



Yamuna Machine Works Ltd.

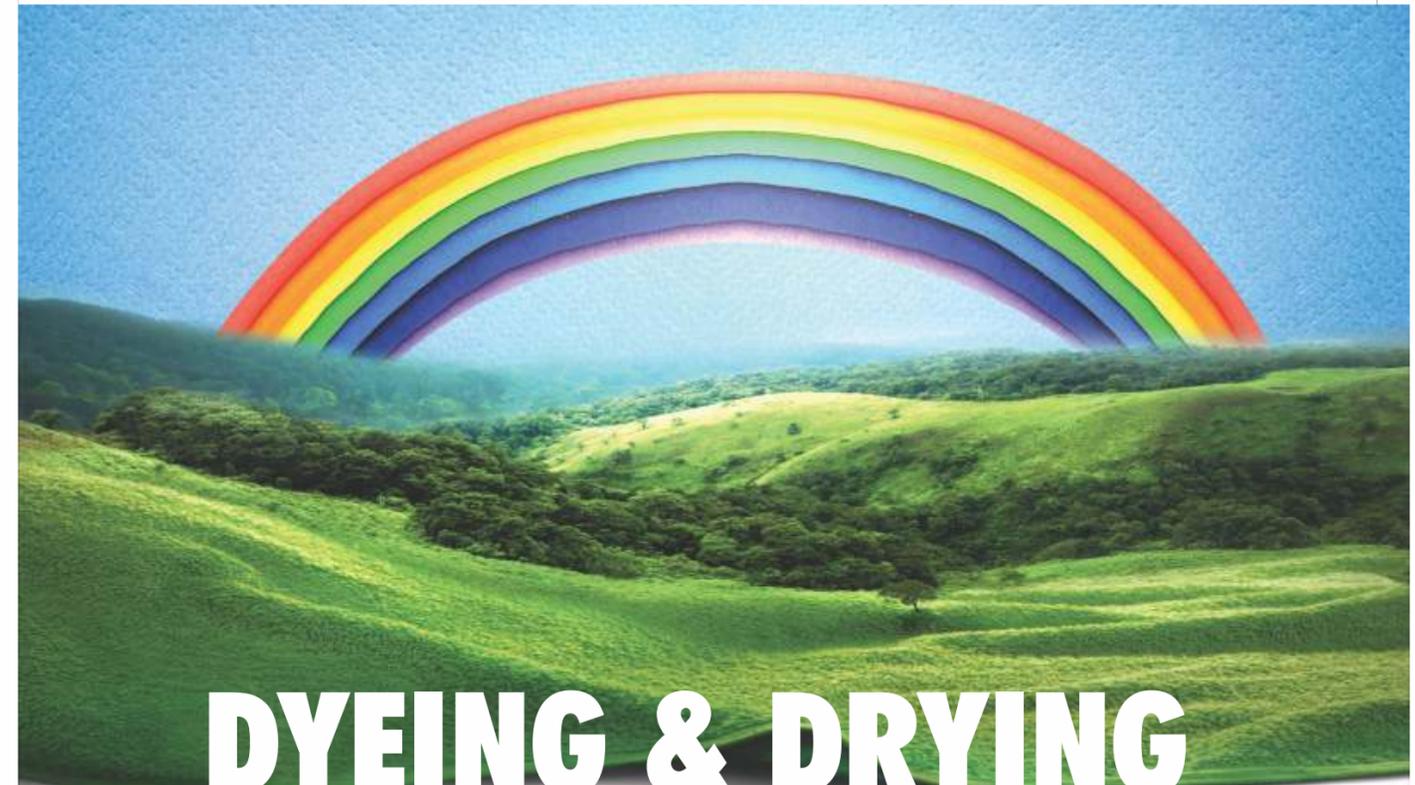
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DYEING & DRYING

technology that's
tested and trusted





engineering

innovative engineering

engineering (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 has 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 Furnishing 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, furnishings 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 a carpet, the durability of a 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 machines, 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 a 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.

