PRASHANT GROUP established in 1975, is one of India's prominent and fast growing textile machine manufacturing company.

The group has co-operations with leading European, American and Japanese textile machine manufacturing companies which bring edge in updated technology and enhancement in products profile.

Ball Warper

Long Chain Beamer

PWP

- Direct Warper and V Creel
- Spun Sizing Machines
- Denim Preparation Equipments
- Poly Beamer with unrolling creel
- Filament Sizing
- Beam to Cone Winder

- High Speed Sectional Warper & Creel
- Robotic Sectional Warper
- Sizing Winder
- Beam to Beam Warper
- Loom Printer

ferber

- Manual & Battery operated Warp Beam Trolleys
- Beam Stocker
- Inspection & Finishing

PRASHANT WEST POINT MACHINERY PVT. LTD. (An ISO 9001:2015 certified company)
Plot No. 4/A-3 & 4/B-2, G.I.D.C. Estate, Phase 1, Vatva, Ahmedabad 382 445. India
Phone : +91 79 25830603 / 25833384, Fax : +91 79 25894020
E-mail : sales@prashantgroup.com, westpoint@prashantgroup.com | **www.prashantgroup.com**

TUV NABCB QM 002

DENIM PREPARATION

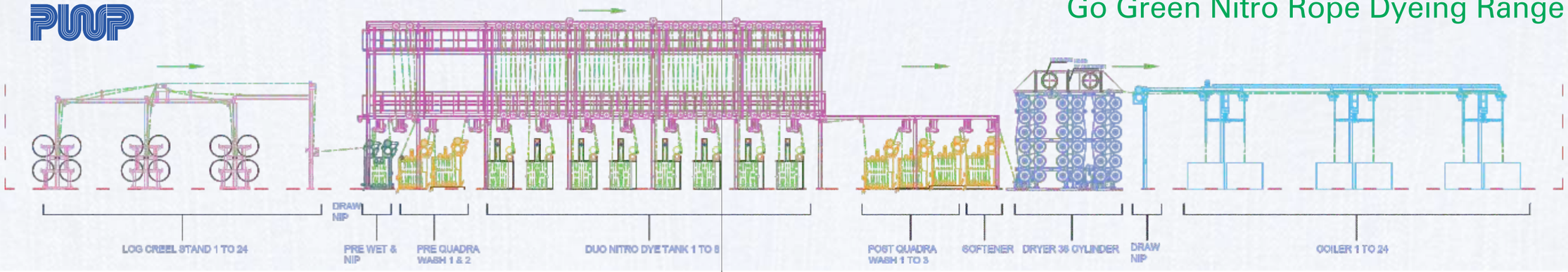
PRASHANT GROUP

TRENDSETTER
ROPE DYEING RANGE

Indo-US Joint Venture

PWP PRASHANT WEST POINT

Go Green Nitro Rope Dyeing Range



'PRASHANT WESTPOINT' INDIGO ROPE DYEING RANGE is technologically advanced machine for Denim preparation.

American technology and rich experience of **'WEST POINT'** ensures the reliability of the system with uniform dyeing and good fastness. Suitable for yarn dyeing process of pure cotton and cotton blended yarn.

Ball log Creel

Ball log creel stand designed in modular system from structural steel with UHMW nylon log holder.

Double Decker design of module saves considerably floor space for installation and improves operator comfort.

Capacity is for 12, 24, 32, 40, 48 Ball logs.

- Ball logs Max. Width 1200mm.
- Ball logs Max. Ø1500mm.

Pretreatment Trough

The rope dyeing unit designed in modular system offers several possibilities of pre-treatment:

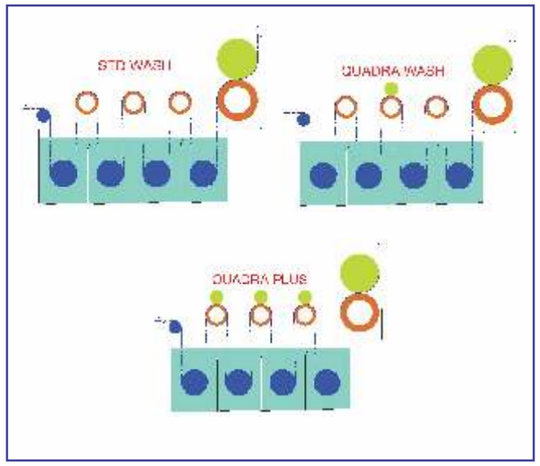
- Simple pre-wetting of the yarn.
- Pre-dyeing of the warp for obtaining a special effect of black-blue.
- Caustic preparation for increasing the color brilliance and for achieving a reinforced ring-dye.

