ISO : 9001 : 2015 Certified Company

HARSHAD

Machinery Pvt. Ltd

Manufacturer and Exporter of Textile Processing Machinery

www.harshadmachinery.com

/ PART 1
INTRODUCTION

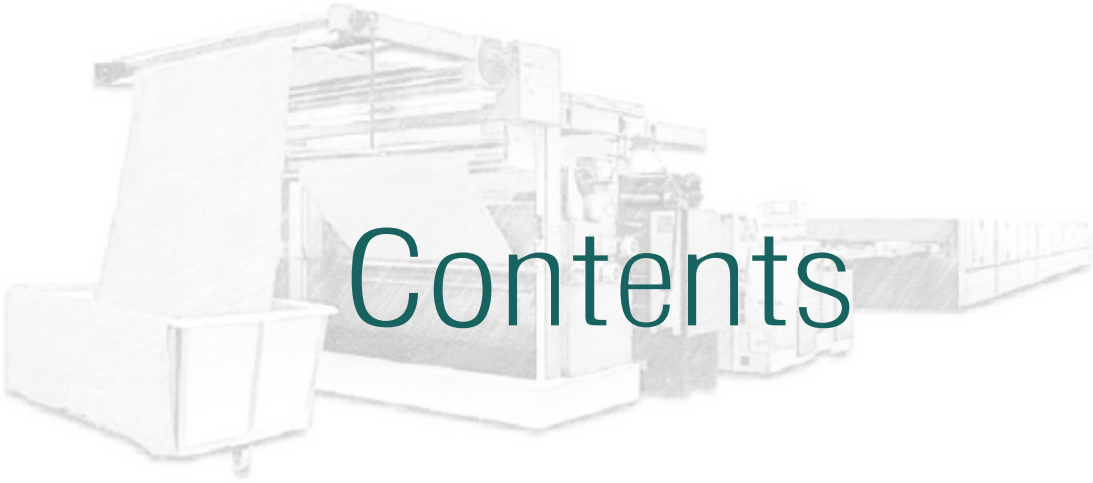
About Harshad Machinery

Product Range :

- Hot Air Stenter
- Relax Dryer
- Batching Stenter
- Float Dryer(Printing Dryer)
- Rotory Dryer
- Padding Machine with Mangle
- Fabric Folding Machine

/ PART 2
MACHINERIES

Hot Air Stenter
Entry Section / Mangle
HM Stenter Machine
Gas Direct Heating System
Thermal Oil Heating System
Feeding Desk With Cockpit
Delivery Desk With Plaitor
Overfeed Pinning System
Relax Dryer Machine
Batching Stenter
Float Dryer (Printing Dryer)
Padding Machine With Mangle
Folding Machine
Dimensions



Contents

About Harshad Machinery

Harshad Machinery Pvt. Ltd. formerly known as Bharat Engineering founded in 1994 based on accumulated experience and know how in Stenter Machine technology. The company's greatest strength is in developing textile machinery confirming to world class quality standards. HM Stenters are known for giving best quality at best price. This is the reason why HM became first choice among the valuable customers throughout India and Abroad.

Located in Surat, Gujarat, India. Company ensures to match international quality standards with combined effort of skilled engineers and dedicated work force.

Harshad Machinery has successfully installed more then 800 stenter machines worldwide.

CERTIFIED BY:

Decide with Confidence

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HARSHAD MACHINERY

Mangle

Entry Section

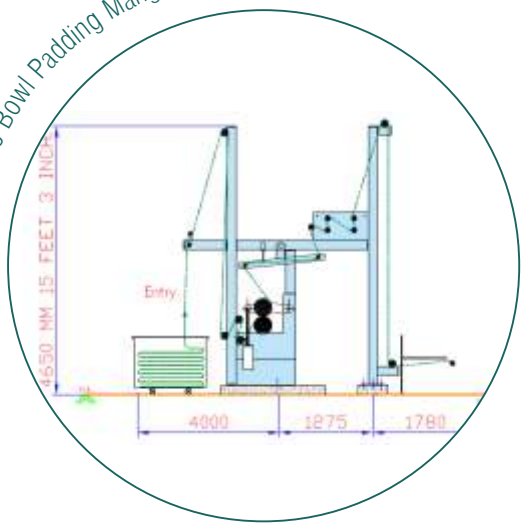
Entry Section consists of cloth tensioning device, centering device or guiders (both optional) for keeping the fabrics in center line with respect to 3 BPM or 2 BPM or both & a mechanical or pneumatic compensator. 3 BPM consists of 2 dip & 2 nip system. Above the mangle structure, is mounted a mechanical bow & weft straightener unit.

Padders & Squeezer : The rubber hardness of padding and squeezing mangle rollers are designed depending upon the type of fabrics processor in order to achieve the highest possible squeezing expression & highest stenter performance and uniform chemical padding. The crown roller is applied as a standard padder & squeezer.

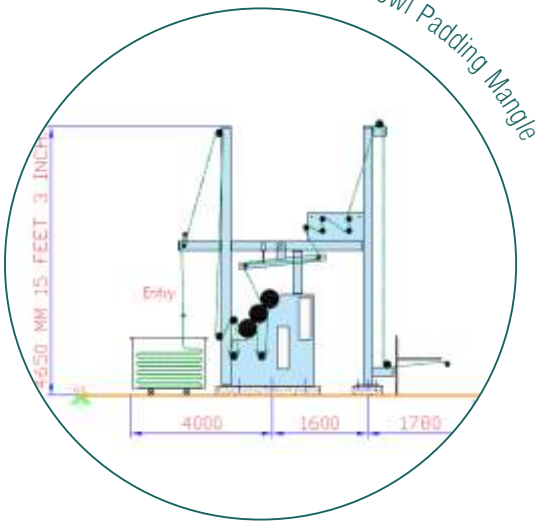
Various Line Diagram

- 3 - Bowl Padding Mangle.
- 2 - Bowl Padding Mangle.
- 2 - Bowl + 3 - Bowl Padding Mangle
- 2 - Bowl + 2 - Bowl Padding Mangle