Team Yamuna...best in class

Here is a team of talented professionals who bring to the drawing board not just their expertise, but wisdom distilled from years of experience. Where commitment to quality and timeframes is dictated not merely by the clauses in a contract, but an intense self-desire to be the best in class. No job is too small and no project too big, simply because there's almost a meditative scientific approach to work. Here, success isn't defined by the bottom line in the balance sheet but measured by the respect and goodwill earned over 25 years!

A global ring to our engineering!

As India takes giant strides towards becoming an industrial powerhouse, it's a defining moment for Yamuna. The Company is perfectly poised to explore and expand beyond geographical boundaries and organically progress on the world stage. Multinational textile engineering companies and fashion labels will only be eager to collaborate with an Indian partner who brings a global ring to engineering!





HYDRAULIC JIGGER

HYDRAULIC JIGGER

For Scouring, Bleaching and Dyeing using various dyes like Vat, reactive or sulphur. Tensionless dyeing, no center selvage variation, no tailing effect. Machines are available from 1600 mm to 3400 mm working width in different capacities.

Technical data (Roller face width 200 cms)

Model	Y500	Y800	Y1100	Y1400	SUPER JUMBO
Capacity	100 Kgs	250 Kgs	500 Kgs	1000 Kgs	2000 Kgs
Batch Dia (mm)	500	800	1100	1400	2000
Fabric Tension (kg)	3-20	3-30	5-50	5-50	5-70
Hydraulic Power Pack Unit (kw)	2.2	3.75	5.6	11.25	15
Direct Heating	YES	YES	YES	YES	YES
Indirect Heating with external heat exchanger	YES	YES	YES	YES	YES
Selvage Shifting	NO	YES	YES	YES	YES
Pressurised Vapour Escape Arrangement	NO	NO	YES	YES	YES
Batching Motor	NO	YES	YES	YES	YES
Overall Dimensions (W x L x H) mm	1100 x 3000 x 1930	3000 x 3800 x 2200	3500 x 3900 x 2300	3900 x 3900 x 2300	4700 x 3900 x 2300