Dryer

Depending upon the configuration, dye range is equipped with 12 to 48 drying cylinders in the unit. 8 to 36 cylinders are teflon coated.

2 temperature control groups in each dryer stack of 12 dryer cylinder.

Each stack of 12 dryer cylinders is driven by AC geared motor and controlled by frequency converter.



Washing trough

Choice from three type of wash troughs available:

1. STD wash
2. QUADRA wash
3. QUADRA PLUS wash

It is equipped with short free-running warp lengths and interim squeezing units, ensuring a highly-efficient washing performance. In this way, it is possible to adjust the pH-value of the warp to the optimum value required by the sizing process.

Wash troughs are designed with counter flow arrangement and water spray nozzle to minimize water consumption.

- 2 to 3 washing trough for Pre-wash.
- 4 to 5 washing trough for Post-wash includes one trough for softner application.

Dyeing Trough

Choice from three type of dye troughs available:

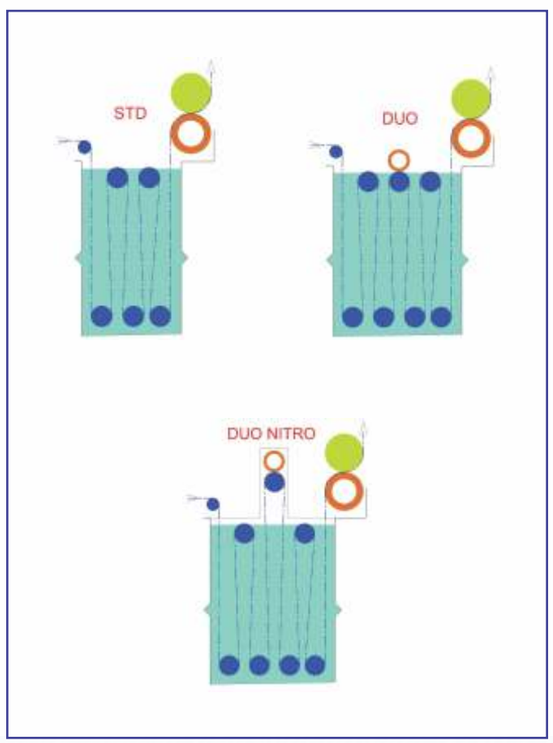
1. Standard 5 immersion roll
2. Duo 7 immersion with intermediate nip
3. Duo Nitro with Nitrogen technology

Heart of the dyeing unit is the dyeing trough offering following advantages:

- High liquor circulation rate.
- Precise liquor squeezing.
- Uniform concentration of dye in trough.
- Uniform dyeing effect.

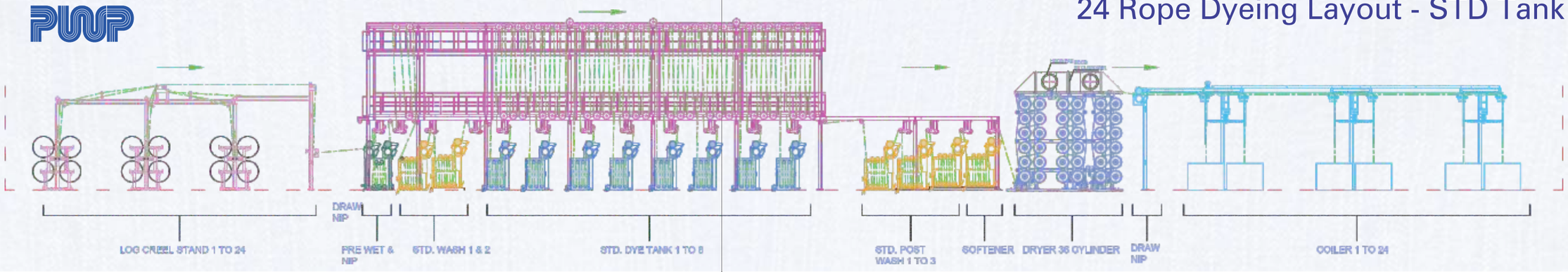
Machine can be equipped with 6 to 10 troughs. Dyeing troughs can make the following dyeing effects:

- Pre-treatment +Indigo dyeing.
- Pre-treatment + sulfur dyeing+ Indigo.
- Pre-treatment + Indigo + sulfur dyeing.
- Pre-treatment+ mercerizing + sulfur dyeing.