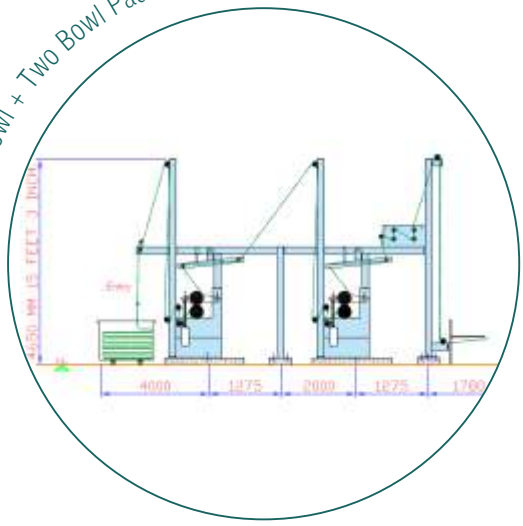
Two Bowl Padding Mangle



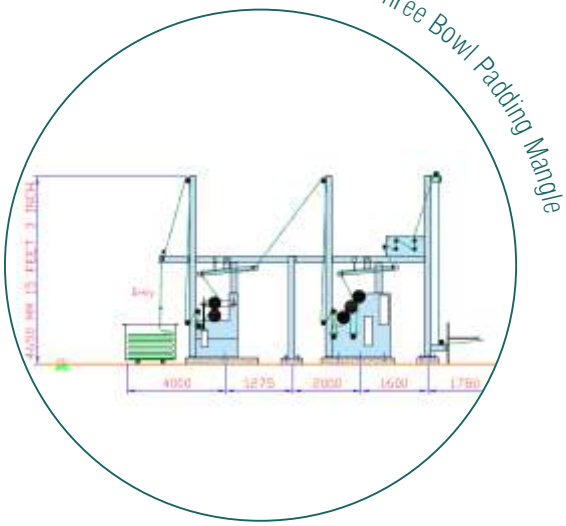
Three Bowl Padding Mangle



Two Bowl + Two Bowl Padding Mangle



Two Bowl + Three Bowl Padding Mangle



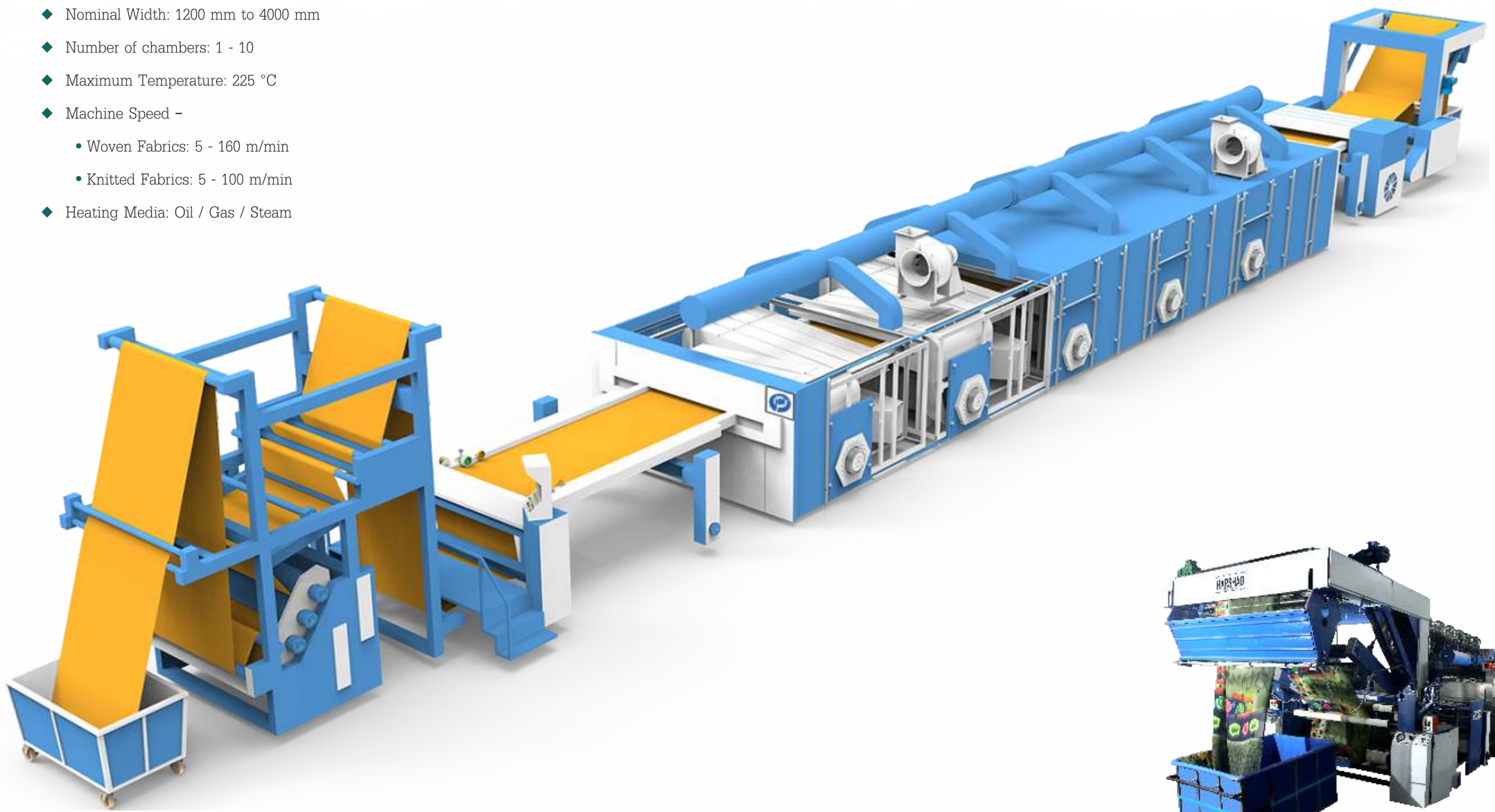
Stenter Range for Dehydration, Drying, Heat Setting and finishing woven and knitted fabrics.

Technical Data

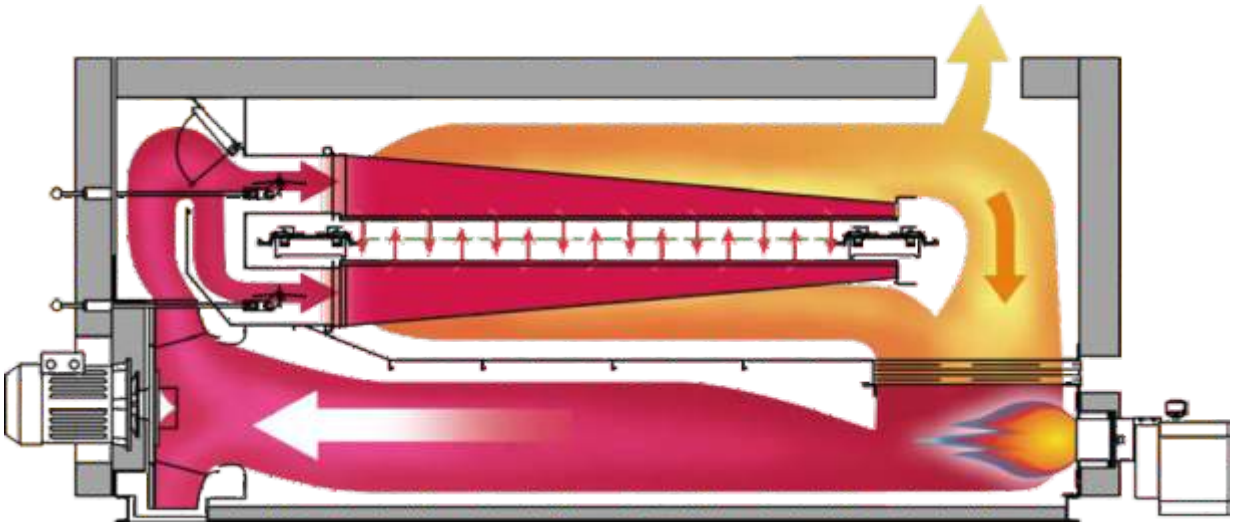
- For woven fabrics.
- For knitted fabrics.
- Nominal Width: 1200 mm to 4000 mm
- Number of chambers: 1 - 10
- Maximum Temperature: 225 °C
- Machine Speed –
  - Woven Fabrics: 5 - 160 m/min
  - Knitted Fabrics: 5 - 100 m/min
- Heating Media: Oil / Gas / Steam

HM Stenter Machine

HM Stenter Machine is designed to match the requirement of all kind of fabrics. Minimization of heat loss, highly efficient, saving energy and increasing productivity.



