



3 WASHING RANGE

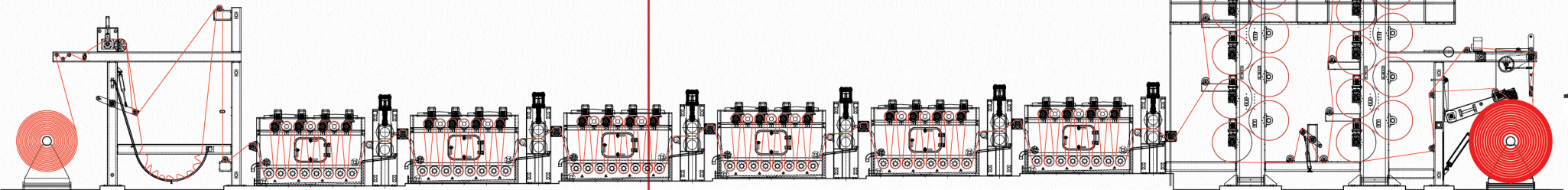
Engineered Precision for Open-Width Textile Washing

The Dhara Washing Solution is a refined open-width washing system developed for textile manufacturers who demand process stability, resource efficiency, and consistently high fabric quality. Designed with a modular architecture and intelligent control philosophy, the system delivers controlled washing, precise neutralization, and uniform rinsing across a wide spectrum of fabrics and finishing applications.

Every element of the Dhara Washing Solution is engineered to ensure repeatable results, reduced utility consumption, and long-term operational reliability, making it a preferred choice for modern finishing lines with high quality expectations.

Typical Applications

- » Open-width washing
- » Washing after mercerization
- » Post-dyeing neutralization
- » Removal of residual sizing agents
- » Multi-stage rinsing
- » Final finishing wash
- » After scouring or bleaching



Advanced Process Intelligence

The system operates through a fully integrated automation platform that continuously monitors and regulates critical process parameters. This closed-loop control ensures stable conditions and consistent washing performance, independent of production speed or fabric variation.

- » **Adaptive Water Regulation**
Fresh water intake is continuously optimized according to fabric load and line speed through inverter-driven pumps and precision flow measurement.
- » **Accurate Temperature Management**
Liquor temperature is maintained with sensor-based steam control and PID logic, ensuring thermal stability throughout the washing sequence.
- » **Automated Chemical Balancing**
Inline dosing units work in combination with real-time pH monitoring to achieve precise neutralization and controlled chemical application.
- » **Automated Chemical Balancing**
Inline dosing units work in combination with real-time pH monitoring to achieve precise neutralization and controlled chemical application.
- » **Continuous Liquor Filtration**
Integrated filtration systems maintain bath cleanliness, reduce contamination, and extend liquor usability for improved efficiency.
- » **Central PLC-HMI Control**
A centralized touch interface enables recipe management, real-time diagnostics, alarm handling, and seamless integration with plant monitoring systems.
- » **Water Recovery Strategy**
Cascade rinsing and controlled liquor reuse are managed through conductivity-based quality evaluation, minimizing fresh water demand.

Technical Specifications: Washing Solution

General Configuration

| Parameter | Specification |
|------------------|--|
| Machine Type | Open-width washing system |
| Fabric Path | Vertical |
| Line Concept | Modular |
| Operation Mode | Continuous |
| Fabric Handling | Low-tension, open-width |
| Control System | PLC with touch-screen HMI |
| Automation Level | Fully automated with closed-loop control |

Process & Control Systems

| | |
|-------------------|--|
| Water Control | VFD-controlled pumps with flow measurement |
| Steam Control | Sensor-based, PID-regulated |
| Chemical Dosing | Automated dosing with inline pH monitoring |
| Liquor Filtration | Integrated continuous filtration |
| Sensor Package | pH, temperature, flow, level, conductivity |
| Water Reuse | Cascade rinsing with quality monitoring |
| Connectivity | SCADA compatible |

Mechanical & Fabric Transport

| | |
|-------------------|---|
| Drive System | Standard or optional independent twin drive |
| Tension Control | Load cell & pneumatic feedback system |
| Liquor Extraction | Optimized roller & compensator design |
| Fabric Stability | Wrinkle-free, distortion-free transport |
| Module Expansion | Wash, hot wash, neutralization, rinsing |

Mechanical Design & Fabric Handling

Vertical Fabric Passage

The vertical fabric path promotes effective drainage and intensive liquor exchange, enabling deep and uniform penetration of washing or neutralizing media.

Modular Line Concept

The washing line can be configured precisely to process requirements by adding or removing modules. Hot wash, neutralization, chemical rinsing can be arranged as needed.

Low-Tension Transport (Optional)

Independent upper and lower drive systems allow exceptionally gentle fabric handling, particularly suitable for elastic, lightweight, or deformation-sensitive materials.

Efficient Liquor Expression

Optimized roller geometry combined with pneumatic compensators ensures effective liquor removal while maintaining smooth, crease-free fabric movement.

Active Tension Management

Real-time tension feedback via load cells and pneumatic control elements prevents fabric elongation and preserves dimensional stability at high operating speeds.

Operational Advantages


- » Stable and reproducible washing quality
- » Reduced water, steam, and chemical consumption
- » Compact modular layout adaptable to existing lines
- » Gentle fabric handling for sensitive materials
- » Lower operating costs with sustainable processing
- » Long service life with industrial-grade construction


The Dhara Standard


The Dhara Washing Solution reflects a commitment to engineering discipline, process clarity, and long-term performance. Designed to meet the expectations of international textile markets, it delivers clean fabrics, controlled processing, and consistent results—day after day.



CONTACT

 DHARA TEXTILE MACHINERY PRIVATE LIMITED.
PLOT NO. 4011, ROAD NO. 4B
PHASE-4, GIDC VATVA
AHMEDABAD – 382445
GUJARAT, INDIA

 +91 98240 59699 (Shailesh Panchal)
+91 97230 59699 (Jay Panchal)

 sales@dharatextilemachinery.com
sales.india@dharatextilemachinery.com

 dharatextilemachinery.com