Creating the Tradition in Indigo

24 Rope Dyeing Layout - STD Tank



Oxidation zone

For the development of Indigo dyes, machine is equipped with oxidation zone following each dyeing trough. The framework is made of structural steel fabricated into a cage-type frame for supporting both the upper and lower skier rollers.

Skier rollers of Ø350mm are teflon coated and accurately located on top and bottom frame section.

Coiler mechanism

Depending upon the configuration, dye range is equipped with 8 to 48 sets of doffing frame and coiling device.

A group of eight coiler head is driven by 'WESTPOINT' patented planetary gear box. Special design facilitates dribble laying pattern of rope in can so that it gets unwind from can trouble free in next process of Long chain beamer.

All the groups are driven through jack shaft by centralized AC geared motor controlled by frequency converter.

Steamer

The steam environment ensures a better penetration and fixing of sulpher dyestuff with yarn.

Steamer sides are fabricated of 3 mm stainless steel with entry and exit slots, which are coil heated at the bottom. Five Ø350mm stainless steel teflon coated skier rollers mounted in the enclosure. Two additional carrier roll of Ø 150 mm externally mounted, one located at the entry slot and one at the exit slot. The stainless steel enclosures are with access doors for threading and windows for visual inspection.

Remote diagnosis

By just providing the static IP and Internet connection to machine console, customer can avail the online service support from our team of well experienced experts from service head quarter.

Dosing station

The PLC-controlled accurate dosing of dyes and chemicals is the heart of the indigo dyeing unit. Exact dosing, reduced losses during the use of dyestuffs and chemicals, thus ensuring economical and environmentally conscious dyeing process.

Speed-dependent control system of the dosing station memorizes all the required setting parameters, ensuring a high degree of process reliability and reproducibility.

Preparation tank

For the preparation of various dyes and chemical, tank with volumetric capacity of 500 to 1500 liters is available. It is made of stainless steel with indirect heating and agitator.

Technical features

- The range is designed for a gear-in speed of 40 mpm.
- Finger racks at the entry point of each trough facilitates quick change in number of working rope.
- Trough immersion rollers are mounted with SS bearing block having carbon filled teflon bush.
- Indirect heating system is provided.
- Precise temperature control in each trough.
- Max. Squeezing nip pressure is 100KN
- Step less tension control system for each drive consists of angle sensor roller or load cell roller.
- Trough side frames will be fabricated of 5 mm stainless steel SS-316L for mounting of the nip rolls, bearing housings and compensator.
- Troughs are rigidly braced and provided with drain; overflow drain and immersion roll mounting brackets.
- Top nip rolls are rubber covered 65º +/-3 shore A' to suit the application.
- Bottom nip rolls are S.S. cladding roll.
- Bottom nip roll is driven by individual AC geared motor and controlled by frequency converter.

Filtration and Circulation

Heavy duty centrifugal pumps with inline filters are installed to ensure high circulation rate of dye in troughs.

Dispensing of dyestuff in the trough through spraying pipe guarantee the uniform concentration of dye in trough and results in uniform dyeing effect.

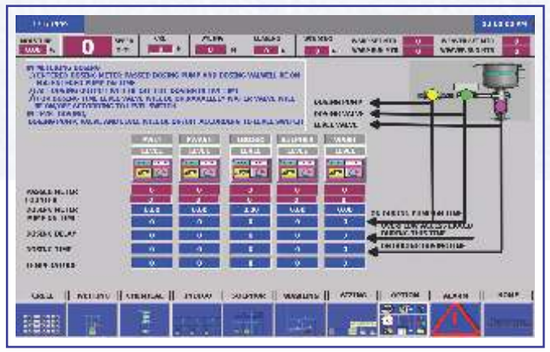
Stand-by filters are installed in the circulation line for periodical cleaning of filter during the machine in operation.

General circulation pipe is made of stainless steel and diameter is Ø200mm. Return line pipe is Ø100mm.

