



[www.dhartexindia.com](http://www.dhartexindia.com)

# Contents.

|    |                                  |
|----|----------------------------------|
| 3  | <b>ABOUT US</b>                  |
| 4  | <b>DMERC LINE™</b>               |
| 6  | <b>DWASH LINE™</b>               |
| 8  | <b>DHARTEX DRYLINE™</b>          |
| 12 | <b>DHARTEX PADMASTER™</b>        |
| 14 | <b>DHARTEX SIZELINE™</b>         |
| 17 | <b>DHARTEX DRYLINE CYLINDERS</b> |
| 19 | <b>OUR CLIENTS</b>               |



## CORPORATE INTRODUCTION

Dhartex Machinery India Pvt. Ltd. is a reputed name in the Indian and international textile machinery market. The company specializes in the design, manufacturing, and commissioning of high-performance equipment for wet finishing, dyeing, drying, squeezing, and fully automated size cooking solutions.

With a legacy built on trust, precision engineering, and innovation, Dhartex has grown to become a preferred technology partner for modern textile processing units. The company focuses on combining functionality, energy efficiency, and operator-friendly automation to develop robust systems that improve textile production quality and operational consistency.

## FOUNDER AND LEADERSHIP

Mr. Narendra Panchal, the Managing Director and pioneer behind Dhartex Machinery India Pvt. Ltd., brings with him over 35 years of rich and hands-on experience in the textile machinery sector. With his deep-rooted technical knowledge and visionary approach, Mr. Panchal has led the company from its early beginnings to a well-recognized and respected brand in the textile industry.

His belief in "engineering with purpose" and his focus on practical, production-centric solutions have guided the company's R&D and product innovation efforts. Mr. Panchal continues to mentor new generations of engineers and technologists within the company, maintaining Dhartex's industry edge.



### OUR MISSION

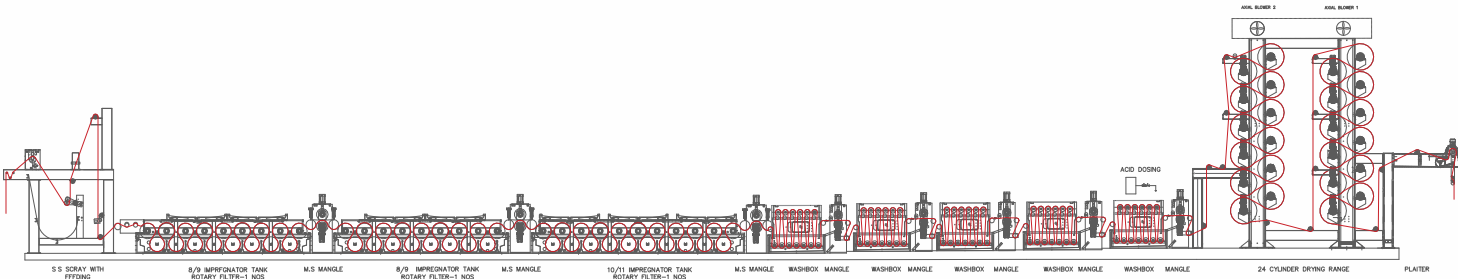
To become a globally recognized leader in textile machinery manufacturing by continuously innovating efficient, sustainable, and intelligent solutions that empower the textile industry to achieve excellence.

### OUR VISION

To design and deliver world-class textile machinery that enhances productivity, quality, and operational efficiency.