Gas Direct Heating System



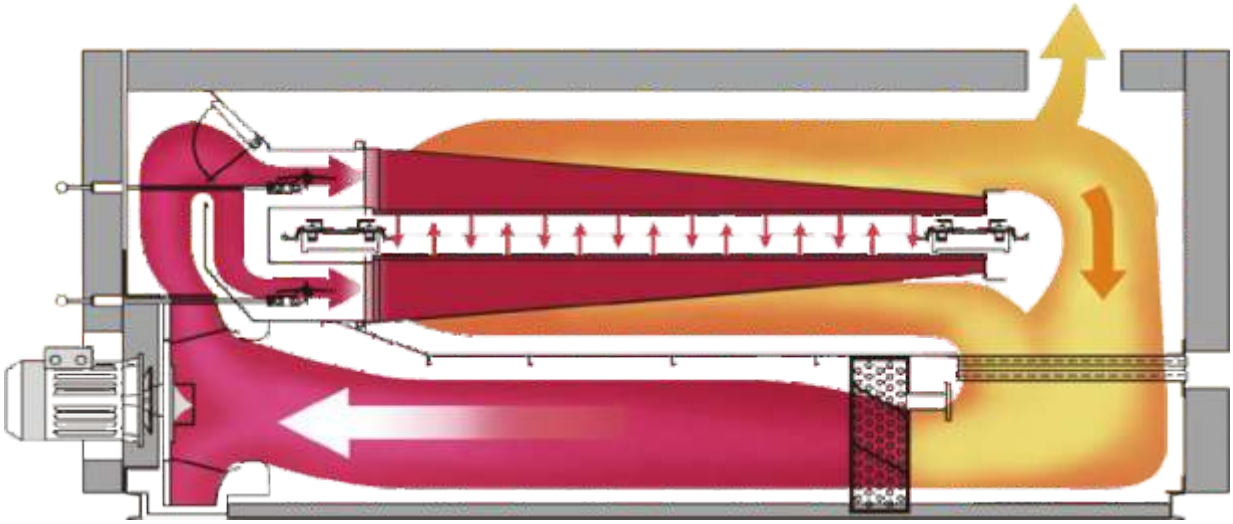
Gas Burner

Gas Direct Heating System Features:

- It is equipped with auto - cut off, and safety devices.
- Temperature raises very fast, shortens the loading time of machine.
- Anti - explosive door designs in heating chamber.
- Low pollution, easy maintenance, the most clean heating way for environmental protection

Gas Burner

Thermal Oil Heating System



Oil Heater

Thermal Oil Circulation Heating System

- PID digital temperature controller, Pt 100 temperature probe and motorized control valve / Pneumatic valve open and close movement, controls the suitable temperature in the heating chamber.
- Heat exchanger is fin type, the heat distribution dimension is high, heat storage is low, Heating and heat dissipation is faster to keep steady temperature. Assure the fabric is under good thermo - fixing, to upgrade the quality.
- The highest temperature can be reach at 225°C to satisfy the customer demands.

Oil Heater

Feeding Desk With Cockpit

- Feeding Range From - 10% to +40% based on chain speed.
- Independent drive of overfeed roller & under feed (Fabric) Roller.
- Fabric can be straightened, skewed by movable Skew Control Roller Manually (optional).

Delivery Desk With Plaiter

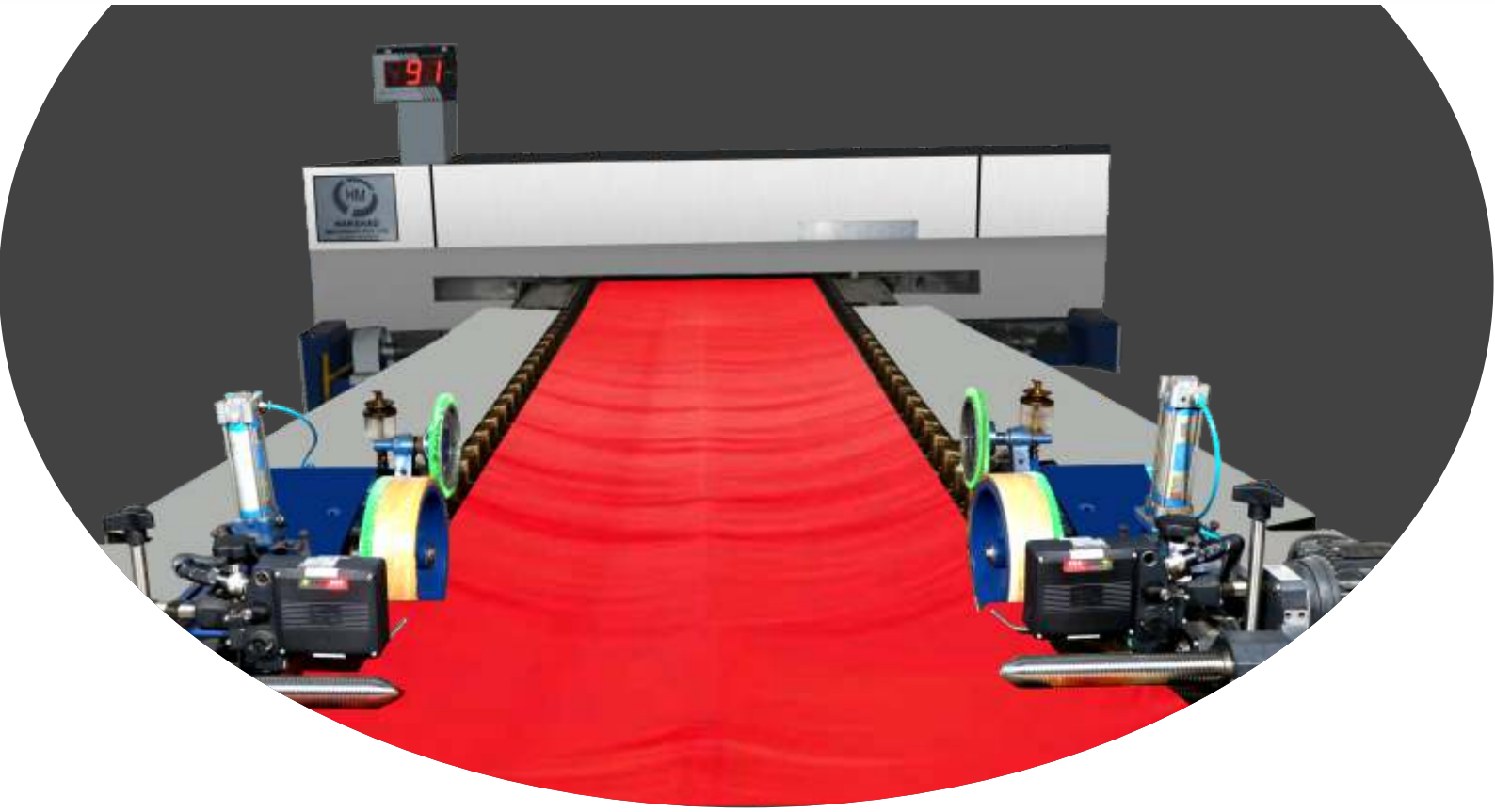
Delivery Desk:

Main Gear Box running through spiline shaft which is commonly connected to drive on both side of main chain.

