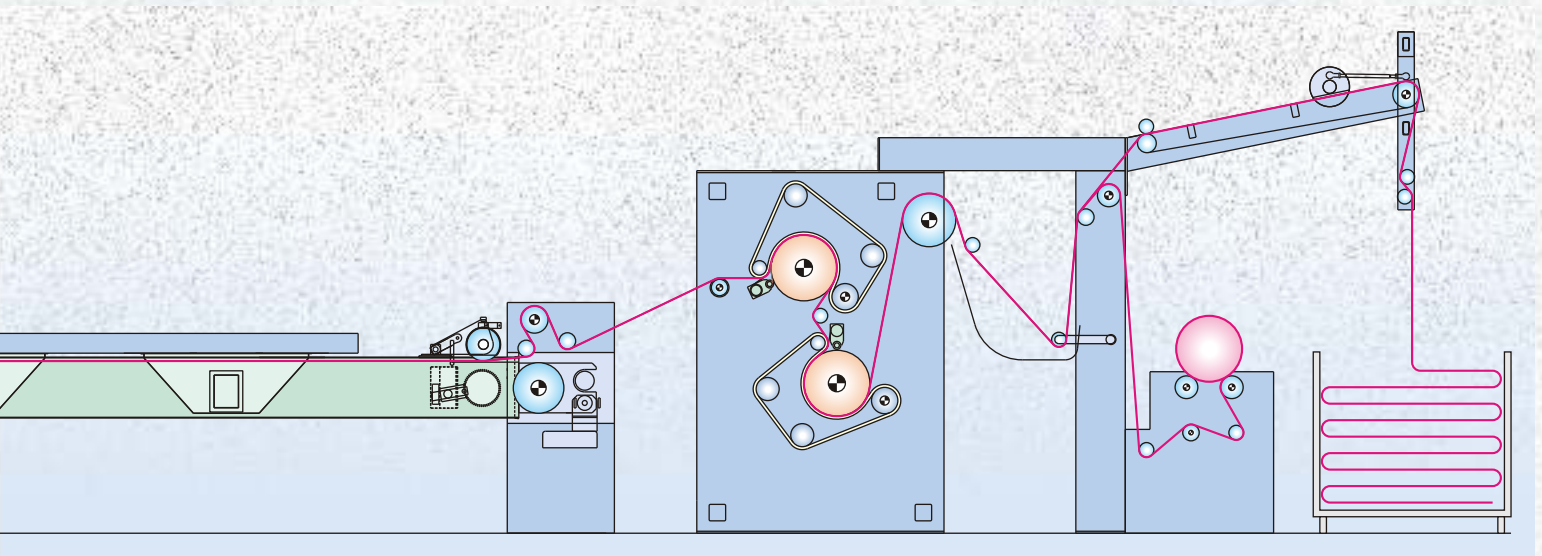
FABRIC FEEDING WITH IN-FEED DEVICE AND INFRA-RED SENSOR



BRUSH BELT WITH OVER FEEDING SYSTEM



FABRIC FEEDING WITH DE-CURLER AND OVERFEED ROLLER



STEAMING DEVICE

A stainless steel fabricated Steaming Device is provided in the entry of the stenter frame for uniform moistening of the fabric.

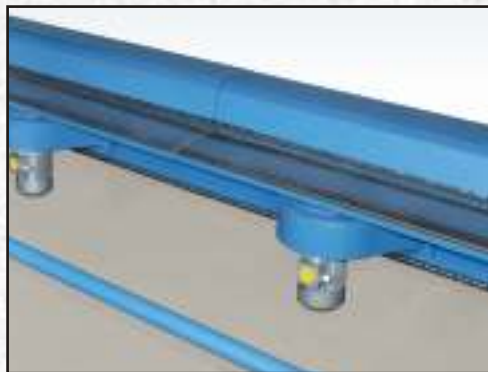
The Steaming Device has stainless steel sliding shutters that allow steam to flow only as per the width of the fabric.



STEAMING DEVICE

SELVEDGE GLUEING AND DRYING UNIT

A low contact Glueing and Drying unit is provided with a stainless steel trough. Four selvedge drying units with Infra-Red emitters are placed on either side of the machine.