# DMERC LINE™

Chainless Mercerizing Range  
Next-Generation Mercerization for Superior Fabric Quality



Introducing **DMERC LINE™** the latest innovation from Dhartex—a cutting-edge Chainless Mercerizing Range engineered for optimal performance, low maintenance, and unmatched fabric quality. Designed with advanced automation and energy-efficient technology, **DMERC LINE™** redefines mercerizing with seamless fabric handling and consistent results across a wide variety of woven fabrics.

| Benefits                     |                                                                                                                             |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Superior Fabric Quality      | Enhanced luster, dye uptake, and hand feel make your fabrics stand out in the competitive textile market.                   |
| Energy & Resource Efficiency | Reduced water, steam, and chemical usage contribute to a lower environmental footprint and operational cost.                |
| Low Maintenance, High Uptime | The chainless design, robust construction, and self-cleaning systems ensure longer intervals between maintenance shutdowns. |
| Fast ROI                     | Increased productivity, reduced wastage, and long service life translate into rapid return on investment.                   |

## Applications



100% Cotton Woven Fabrics



Cotton Blends



Poplin, Twill, Voile, Satin & Sheeting Fabrics



High-thread-count Shirting Materials

## Key Features

- Chainless Fabric Transport System**
  - Eliminates the need for traditional chains, reducing mechanical wear, maintenance costs, and downtime.
- Uniform Tension Control**
  - Intelligent tension regulation across the entire range ensures perfect dimensional stability and smooth mercerizing.
- High-Efficiency Dwell Time Impregnator Tank**
  - Ensures uniform and deep penetration of caustic soda by controlling dwell time precisely. The well-engineered tank design allows even saturation of fabric, crucial for achieving consistent luster, improved strength, and enhanced dye affinity.
- Advanced Stabilizer Tank System**
  - Designed to lock in the mercerizing effect, the stabilizer tank ensures controlled relaxation and alkali retention time. This results in better fiber swelling, dimensional stability, and minimized fabric shrinkage. Integrated washing and neutralization ensure effective alkali removal and smooth fabric feel.
- High-Performance Caustic Recovery System**
  - Maximizes lye recovery and minimizes chemical consumption, resulting in a more sustainable and cost-effective process.
- Modular Design**
  - Flexible, space-saving layout tailored to your production floor—easily expandable for future upgrades.
- Advanced Automation & Monitoring**
  - Intuitive HMI with real-time process visualization, automatic concentration control, and integrated production analytics.
- Efficient Washing & Neutralizing Units**
  - Multi-stage counterflow washing for thorough alkali removal and minimal water usage.
- Optimized for Fine & Delicate Fabrics**
  - Gentle yet precise treatment ensures high luster, enhanced dye affinity, and improved fabric strength.

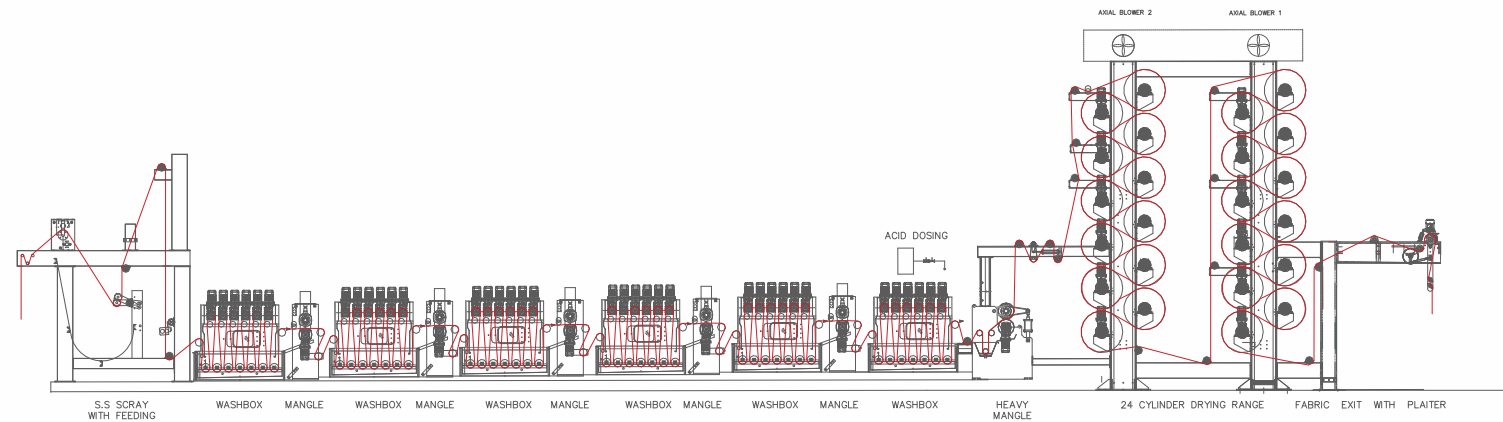
## Why Choose DMERC LINE™?