Y500



Y800



Y1100



Y1400



SUPER JUMBO

HYDRAULIC JIGGER

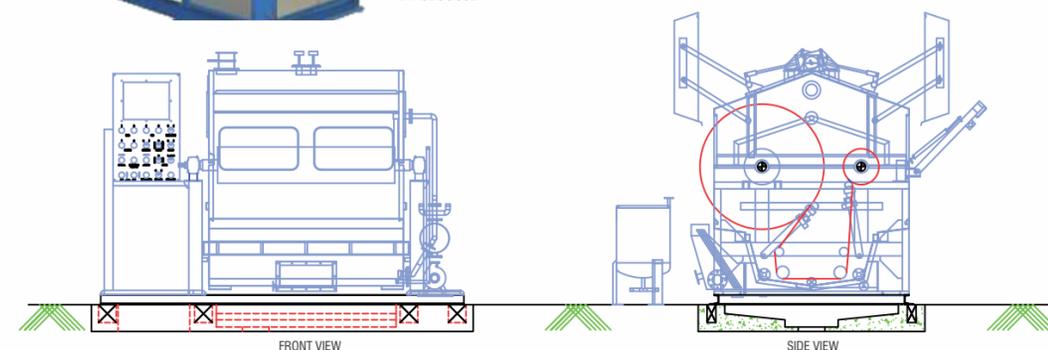
SILENT FEATURES



- Stainless Steel construction closed type jigger with pneumatically operated doors. For Y500 model, door opening is manual with gas spring.
- Hydraulic Drive to both rollers as well as for batching/loading motor. Hydraulic Unit is controlled by VFD system connected to the power pack which saves energy by about 40% on the installed power.
- Liquor circulation system is provided along with a shell and tube type heat exchanger and a filtering system.
- Indirect type heating avoids dilution of the liquor and maintains the temperature of the bath more accurately. Self-cleaning continuous rotary filters are offered for scouring worsted fabrics with high fluff. Liquor circulation pump is also provided with a VFD wherein the speed of circulation can be controlled depending on the process i.e. lower circulation speed in dyeing as compared to high speed in scouring/washing.
- Hood is with heating arrangement to avoid condensation.
- Water spraying arrangement by nozzles for efficient rinsing.
- Automatic back and forth pendulum type oscillations avoid unbalancing of the batch when the machine is idle. Both semi automatic and fully automatic versions are available with PLC.
- Semi automatic version has automatic reversal and tension control, auto speed, auto temperature control, water filling and drain, pendulum mode.
- Fully automatic version has volumetric inlet of fresh water (programmable to control the liquor ratio precisely), linear or at will dosing of dyes and chemicals, automatic reversal, auto temperature, auto speed control, drain, filling, sampling, process steps and complete recipe management for reproducibility. Process steps right from loading to unloading can be programmed with operator calls for sampling. Unique software ensures uniform dyeing with no center selvage variation or tailing. Complete programmable software provides history of alarms, recipe management for process repeatability.
- With a cluster of jiggers, complete system can be provided with remote monitoring and data acquisition software. Individual machines can be controlled as well as total efficiency of all the machines can be monitored from a single point. Dosing of dyes and chemicals directly from the color kitchen as well as downloading and monitoring recipes on each machine can be easily done from a single interface. Utility consumption data and production reports along with other MIS reports can be generated.



