

PURA

Continuous Open-Width Pad-Steam Bleaching
for Knitted and Woven Fabrics





**HIGH
PRODUCTIVITY**



**ENERGY
EFFICIENCY**



**HIGH
QUALITY**

HIGHER WHITENESS

HIGHER HYDROFILITY

HIGHER CAPILARITY

NO CREASE MARKS NO DRYING SPOTS

NO HEAD AND TAIL, RIGHT LEFT DIFFERENCES



LOGIC OF PLUVIA BLEACHING SYSTEM



IMPREGNATION SYSTEM

System has hydraulic pistons to create required nipping forces. Hydraulic system offers the possibility of reaching constant tightening forces against changing rubber structures.

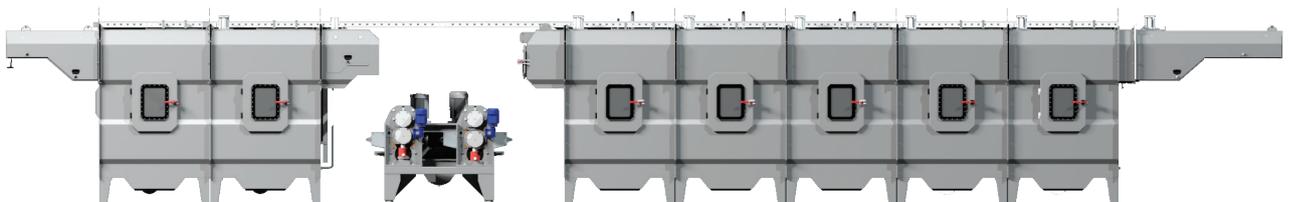
For homogenous diffusion of chemicals, continuous circulation is applied for the effluent.

STEAMING SYSTEM

The path of the fabric inside the cabin is extended and thus the steam contact time is increased. In steaming chambers, steam is directed to the surface of the fabric with a special angle. In the meantime, saturated humidity is maintained by evaporating boiling the water inside the chambers. The dwell time is around 4-6 minutes for each chamber. During steaming process, fabric is transferred between j-boxes, so that the fabric contact points with the metal surfaces changes. With all these design features, local drying and contact spots, right-left and head and tail differences do not occur during steaming process.

LAYOUT ADVANTAGE

Conventional continuous bleaching machines occupy space of 150-200 m². Our Pluvia Pura Bleaching machine occupies only 75 m² via its modular and compact design.