At Dhartex, we engineer solutions that empower textile manufacturers to reach new levels of quality and efficiency. **DMERC LINE™** is a testament to our commitment to innovation, precision, and customer success. With state-of-the-art components like the Dwell Time Impregnator Tank and Stabilizer Tank, this range delivers unmatched consistency in mercerizing results. Backed by expert technical support and customizable configurations, it's the ideal choice for modern textile processing units seeking a competitive edge.

# DWASH LINE™

## Smart Washing in Wet Finishing

Intelligent Open-Width Washing System for Pre-treatment, Dyeing & Finishing



## Clean Fabric. Controlled Process. Consistent Results.

**DWASH LINE™** by Dhartex is a next-generation **modular open-width washing** unit designed to optimize washing performance while drastically reducing water, steam, and chemical consumption. With intelligent automation features and customizable configurations, it ensures consistent quality across fabric types and processing needs.

## Smart Automation for Precision Washing

| Automation Feature        | Description                                                                                              |
|---------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Water Flow Control</b> | Auto-adjusts water input based on fabric load & speed using VFD-regulated pumps and flow meters          |
| <b>Steam Control</b>      | Steam injection regulated by temperature sensors & PID logic to maintain precise liquor temperatures     |
| <b>Dosing System</b>      | Smart dosing unit integrated with pH sensors to neutralize acids/alkalis in real-time                    |
| <b>Tank Filtration</b>    | Continuous inline filtration system removes suspended particles to extend liquor life and protect fabric |
| <b>Sensor Integration</b> | pH, temperature, flow, and level sensors enable real-time monitoring and closed-loop feedback            |
| <b>PLC-HMI System</b>     | Centralized touch panel with recipe management, alarm systems, and SCADA compatibility                   |
| <b>Water Reuse Logic</b>  | Cascade rinsing and recycled liquor return with conductivity-based quality control                       |

## Core Features & Technical Excellence

- 01 Vertical Fabric Passage**
  - Enhances drainage and liquor contact
  - Ideal for deep, uniform penetration of water or neutralizing agents
- 02 Modular Construction**
  - Add/remove wash modules as per process length
  - Supports washing sections, hot wash, neutralizing, or chemical rinsing
- 03 Twin Drive System (Optional)**
  - Independent top and bottom drives for ultra-low tension handling
  - Especially useful for sensitive or stretch-prone fabrics
- 04 Splint Rollers & Pneumatic Compensators**
  - Optimize liquor extraction without excess tension
  - Maintain smooth and wrinkle-free passage
- 05 Tension Control System**
  - Real-time tension feedback loop via load cell & pneumatic cylinders
  - Prevents fabric elongation or distortion during high-speed runs