Plaiter:

Fabric exit section of the machine mainly suitable for plating, Surface Batcher, Big Batcher & with Small Roll Batching.

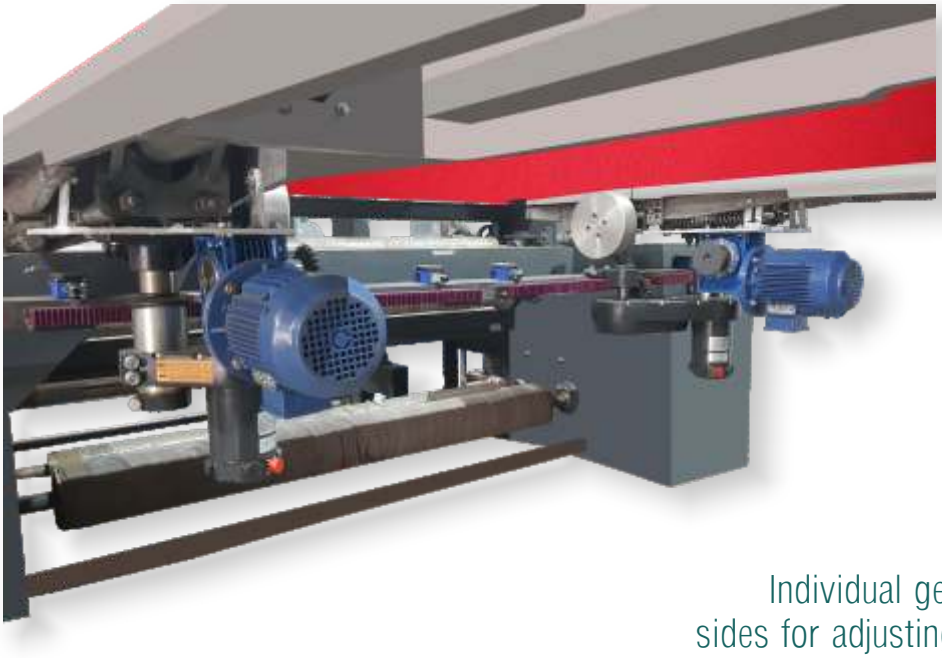
Overfeed Pinning System



Selvedge Tension can be controlled by means of mechanical as well as pneumatic, as cylinder system to minimize fabric tension and selvedge curl by shorter distance between selvedge uncurler and pinning device.

Stenter Infeed System

It is used for short controlled fabric guidance for excellent feeding of even extremely delicate woven and knitted fabrics and Invariant Pinning.



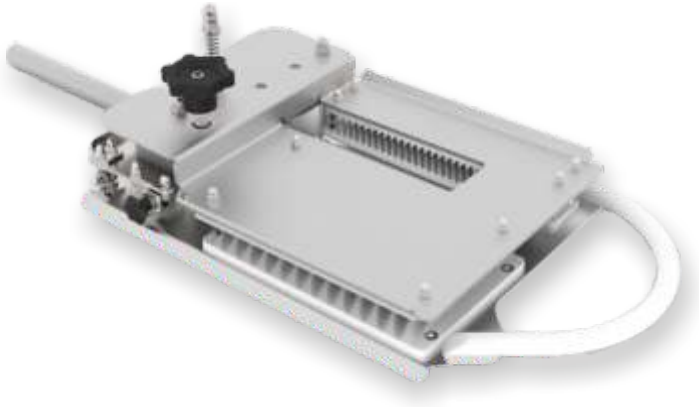
Individual gearbox on both sides for adjusting Selvedge Tension

For Knit Fabrics

Mechanical Spreading Unit

The mechanical LS 30 plate type selvedge openers made of stainless steel and resistant to moisture and chemical influence.

The spreading fines are set diagonally to the direction of the web and uncurl the rolled edges of knitted fabrics. The spreading effects can be adjusted to the needs of different types of fabric by adjusting the distance between two plates. Mechanical edge openers do not require any external form of energy.



Selvedge Cutting (For Knit Fabrics)

The edge cutter is used in pairs on the out feed of the stenter for cutting the glued edges of the web. The reliable shear cutting technology with powered top blade ensures a precise cutting results. The contact pressure b/w the top blade and the bottom blade can be adjusted using a spring and transfers the rotary movement to the bottom blade.

Gumming Unit

This system applies gum to the selvedge and prevent selvedge curling perfectly. Application tank maintains a constant gum level thus ensuring minimum and steady gum application.

Pinning Unit (For Knitted Fabrics)

View of open chamber

Close circuit design, Radial Fans, Detachable Nozzles, Oil Heated / Gas Fired, Online Filter Cleaning etc.

High Efficiency Blower

Specially Designed high efficient radial impellers give most effective hot air circulation & unique nozzles gives most effective drying. Impellers are well balanced. Inspection, Cleaning etc. are very easy, thanks to big inspection windows on blower sockets.

Electronic Panel

Steel Fabrication electric control panel consist of necessary switch gears like main switch fuse unit, contractors, relays, MCB. A.C. drives etc.

Optionally - Industrial A.C. is supplied along with panel for long life of drives where room temp. is above normal.