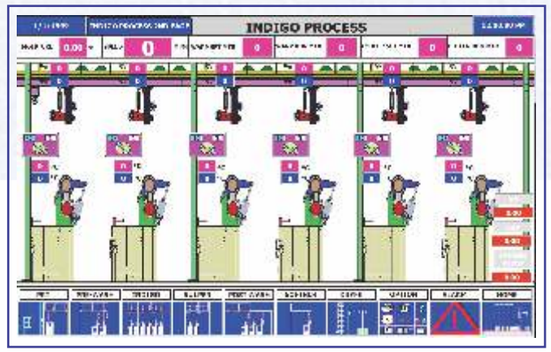
Creating the Tradition in Indigo

Automation and Controls

'PRASHANT WEST POINT' automation system provides at a glance all process parameter as mentioned in below graphics. All the parameters are controlled and monitored in close loop by PLC for consistence performance. Diagnostic function for control system maintenance and trouble shooting is integrated. Various reports can be generated for exporting to customer SCADA system.

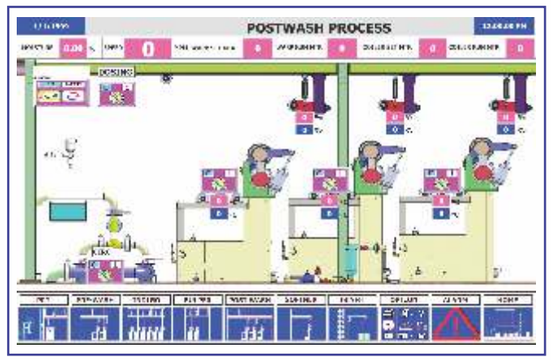


Dosing Device



Indigo Process

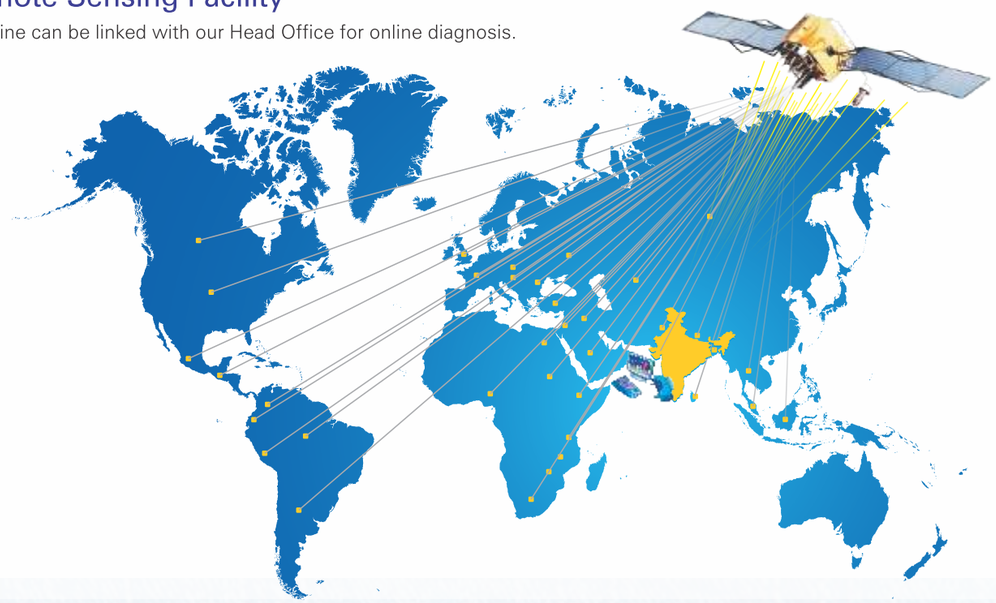
Drive Control



Wash Process

Remote Sensing Facility

Machine can be linked with our Head Office for online diagnosis.



Advantage Prashant Nitro 'Go Green' Technology

- Most sustainable dyeing process independent of external variables ensures consistent quality.
- Better diffusion and fixation of indigo and sulfur dyes to the fibre increases fastness.
- Higher dyeing yield saves dyes up to 15 % and hydro sulfates up to 40%
- Use of about half the number of dyeing vats reduces yarn path and yarn waste at lot change
- Reduction in energy consumption and saving in the consumption of washing water up to 50% with remarkable less sulfates in waste water

'PWP' Beam to Package Winder