## Applications



## Key Benefits at a Glance



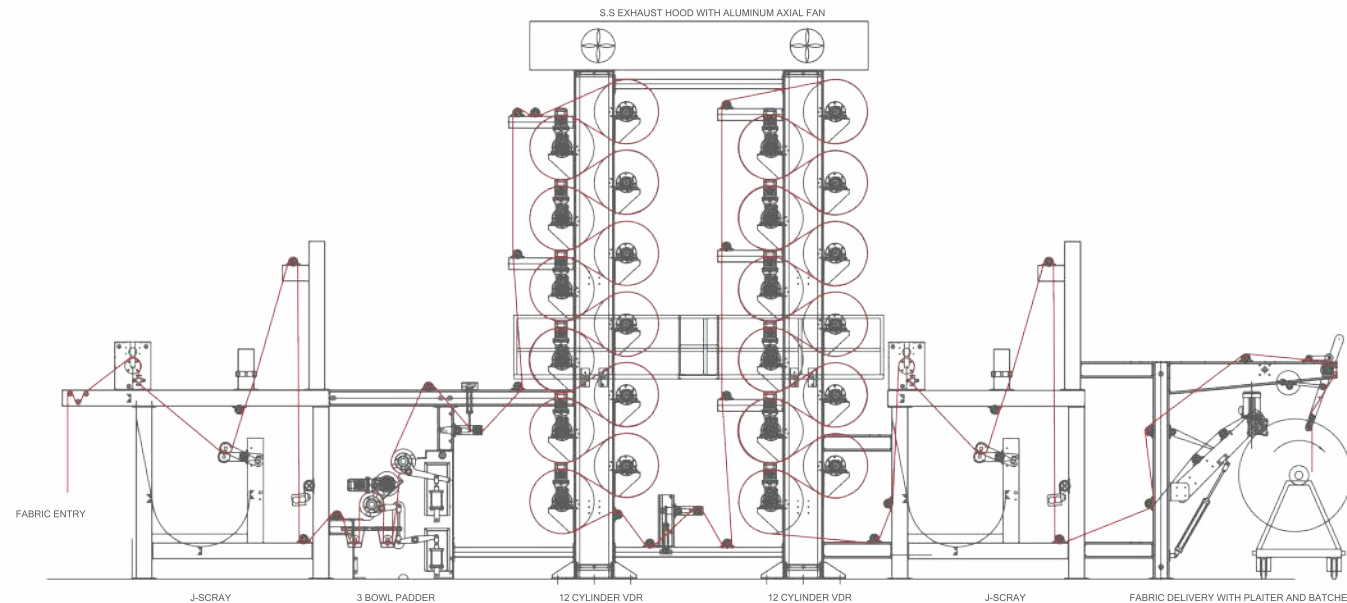
## DWASH LINE™

### Smarter Fabric Washing

Deliver clean, neutralised fabric ready for flawless dyeing or finishing—without excess water, steam, or manual adjustments. With **DWASH LINE™**, every wash counts

# DHARTEX DRYLINE™

Professional-grade, High-Performance vertical cylinder drying system



## INTRODUCING DHARTEX DRY-LINE SERIES

Precision Drying. Intelligent Steam Control. Superior Results.

The DRY-LINE™ is a high-efficiency, modular cylinder drying system engineered for modern textile finishing. Designed with advanced steam automation – including real-time moisture control and multi-level steam pressure regulation – the system delivers maximum drying efficiency, reduced energy consumption, and consistently superior fabric quality.

Engineered for seamless integration, DRY-LINE™ operates efficiently in continuous finishing and processing lines for woven, knitted, and non-woven fabrics.

## INTELLIGENT STEAM ACCESSORY PACKAGE

01

### Group-Based Steam Pressure Control

- › Independent steam regulation for each cylinder group
- › Enables thermal profiling based on fabric type and GSM
- › Improves drying uniformity and energy efficiency

02

### Whole-Dryer Steam Management

- › Centralized steam pressure control across the entire system
- › Maintains consistent thermal balance in all drying zones
- › Ideal for high-speed continuous operations

03

### Real-Time Moisture Control

- › Inline moisture sensors monitor fabric wetness continuously
- › Automatic steam modulation based on feedback
- › Prevents over-drying and maintains fabric hand feel

04

### Closed-Loop Automation

- › Fully integrated PLC-based feedback system
- › Self-adjusting steam valves ensure process stability
- › Minimizes operator dependency