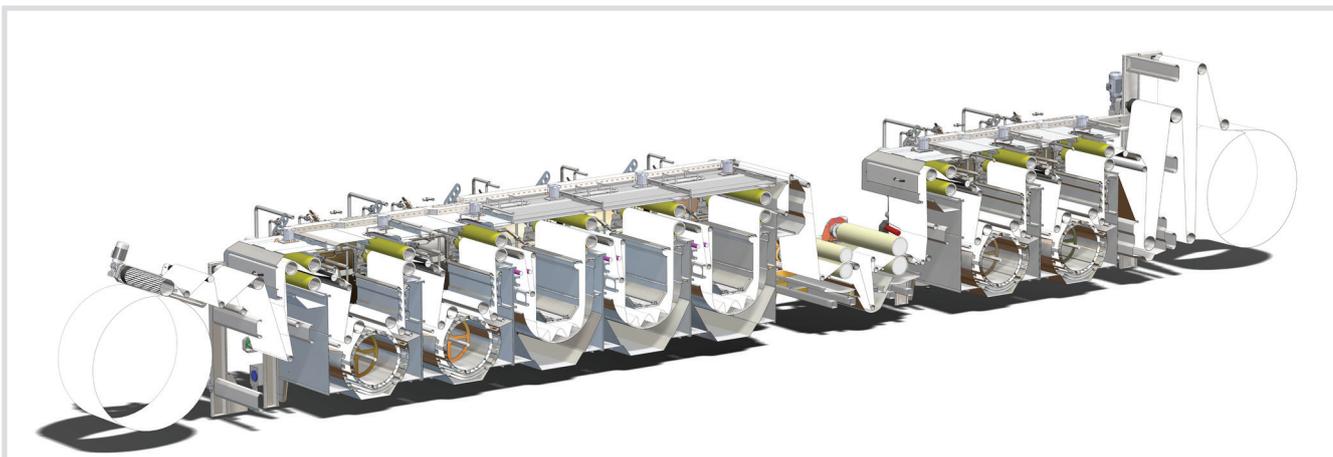


AREA OF USE & DESIGN PARAMETERS

- Compact and modular design for knitted and woven fabric.
- Capable of washing almost all types of printed fabrics and fibers like cotton, regenerated fibers, polyester and blends.
- Wide washing range from 40-900 GSM fabrics from silk to towel.
- 10-15 minute dwell time in steaming chambers.
- Impregnation system with automatic chemical dosage and high pick-up values with hydraulic pistons.
- High washing efficiency with 60 m³/h continuous water flow rate in each washing chamber.
- Closed-loop type heat exchanger for each chamber.
- Static or automatic filter for each washing chamber.
- Double dosing inlet points for chemicals in each washing chamber
- Automatic washing nozzles in each chamber for cleaning the chambers.

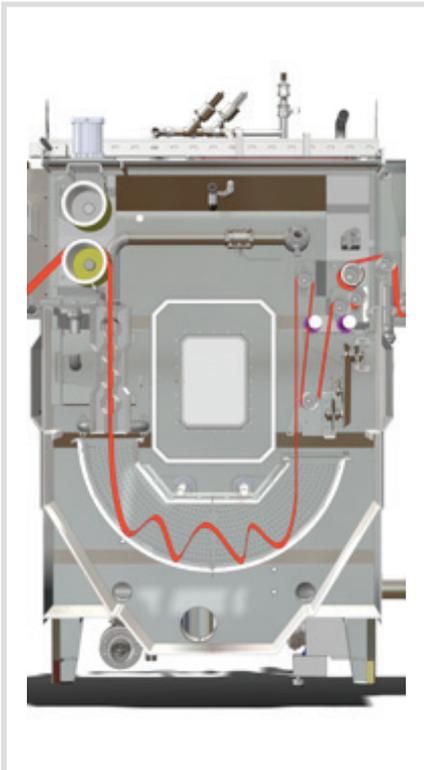


PLUVIA PURA CONSUMPTIONS		
	FOR KNITTED FABRIC	FOR WOVEN FABRIC
Water Consumption	10 - 12 l/kg	10 - 12 l/kg
Steam Consumption	1 - 1,2 kg/kg	1 - 1,2 kg/kg
Electricity Consumption	0,05 - 0,08 kW/kg	0,05 - 0,08 kW/kg



PLUVIA PURA FOR WOVEN FABRICS

SYSTEM IN BLEACHING MACHINE



DEMINERALIZATION

Iron ions, which can come from the fabric, water and chemicals, are eliminated in this process.

WASHING BEFORE IMPREGNATION

Prewash process is carried out after demineralization just before the chemical application in the impregnation system.

Drum washing chambers are used for woven fabric, while j-box washing chambers are used for knitted.

IMPREGNATION SYSTEM

The pre-washed fabric is nipped with hydraulic nipping cylinders which ensures highest pick-up values. Then, the fabric enters in the chemical effluent tank. The chemical amount on the fabric is precisely adjusted with hydraulic cylinders.

System has hydraulic pistons to create required nipping forces. Hydraulic system offers the possibility of reaching constant tightening forces against changing rubber structures.

For homogenous diffusion of automatically dosed chemicals, continuous circulation is applied for the effluent.

PAD-STEAM CHAMBERS

The path of the fabric inside the cabin is extended and thus the steam contact time is increased. In steaming chambers, steam is directed to the surface of the fabric with a special angle. In the meantime, saturated humidity is maintained by evaporating the water inside the chambers. The total dwell time is around 10-15 minutes.