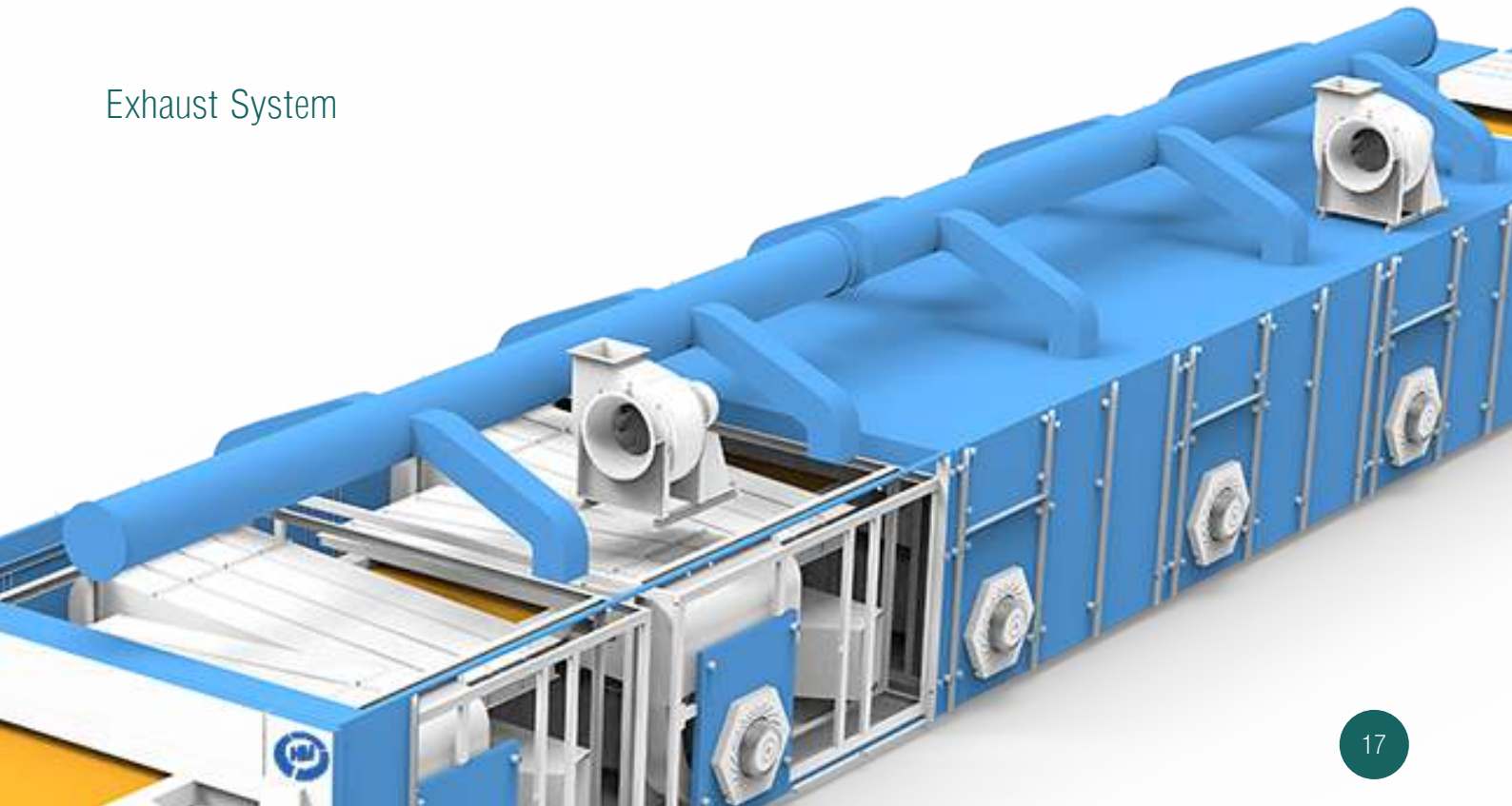
Air Cooling System

Blowing ambient air via turbo fan on to the fabric through top and bottom nozzles is ideal for all types of fabrics.

Chamber Inside View

The chambers widened inside space facilitates easy maintenance.

Exhaust System



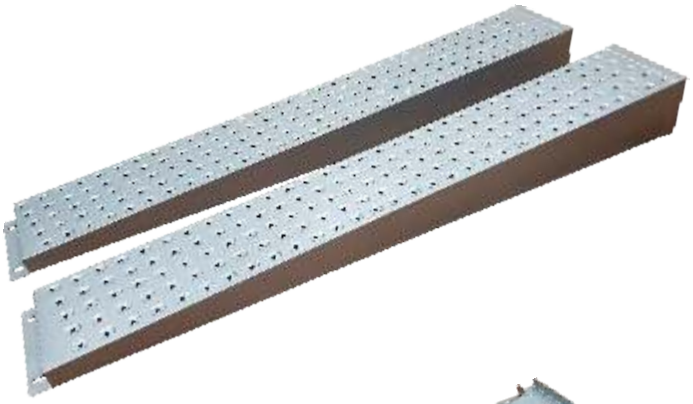
Nozzle Box (Suitable for all types of fabrics)

- Specially designed high efficiency nozzles.
- Constant and efficient air distribution over the fabric.
- Accurate surface polishing.
- System to maintain a constant and uniform airflow pressure over the fabric, even when fan speed is varied via the inverter.
- Excellent processing of heavy weight and lightweight fabrics.

Nozzles are detachable – can be removed, cleaned and fitted in a very short time – thus helps in keeping machine drying efficiency constant. Big open able doors with detachable nozzles gives maximum access inside the chambers for repairs and cleaning.

Flat type round punching nozzles:

Flat type round punching nozzle is generally ideal for synthetic and blended woven fabric. It is highly suitable for dimensional and heat setting effect.

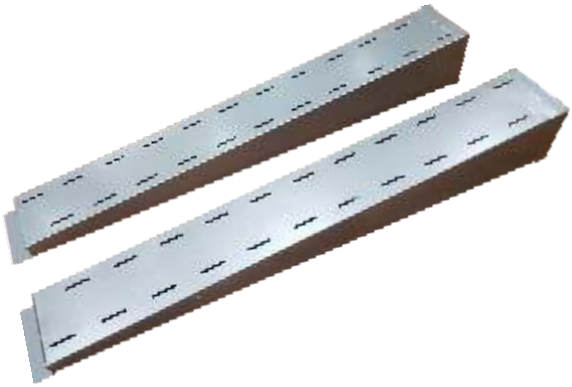


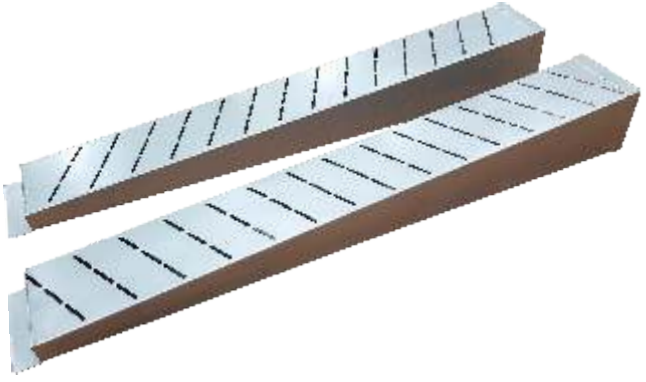
M-type round punching nozzles:

Specially designed nozzles with embossed holes gives maximum uniform distribution of hot air and best drying effect.

Slot type nozzle:

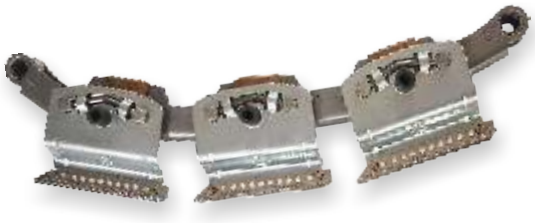
Slot type nozzle is generally ideal for cotton, pilled fabric, raised fabric velvet and coating process.





High Tech Stenter Chain

- Chain Link made of high carbon steel with high tensile strength Sintered Bronze.
- Chain assembly (Lubrication Type) Big Liner Riveted & Small Liner specially flared.
- Running Speed well in excess of 150 m/min.
- Design as pin chain, clip chain or combined pin / clip chain.

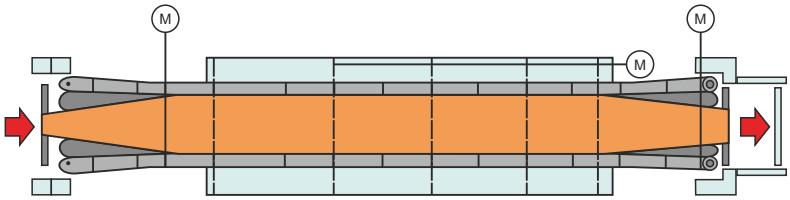


Bottom part with m.s pin block and hard chrome plated and S.S (Optional) Pin bar.

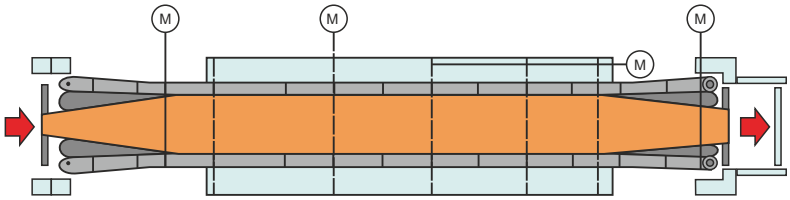
Bottom part with aluminum pin block and hard chrome plated and S.S (Optional) Pin bar.