HYDRAULIC JIGGER

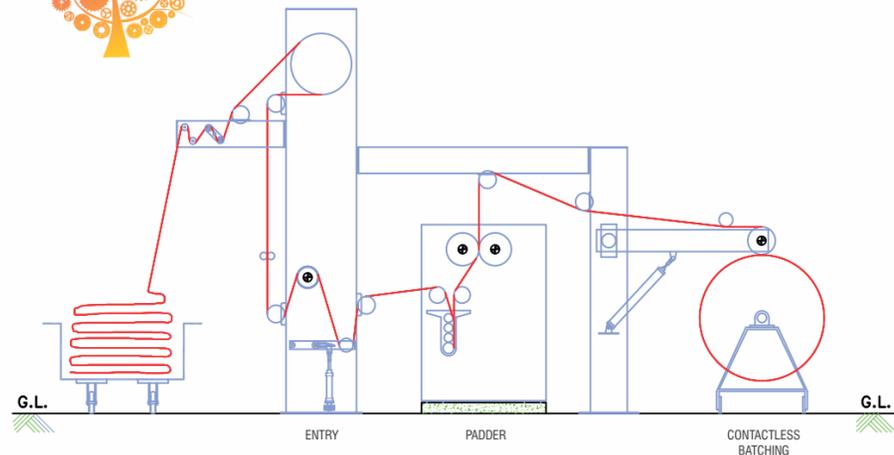


FRONT VIEW

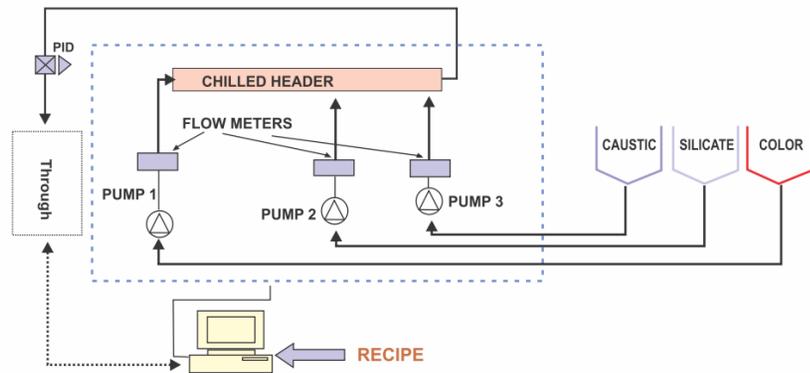
SIDE VIEW



COLD PAD BATCH



- Dyeing padder with two nos. Hydraulic deflection controls.
- Nip pressure can be controlled and uniform pressure and pick up throughout the width of the fabric. Complete machine with contact less batching system and 3 component dosing system.
- Dyes, caustic and silicate are individually dosed and controlled in exact proportion by means of flow meters and PLC.
- Machine is offered for fabrics from 1600 mm to 3400 mm width.
- Complete pad dry range is also be offered with IR and curing / stenter frame.



DOSING SYSTEM

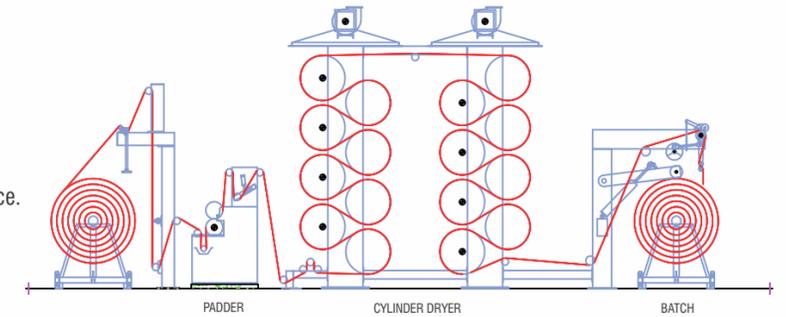


CYLINDER DRYING RANGE



CYLINDER DRYING RANGE

- Roller Face (mm): 1600 - 3600
- Cylinder Dia : 800 mm
- Design Pressure - up to 5 bar.
- Design Temperature - 150 C.
- Shell material - S.S. AISI - 304.
- Shell thickness - 2.5 mm
- Teflon Coating : 50 microns (on request).
- Stacks Fabricated from M.S. Plates.
- Hood : SS hood with exhaust system (on request).
- Platform and ladder for ease in cleaning and maintenance.
- Entry with a set of curved rubber expanders.
- Steam and Condensate removal system.



DRIVE SYSTEM :

Cylinder dryers can be equipped with individual drive to each cylinder. Individual drive system, each cylinder is coupled with a geared A.C. motor. Individually driven cylinders are synchronized with PLC. Especially suited for non woven and delicate fabrics where tension regulation is very critical as the fabric dries. Fabric residual moisture controller can be provided at the exit of the drying range. The feedback from the controller either controls the speed of the machine or steam flow (depending on the process requirement). Cylinder dryers can be supplied as independent machine with squeezer and plaiting batching or in conjunction with continuous processing machines.





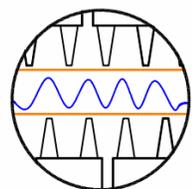
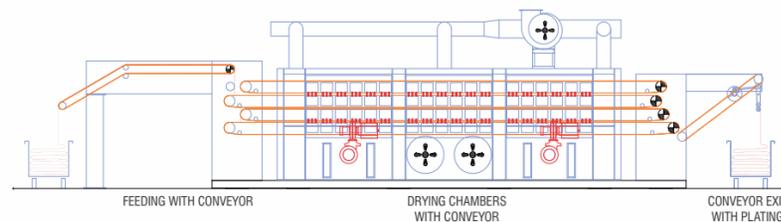
RELAX DRYER

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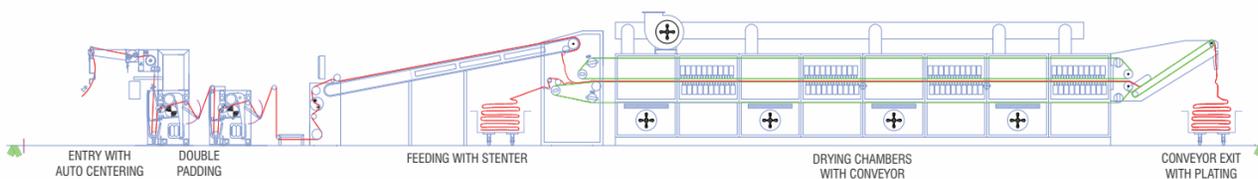
For Knitted / Delicate Fabrics

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 nozzies comes in between the fingers of top nozzies 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 O : 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.