## CORE TECHNOLOGY & MACHINE SPECIFICATIONS

### Drying Cylinder Configuration

- › Drying Cylinder Diameter: 400 mm to 800 mm
- › Roller Face Width: 1000 mm to 4500 mm
- › Engineered for optimal heat transfer and fabric contact

### Modular Vertical Design

- › Configurations: 1 to 6 stands
- › Each stand: 4 to 12 drying cylinders
- › Expandable design based on production requirements

### Drive System

- › Direct Drive System (Standard)
- › Frequency-controlled geared motors
- › Eliminates belts → reduces maintenance & vibration
- › Ensures synchronized and smooth operation
- › Alternative Drive Options
- › Belt Drive System – economical and widely adaptable
- › Chain & Sprocket Drive System – positive drive, no slippage, ideal for heavy-duty applications

### Adaptive Speed & Tension Control

- › Automatically compensates for fabric shrinkage
- › Maintains consistent tension across full width
- › Protects fabric structure and dimensional stability

### Cylinder Surface Options

- › Standard polished surface
- › Optional Teflon-coated cylinders for non-stick drying
- › Independent temperature zones for process flexibility

### Machine Operating Parameters

- › Drying Cylinder Design Temperature: - 165°C
- › Operating Steam Pressure: 5 kg/cm<sup>2</sup>
- › Production Speed: 0 – 150 Mtrs/minute

### Machine Structure

- › Available in Heavy-Duty Mild Steel (MS) construction
- › Optional Stainless Steel (SS) structure for corrosion resistance and hygiene applications

## FABRIC SYNCHRONIZATION SYSTEM

01

### Compensator Between Stacks

- › Installed between drying stands for smooth synchronization
- › Absorbs tension variations during fabric movement
- › Maintains stable fabric loop and continuous flow

### Key Advantages

- › Eliminates jerks and sudden tension peaks
- › Improves fabric quality and dimensional stability
- › Essential for high-speed continuous operations

02

### OPTIONAL PADDLE INTEGRATION

- › Available in 2-Bowl and 3-Bowl configurations
- › High nip pressure for uniform expression
- › Ideal for integration with washing, dyeing, or finishing ranges
- › Ensures controlled moisture pickup before drying

03

### COOLING CYLINDER OPTIONS

- › Available as Spiral Type Jacketed Cooling Cylinders
- › Enhanced heat dissipation efficiency
- › Uniform cooling across fabric width
- › Available as Single Shell (Non-Jacketed) Cooling Cylinders
- › Simple and cost-effective design
- › Suitable for standard cooling applications

#### Key Advantages

- › Improves fabric handling post drying
- › Stabilizes fabric temperature before further processing

## ADVANCED HEAT CONSERVATION SYSTEM

01

### Steam Loss Prevention Design

- › High-efficiency Rockwool insulation for cylinders
- › Stainless Steel cladding for durability and heat retention
- › Ceramic based Paints on dish ends

02

### Key Advantages

- › Minimizes radiant and convective heat loss
- › Improves overall thermal efficiency
- › Significantly reduces steam consumption
- › Enhances operator safety by lowering surface temperatures

03

### FLEXIBLE CUSTOMIZATION OPTIONS

- › Selective cylinder or zone shutdown
- › Pendulum rollers for improved fabric guidance
- › Optional belt-driven configuration
- › Integrated / standalone cooling cylinders
- › Exhaust hoods, heat recovery systems, and enclosures
- › Entry/exit systems: J-scray, plaiters, batching

04

### APPLICATION COMPATIBILITY

- › Woven fabrics
- › Knitted fabrics
- › Non-woven textiles
- › Jute textile
- › Technical textiles