EDGE DRYER

SELVEDGE TRIMMING UNIT

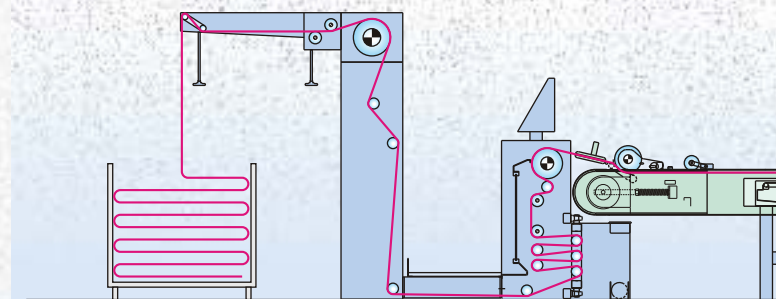
Consists of two motor-driven cutting blades complete with a sharpening device and a pneumatic lifting device. The suction unit for cut selvedge consists of two high efficiency turbo-blowers with a venturi unit.

COMPACTING UNIT

Consists of 2 felt compacting units, each one of them consisting of a very thick Nomex felt approx. 20 mm thick, a steam heated chrome-plated center roller of 400 mm dia., a rubber covered drive roller driven by inverter motor, a compacting pressure roller, a felt tensioning roller and a felt centering roller. Each unit is provided with a special anti-friction sheet type shoe controlled by an electrical actuator to control the compressive shrinkage. A fabric cooling roller is provided after second felt to cool the fabric by means of chilled water circulation.



COMPACTING UNIT



EXIT UNIT

Consists of a J-Scray in stainless steel to allow non-stop roll replacement, a compensating roller and an inverter controlled fabric extracting roller from scray. An inspection table can be provided if required.

BATCHING UNIT

Consisting of variable speed motor driven batching rollers with an adjustable, variable speed pulley. The batching rollers are mounted on a trolley which moves axially by means of an electrical actuator which gets a signal from the fabric edge sensing photocell. A positively driven stainless steel scroll roller is provided for creaseless batching.

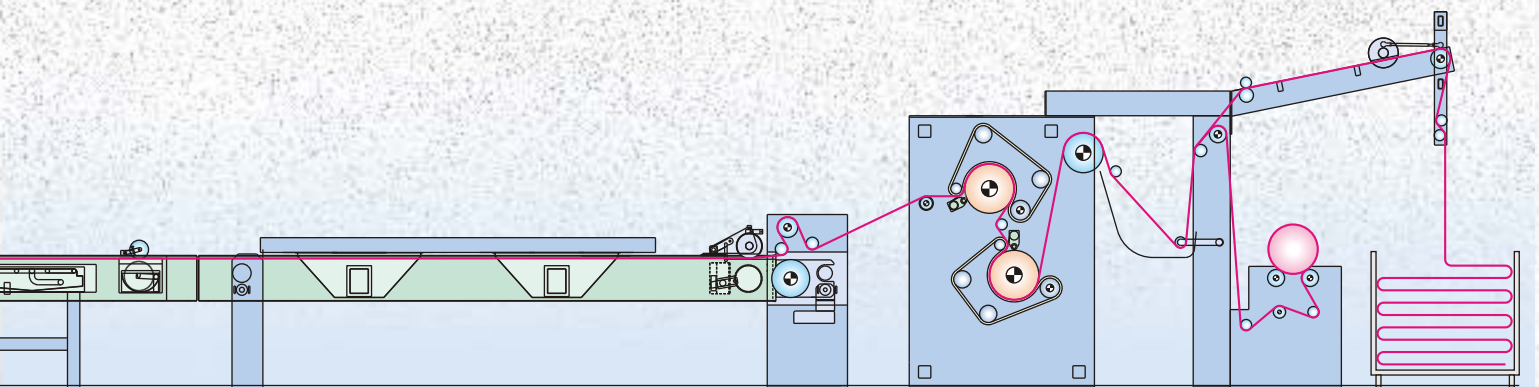
DRIVE & CONTROL SYSTEMS

The machine is equipped with a multi-point fully synchronized variable frequency drive and PLC. For precise control of operating tension, Load cells are provided at required points. Encoder feedback is provided for closed loop speed control. All required settings and the machine operation can be done through the HMI and the recipe manager. This includes the complete machine operation monitoring and process management, visualization of drive and the process, fault report and warnings and operational controls of the machine including Start, Stop, Fast, Slow, Emergency Stop etc. The system can be equipped with a modem for the remote access to the control system.