Fabric waves by specialized nozzles for Knitted and delicate fabrics.

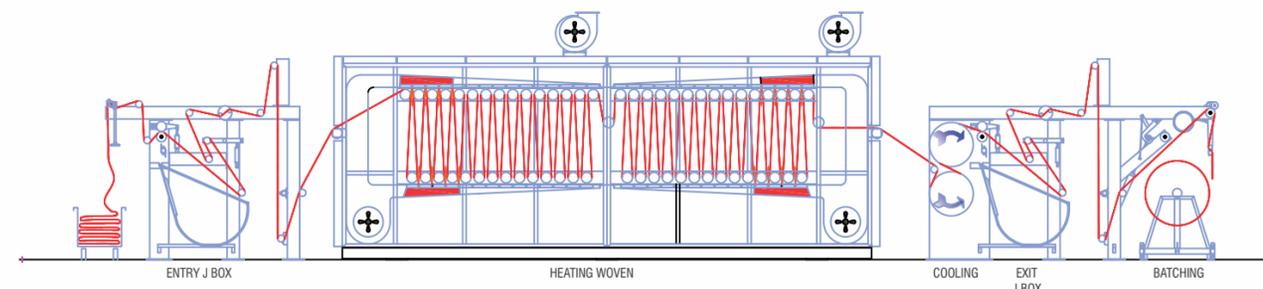


CURING / POLYMERISER



CURING MACHINE - POLYMERISER

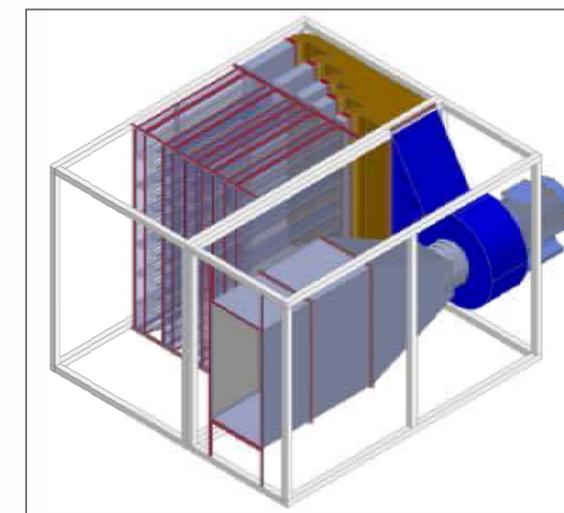
- Suitable for drying & Curing dried / coated fabrics and for special finishing ranges.
- Roller Face : 1600 - 4400 mm
- Roller Diameter : 140/178 mm (Mild Steel, epoxy coated or SS)
- Centre to Centre distance : 1100 / 1500 mm
- Heating Media : circulating Oil, Steam or gas fired.
- Drive : A.C. inverter drive to top rollers.
- Separate blowers for top and bottom air nozzles.
- Uniformity in temperature, width wise, length and diagonally.
- Nozzles Slit type, air flows through between rollers, flow adjusted by VFD.
- Modular construction each section contains 50 mtrs. (Tailor made sections can be designed on request)
- Brake system for bottom rollers for cleaning can be provided.
- Fabric residual moisture controller, Chamber Humidity controller can be provided.
- Supplied as independent machines with padding and plaiting batching or in conjunction with continuous processing machines.



VERTICAL DRYER – DIPPING MACHINE

Dipping Lines for nylon & polyester fabric for tyre cord fabrics, belting and canvas are supplied with vertical dryer and Stenter. Vertical dryer are either 2 pass or 4 pass. Each pass can have either impingement of air on 1 side or on both sides.