05

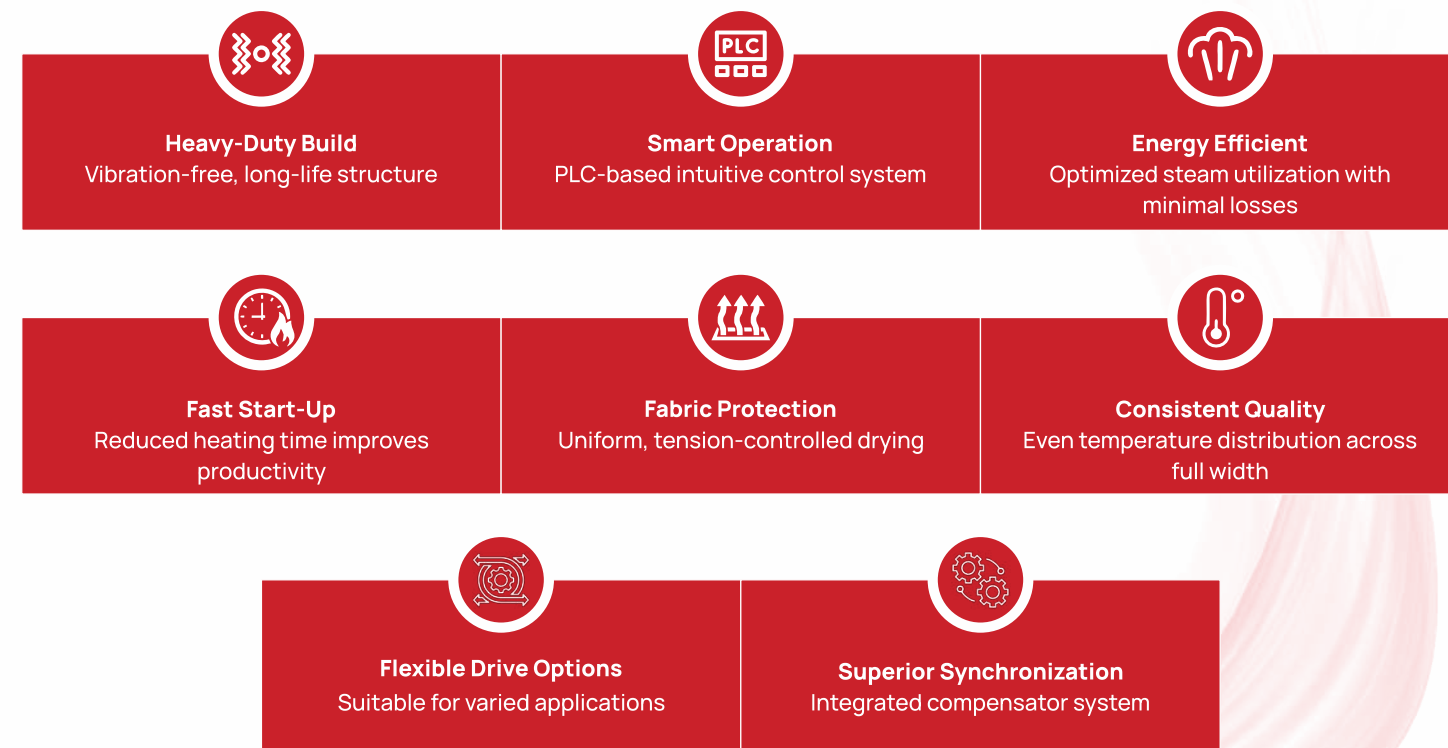
### Seamless integration with

- › Continuous washing ranges
- › Mercerizing ranges
- › Finishing lines
- › Coating Lines

## FLEXIBLE CUSTOMIZATION OPTIONS

- › Optional cylinder or zone shutdown
- › Pendulum roller for optimized fabric handling
- › Alternative belt drive system
- › Integrated or standalone cooling cylinders
- › Exhaust hoods, fans, or enclosures for heat management
- › Entry frames, winders, and stackers for separate operation