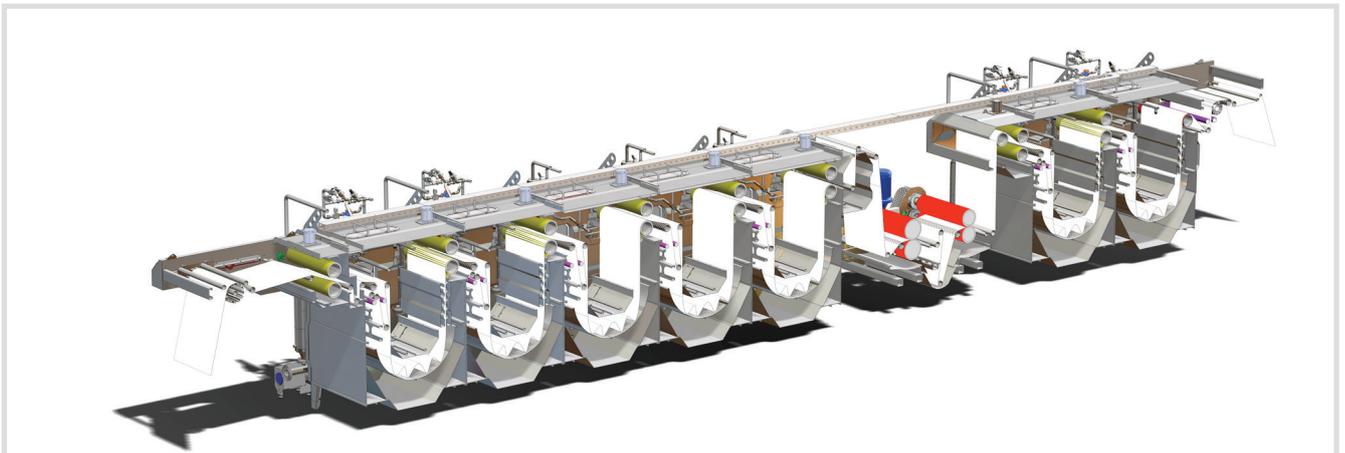
During steaming process, fabric is transferred between j-boxes, so that the fabric contact points with the metal surfaces changes.

With these design features, local drying and contact spots, right/left and head and tail differences do not occur during steaming process.

WASHING AND NEUTRALIZATION CHAMBERS

After steaming, fabric is washed off and automatically neutralized to the desired pH value.

Drum washing chambers are used for woven fabric, while j-box washing chambers are used for knitted.



AUTOMATION SYSTEM & SOFTWARE

SOFTWARE

Pluvia has a software easy to use.
Software codes are shared with customers.

WATER FEEDING SYSTEM

Water consumption is precisely controlled, based on the fabric weight and machine speed.

CHEMICAL DOSAGE CONTROL

Chemical dosage rate is precisely controlled, based on the fabric weight or water flow rate.

SPEED SYNCHRONIZATION

Precise speed synchronization with Load Cell controlled J-Box and frequency controlled drive cylinders provides tension and elongation free fabric flow.

PRODUCTION AND PRODUCTIVITY RECORDS

Batch-wise automatic recording of process parameters such as speed and consumptions, temperatures etc.



MATERIAL

Completely stainless steel.

Pluvia uses state-of-the-art equipments and brands.

SETUP

Easy setup with built-in foundation structure and built-in pipelines.

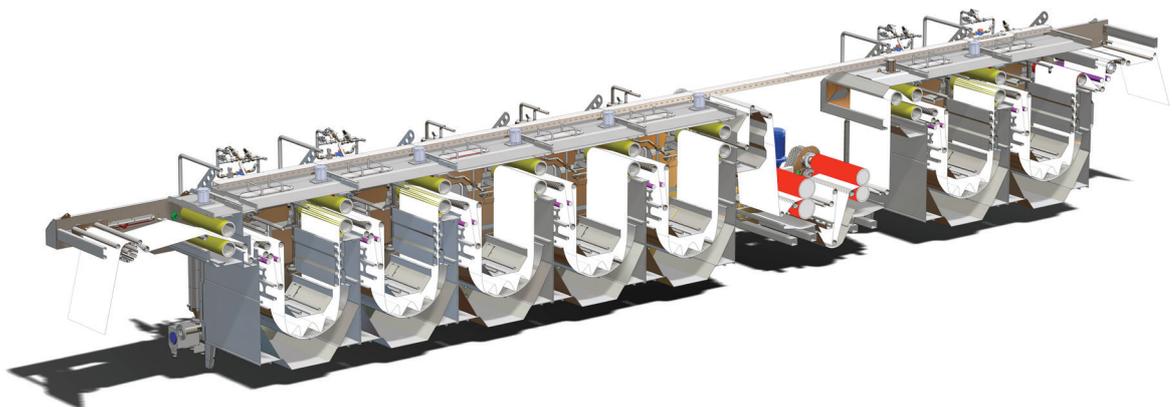
MAINTENANCE

Quick and easy service and maintenance by universally available standard parts and equipments.

Easy maintenance through large windows located on both front and back side of the chamber.

**PLUVIA PURA DIMENSIONS**

LENGTH (mm)	WIDTH (mm)	HIGHT (mm)
16.000	4.000	2.350



PLUVIA PURA FOR KNITTED AND WOVEN FABRICS



SIMPLE | SMART | EFFICIENT

 /tachyonmakine

 /tachyonmakine

 /tachyonmakine

 /company/tachyon-makine

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