Automatic operation and control with the use of necessary sensors provide efficient operations for tensionless fabric movement, while proper fabric stretch and controlled over-feeding facilitate proper shrinkage. Controls can also be provided to regulate the temperature of the main heated rollers.

The machine speed can be controlled in the range up to 50 m / min and will vary according to the process and the fabric.

TECHNICAL SPECIFICATIONS			
OPEN WIDTH COMPACTOR			
Maximum Fabric Width	2200 mm	2400 mm	2600 mm
Roller Width	2400 mm	2600 mm	2800 mm
Mechanical Speed	5 - 50 m / min.		
Connected Load - Basic Machine	23 kW		
Connected Load - Edge Dryer, Cutting & Suction Unit	72 kW		
Saturated Steam consumption at 4 bar	200 kg / hr	250 kg / hr	300 kg / hr
Compressed Air consumption	160 l / hr at 6 / 7 bar		



The treatment of knit fabrics in tubular form on the SWASTIK TUBULAR COMPACTOR model TC-400 meets the exacting standards set by customers so that garment stitched from the fabric finished on this machine will yield the lowest residual shrinkage values.

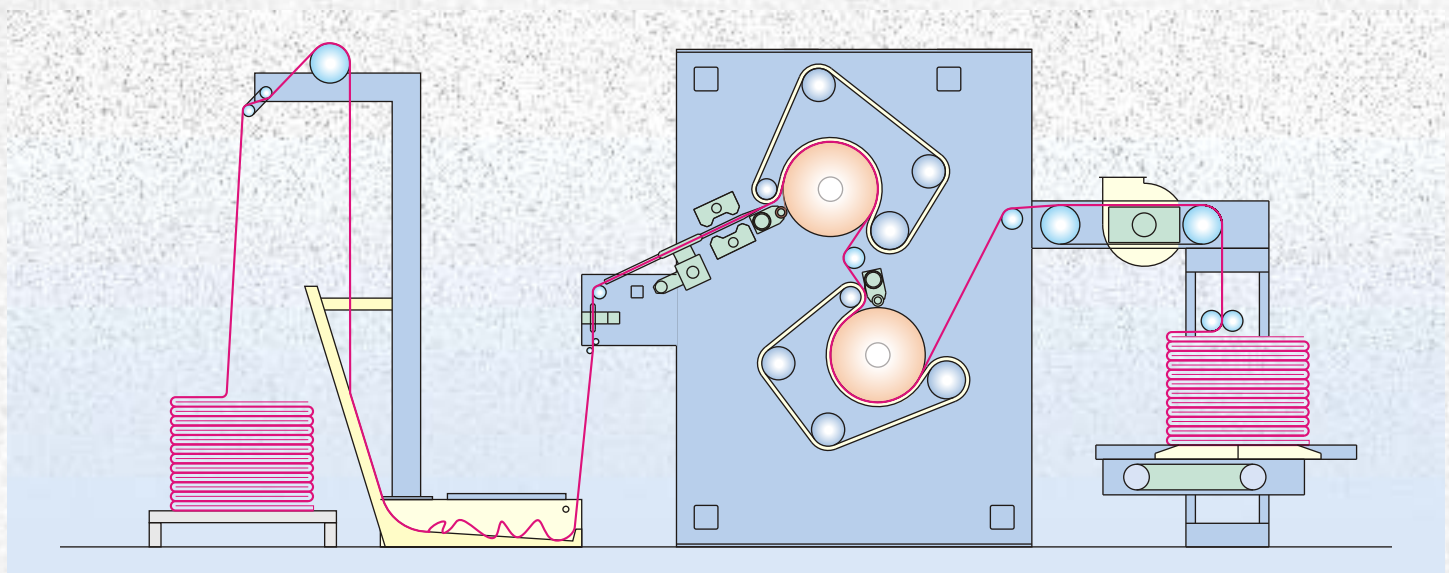
- Width control is through a steplessly adjustable special tubular fabric stretcher driven by variable speed motor for distortion-free fabric guidance.
- Steaming with a condensate-free steam box which is easily operated and completely made from stainless steel.
- Compacting through two Nomex felt belts, normally of European origin.
- Calendering while passing between the felt belt and the heated shrinking rollers
- Precision plaiting with automatic platform level adjustment controlled by folded fabric height.