### Key Benefits



## DHARTEX DRYLINE™

Where Heat Meets Precision – Now Smarter Than Ever

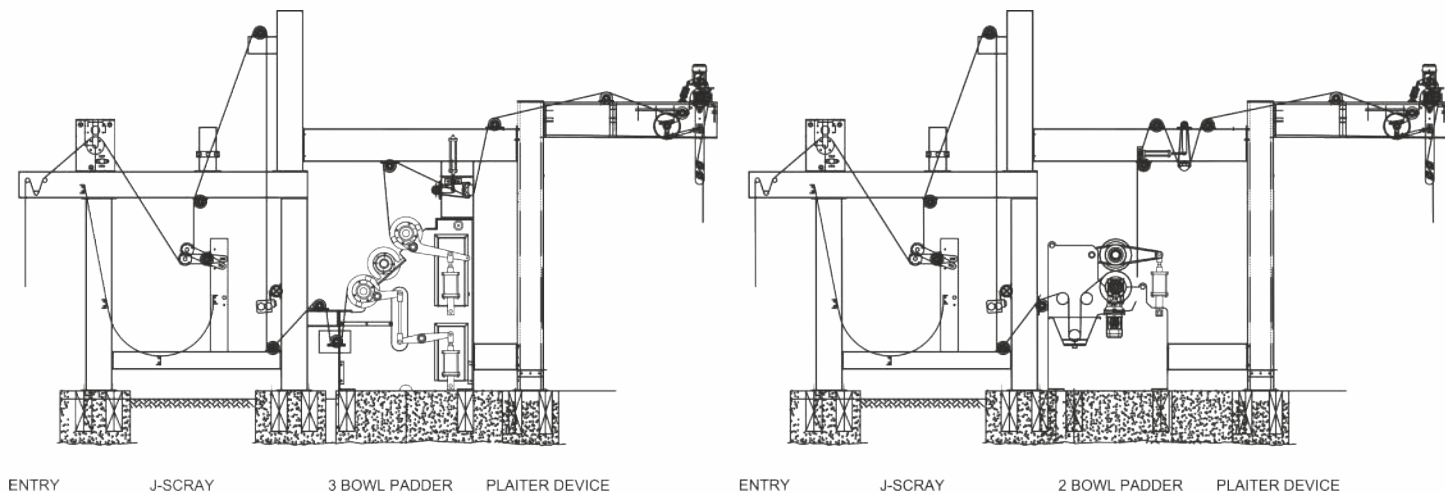
Unlock next-level drying performance with intelligent steam automation, moisture sensing, and precision engineering.

DHARTEX DRY-LINE™ is your trusted solution for efficient, consistent, and high-quality textile finishing.

# DHARTEX PADMASTER™

## Mastering the Art of Fabric Squeezing

Highlights dominance in fabric padding and pressure control



## Engineered for Versatility – Built for Precision

### Now with Advanced Filtration Unit

Smarter Application. Cleaner Operation. Greater Efficiency.

The Dhartex Padder System, enhanced with a high-efficiency **filtration unit**, elevates precision textile processing to new heights. Continuous chemical bath filtration ensures:



Chemical purity



Reduced chemical wastage



Consistent processing temperatures

These features translate into **significant chemical savings** and optimized application quality. Whether dyeing, finishing, or dewatering, Dhartex Padder Systems deliver mechanical reliability and adaptive performance across a broad range of fabric types and processes.

## Configurable to Your Needs

## Squeezing Variants

### 01 2-Bowl Padder

- › Compact, efficient design for standard operations
- › Ideal for light to medium squeezing applications

### 02 3-Bowl Padder

- › Enhanced pressure uniformity
- › Suitable for high-throughput, multi-stage finishing lines

### 01 Low Squeezing Option

- › Gentle on delicate, lightweight fabrics
- › Enables precision chemical application with minimal mechanical stress

### 02 High Squeezing Option

- › Equipped with swimming rolls and nip-pressure control
- › Maximizes dewatering, reducing drying load and improving efficiency