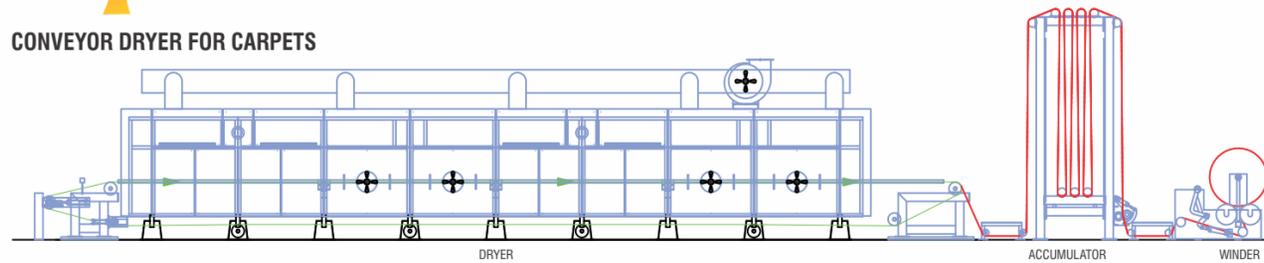
Slit type nozzles are provided for uniform air pressure and temperature. This can be provided with oil heating or direct gas fire. Central exhaust system is provided through and within vertical dryer, which can also be used for quick pool.





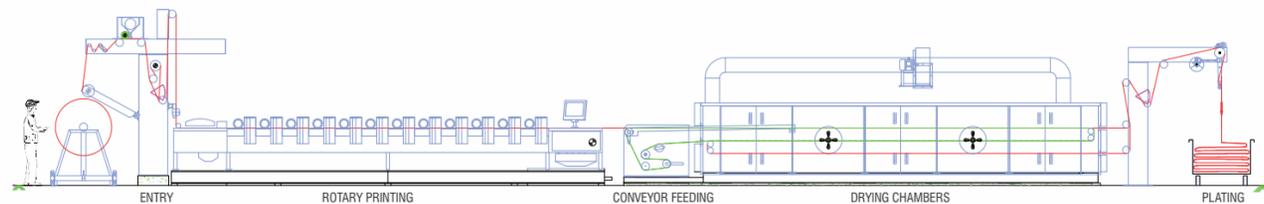
AFTER PRINTING DRYERS

CONVEYOR DRYER FOR CARPETS



- Conveyor dryers for carpets – non wovens, tufted and wovens.
- Can be installed after Printing, coating or padding applications for drying and curing purpose.
- Available with Teflon coated wire mesh belt or stainless steel belt or with chain drive. Multipass options also available with driven supporting rollers.
- Both side air flow nozzles with slit type opening for uniform air distribution, with steam, Thermic oil or gas heating.
- Working width up to 5000 mm.
- Exit can be with Accumulator and Winder unit.

DRYER FOR ROTARY PRINTING MACHINES



- Three Pass highly efficient rotary printing dryers with conveyor.
- Pneumatic tilting of the conveyor at the entry of the dryer to allow fabric to predry before getting in contact with the conveyor. Essential feature for high coverage printing and high penetration.
- Pneumatic centralising of the conveyor
- Dryer length can be 7.5 mtr or 9 mtrs depending on the requirements and up to 3400 mm fabric width.
- Heating can be with Thermic oil heating or with gas.
- Entry unit for Printing machine is also available with draw roller, pneumatic compensator for tension control and centralising unit.

DRYERS FOR PRINTING MACHINES



Hot Air Stenter



Jigger



Coating Head



Singeing Machine



Drying Range



Polymeriser / Curing



Dye Pedder



Drum Dryer



Thermobonding Line



Relax Dryer



Shrinking Range



Merceriser



Denim Finishing Range



Pad steam / Washing Range



Dipping Line & Technical Textile