Bottom part with pressure dye casted aluminum pin & clip type block.

Chain Width Adjustment



Standard

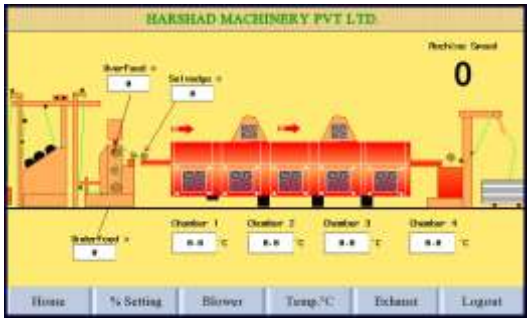


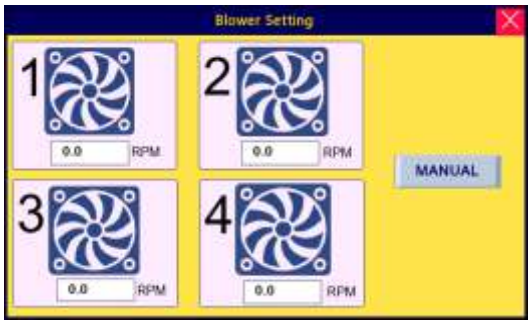
Optional

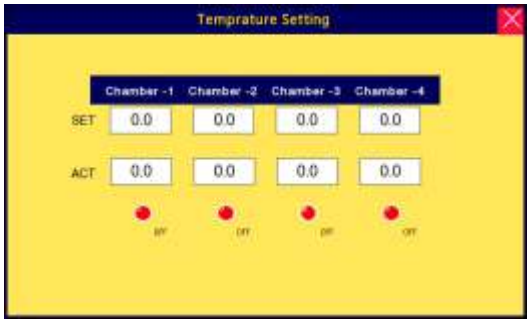
- Independent AC motor drive of each width adjustment.
- Width setting via PLC System.
- Spindles accessible from the roof for easy cleaning and maintenance.

PLC System

PLC with touch screen for smooth operation and synchronization of overfeed, fabric tension and selvedge tension blower RPM of each chamber, fabric counting.







The touch panel and push buttons are used to control functions, modify digital settings and display important process values.

Batching Stenter

Batching stenter - available in two models. Can also be provided with 3 bowl mangle. Mainly used for printing base fabrics. Mangle with batching senter can be utilized in digital printing process also

Pin Type / Pin & Clip Type Roll Batching Stenter Consists of

- High Entry
- Weft Straightener
- Inlet Desk & Rail
- Chamber (Oil or Gas Heated)
- Outlet Rail & Outlet Desk
- Batching Device (Small or Big)

Relax Dryer Machine

Harshad Machinery Conveyor Relax Dryer Machine

The Key to low - tension drying of knitted and woven fabrics.

Technical Data of the HM Relax Dryer

Working width	:	1000 mm - 4000 mm others on request
No. of passes	:	1/ 2 / 3
Temperature	:	Max. 225c
Evaporation Capacity	:	230kg water per hour per chamber
Machine Speed	:	0 - 30m/min. higher speed according to the plant requirements
Fabric guidance	:	Single and multiple-truck, according to requirements
Heating system	:	Steam, Direct Gas, or Thermic Oil
Power	:	Entry Exit 4.4kw Main - Drive 3.5kw - Chamber per each 15.0kw

Harshad Machinery Conveyor Relax Dryer Machine is designed for finishing woven and knitted fabrics. It can be used for Drying, Shrinking, Intermediate Drying, and Effect Drying.

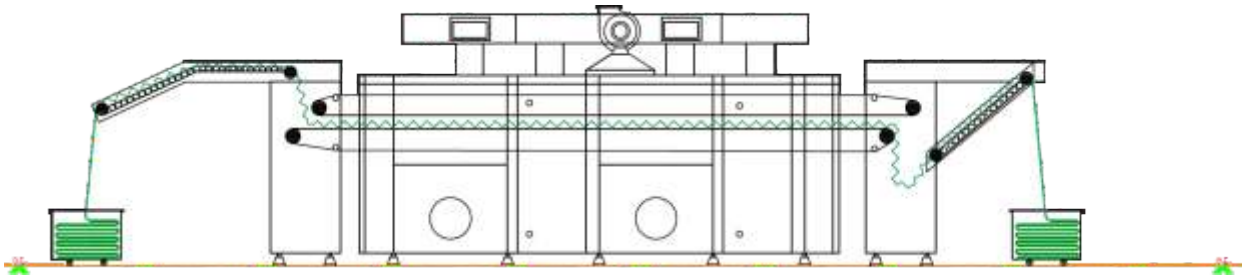
‘HM’ Conveyor Relax Dryer is suitable for

- Achieving Controlled shrinkage
- Developing volume
- Improving Handle
- Effect Drying

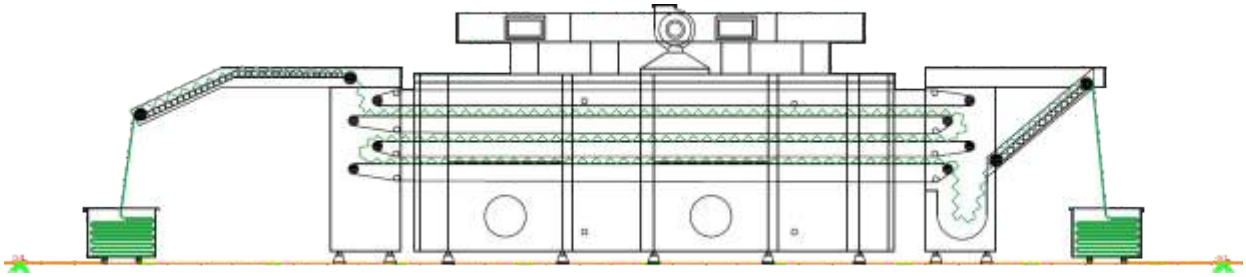
The machine also offers continuously variable adjustment of airing intensity and hence of fabric dynamics. Other equipments details are as under

- Star-jet stepped nozzles (modifications of the protected star-jet nozzle system)
- Econ - Air flow control system
- Fan - assisted oil & gas
- Conveyor relax dryer working width 1000mm to 4000mm
- High production & Low costs