The fabric is fed through the guiding system and stretcher which then takes the fabric through the steam box onto the Nomex felts of the compacting units.

In order to treat both sides of the tubular fabric, two compacting and calendering units are provided. A cooling system is also provided at the delivery side. At the fabric delivery, the machine is equipped with a precision plaiting device with its platform. The height of the platform is controlled automatically and is adjustable according to the plaited fabric height.

Alternatively, instead of the plaiting device the machine can be equipped with a fabric rolling system, with or without a scray.

The machine is equipped with a multi-point variable frequency drive with all operations controlled through touch-screen or through a push-button station.



TECHNICAL SPECIFICATIONS

Working Width	1200 mm	1500 mm
Roller Width	1500 mm	1800 mm
Mechanical Speed	3 - 30 m / min	
Connected Load Basic M/c.	8 kW	
Saturated Steam Consumption at 4 bar	200 kg / hr	250 kg / hr
Compressed Air Consumption	50 l / hr at 6 / 7 bar	

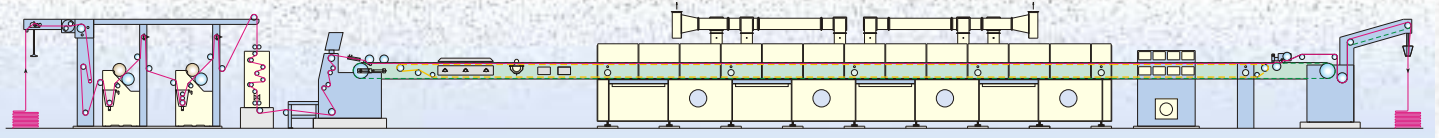
STENTER OPTIMA 2510, 2610 & 2620

STENTER model OPTIMA 2510, 2610 & 2620 with horizontal / vertical return pin-chain with conveyor (Model - 2620) or without conveyor (Model - 2610). Suitable for fabric widths upto 3000 mm or more if required. With 3-10 compartments, suitable for Steam, Thermic Oil or Direct Fired Gas heating systems. Can also be equipped with segmented centering rollers, fully automatic Weft-Correctors, Moisture, GSM, Dwell Time and Fabric Temperature controllers. A fabric Gumming and Trimming device and variable frequency drive are standard equipment.



OPTIMA - 2510

OPTIMA 2620



Relax Dryer with Pin Frame Entry

RELAX DRYER WITH PADDER AND PIN FRAME ENTRY

A universal Relax Dryer suitable for both open-width and tubular fabrics. Machine is equipped with a special Infeed device, with positively driven scroll Rollers, A heavy duty Padder for wetting out is followed by a second Padder for chemical finishes. A well designed pin frame entry with vertical return pin-chain with special edge guider and positively driven Scroll Rolls, pneumatic pinning device is also incorporated, to obtain uniform GSM control. The Relax Conveyor Dryer provided with a possibility of overfeeding upto 40%, which permits good tumbling effect to allow good shrinkage of fabrics. Relax Conveyor Dryer is equipped with Teflon Glass Conveyors, Steaming Device, Driven Beaters etc. Dryer could be either Single Pass, Two Pass or Three Pass as may be required. The machine is suitable for production from 4 Tons to 20 Tons / day depending on the configuration.

Manufactured by

SWASTIK TEXTILE ENGINEERS PVT. LTD.

Selling Agents

SHREEJI ENGINEERING & MARKETING SERVICES

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www.swastiktextile.com

Mumbai Office : 11, Sir Vithaldas Chambers, 16, Mumbai Samachar Marg, Fort, Mumbai - 400 023. INDIA

Tel. : (+91) (22) 2204 9812 **Fax :** (+91) (22) 2288 1481