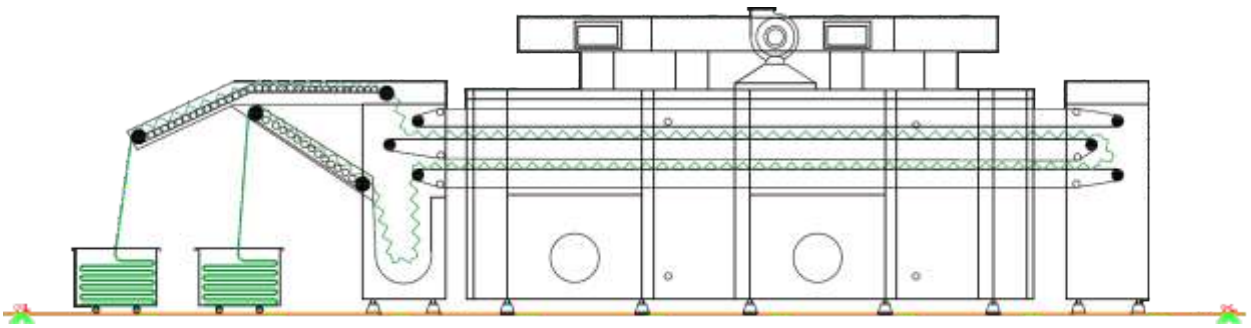
Conveyor Relax Dryer Single Pass



Conveyor Relax Dryer Double Pass

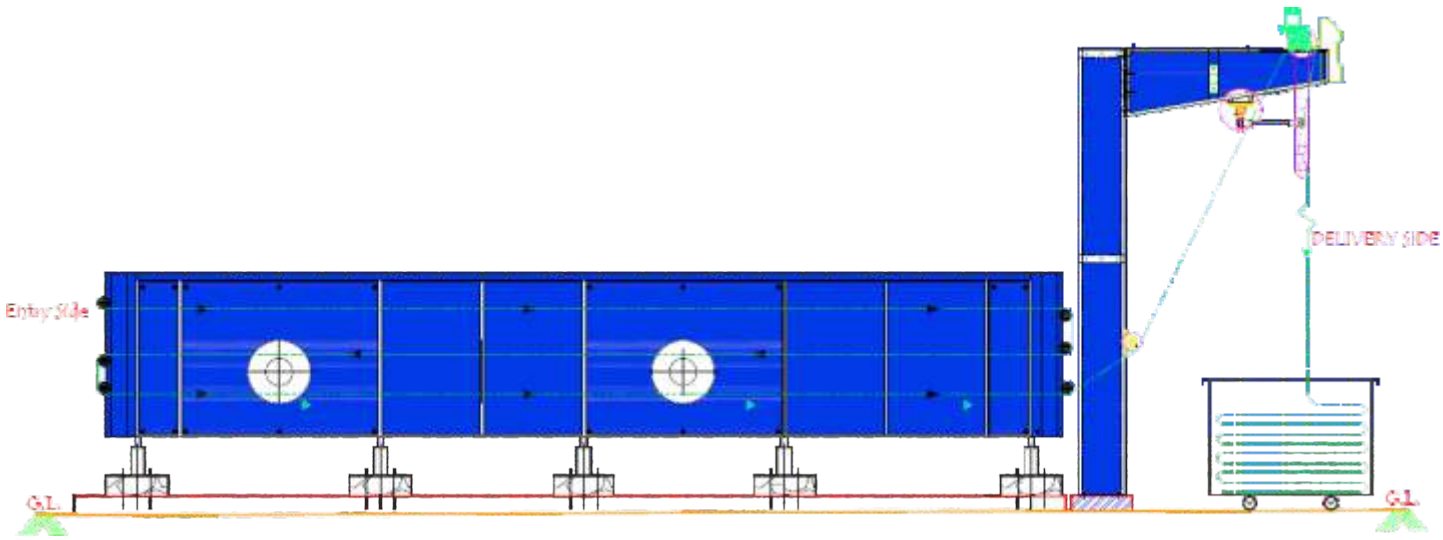


Conveyor Relax Dryer Three Pass

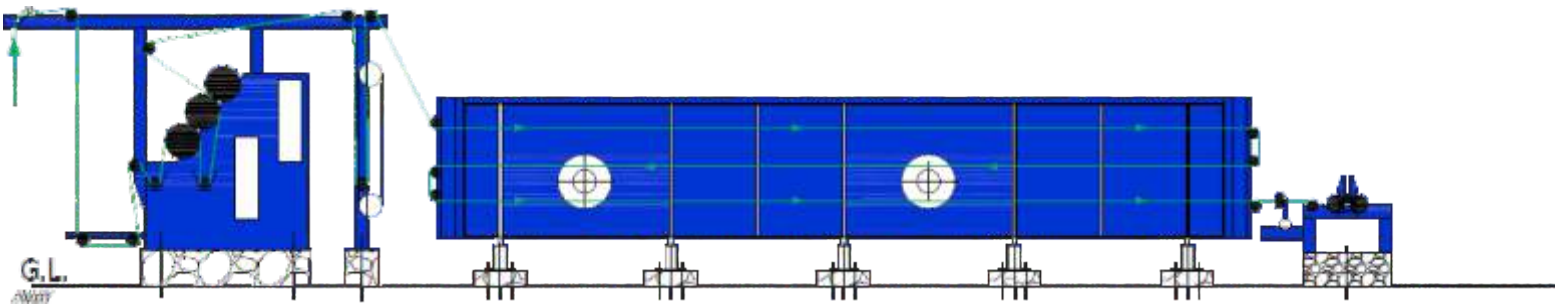


Float Dryer (Printing Dryer)

- Rotary Printing Dryer Machine
- 2/3/4/5 Chamber 3 Pass Dryer Machine
- Plaiter Unit & Big Batching Unit

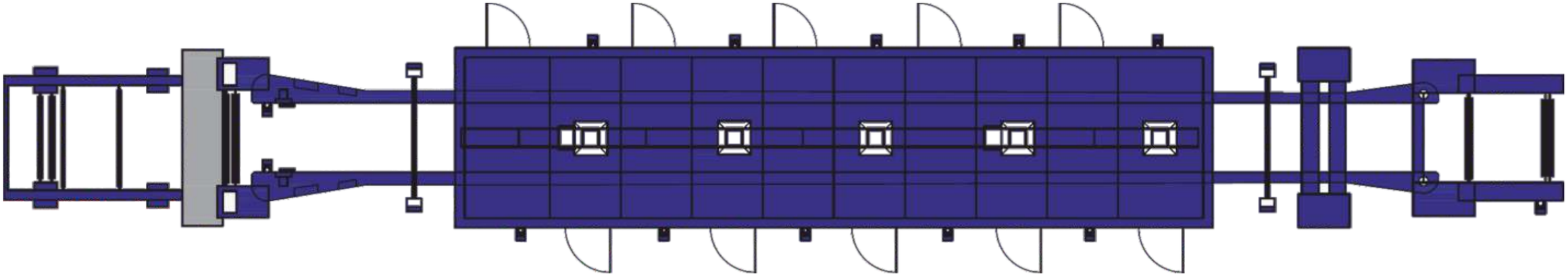


Padding Machine
With Mangle

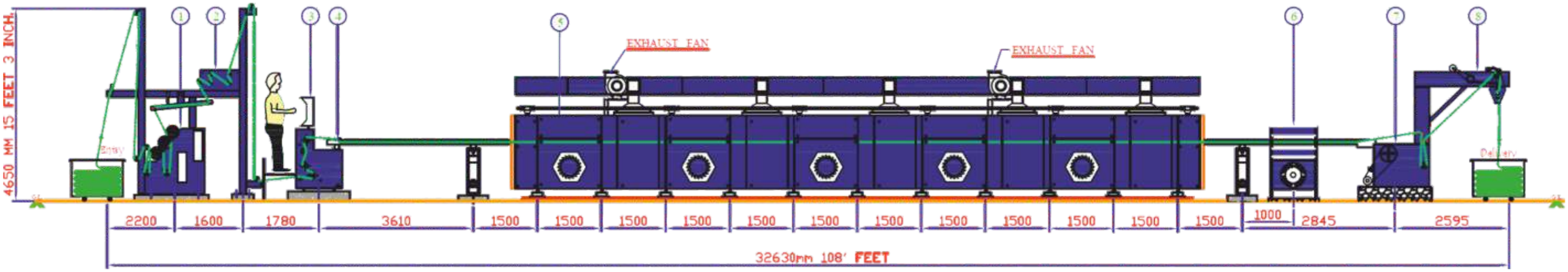


- Inclined Type 3 Bowl Shaded Dyeing Mangle
- Inclined Type 3 Bowl Padding Mangle
- Horizontal Type 3 Bowl Shaded Dyeing Mangle
- Horizontal Type 3 Bowl Silicate Padding Mangle
- 2/3/4/5 Chamber 3 Pass Dryer Machine
- Plaiter Unit & Batching Unit

Dimensions



5 CHAMBER 1600mm WORKING WIDTH HOT AIR STENTER MACHINE



1	3 Bowl Mangle	5	Chamber
2	Heading Unit	6	Cooling Zone
3	Cockpit Unit	7	Outlet Desk
4	Inlet Desk	8	Plaiter

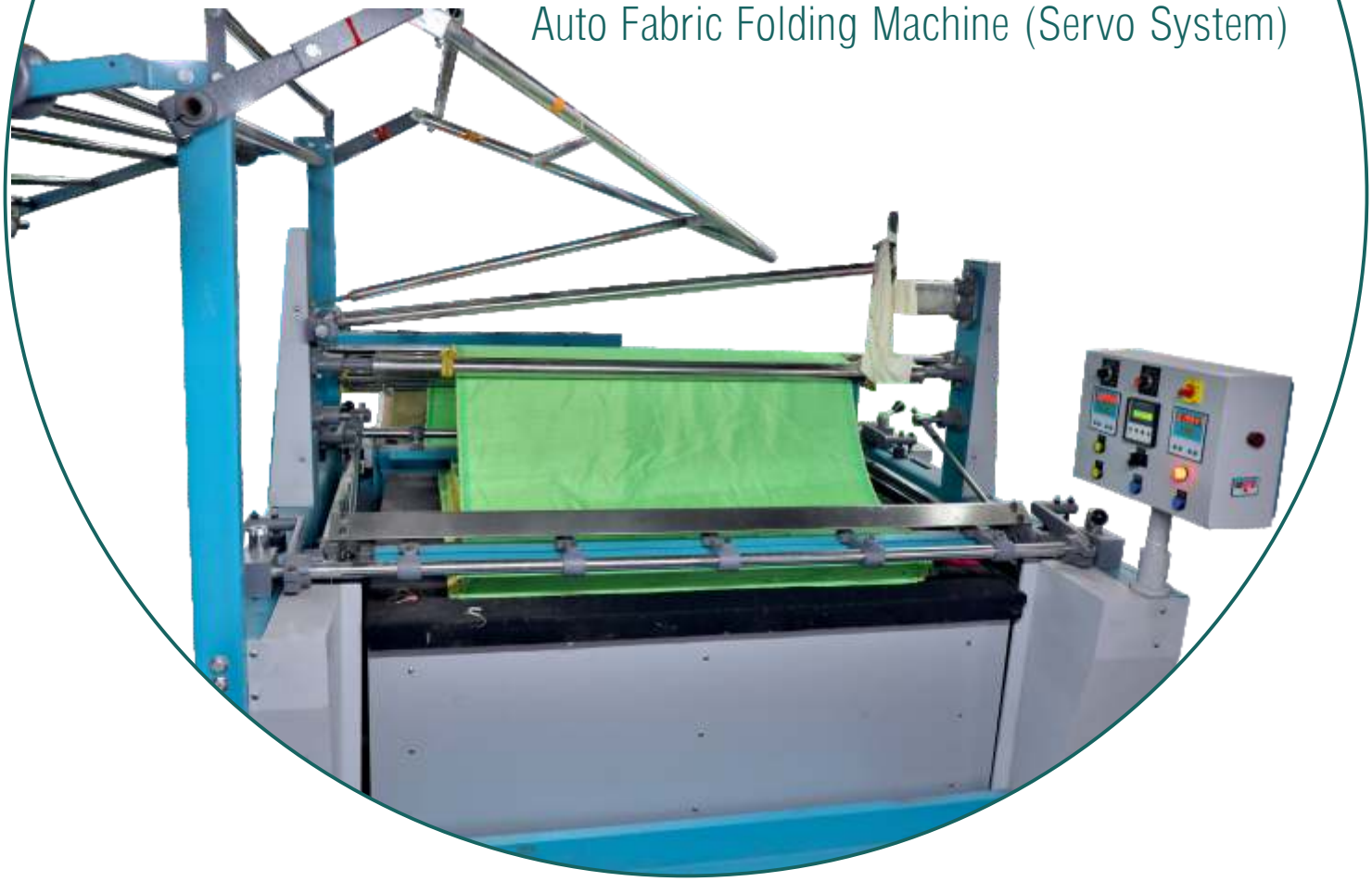
Machine width (mm)

Working width	1,200	1,400	1,600	1,800	2,000	2,200
Roll width	1,400 RF	1,600 RF	1,800 RF	2,000 RF	2,200 RF	2,400 RF
Chamber width	2,960	3,160	3,360	3,560	3,760	3,960

Machine Length (mm)

No. of Chamber	2 CH	3 CH	4 CH	5 CH	6 CH
Chamber Length	6,000	9,000	12,000	15,000	18,000
Total Length	23,630	26,630	29,630	32,630	35,630
Total Length (ft.)	78	88	98	108	118

Auto Fabric Folding Machine (Servo System)



Make an innovative idea to improve the working of machine making auto Servo System Model. Harshad Machinery is making a fabric folding machine which is a highly effective tool for folding the fabric which cares original length and maintains accuracy. The Folding Machines are designed with double fold and work in auto mode.

- Adjustable M/C Speed.
- Folding length size : 0-103 cm.
- Accuracy Control.
- Run in auto mode.
- Pallet (Table) auto up - down.
- System Controller.
- Length counter meter.
- Manually Table Up - Down Switch Option.
- Emergency Stop Switch.

- Servo Drive Motor.
- Auto / Manual + IP Rating 65 Programmer Operating.
- Easy to change fold size.
- View Running Feature on Display.
- Total production meter length of fold.
- Adjustable M/C Speed.
- All function operated by Soft Touch Programmer PLC.
- Negligible maintenance, Lower maintenance parts.
- Adjustable fold length 75 to 103cms.
- Double Fold.
- Dimension : 1753 mm length x 2033 mm Width x 1165 mm Height.
- Fan Drive in servo, table drive AC VFD Drive.
- Main Shaft in EN8 material.
- Due to accuracy, growth achieved in production.

Auto Table

- Table up - down movement through electrical controls auto / manual.
- Empty table can be up manually in 25 second.
- Table total down size 23" (inch).
- Table has ability to lift more weight.
- When needed the table board could be pulled out from the table.
- Fabric Guide Bar.
- Guide Channel.
- Fan angle “V” board etc. are made of SS material.

Examples For Applications











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We Manufacture in India, Transferring to the World.

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