## Key Features

- 1 Integrated Filtration Unit**  
Maintains chemical purity, reduces re-dosing, extends bath life, and cuts operating costs
- 2 Thermal Stability System**  
Ensures consistent bath temperature for uniform fabric-to-fabric results
- 3 Adjustable Nip Pressure**  
Up to 50 N/mm, adaptable to different fabric requirements
- 4 Durable Roll Surfaces**  
Special coatings for fabric protection and long-term durability
- 5 PLC-Controlled Operation**  
Maintains chemical purity, reduces re-dosing, extends bath life, and cuts operating costs
- 6 Available Widths**  
From 1400 mm to 3600 mm
- 7 Pressure Systems**  
Motorized or pneumatic options for flexible integration

## Smart Add-Ons

- 01 Water Cleaning System**  
› Faster line cleaning and reduced downtime
- 02 Pneumatic Control Junction**  
› Provides accurate pressure feedback and automation

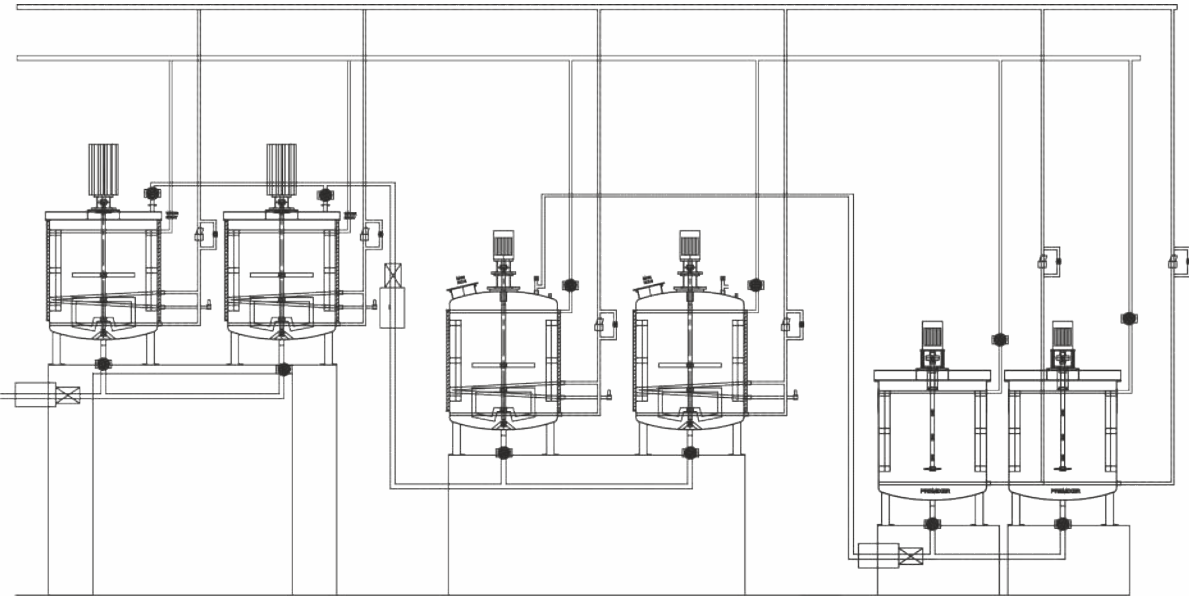
## Applications

- Dyeing**
- Pre-Treatment**
- Resin & Softener Applicatio**
- Moisture Control**
- Finishing**

Achieve consistent results, cost efficiency, and process reliability with the Dhartex PadMaster™—now smarter with filtration and temperature management. Built to meet the demands of modern textile finishing.

# DHARTEX SIZELINE™

**Precision Sizing. Consistent Performance.**  
Fully automated size cooking kitchen for Precision, Productivity, and Consistency



## Smart Sizing Starts Here

The **DHARTEX SIZELINE™** Cooking Kitchen is a state-of-the-art, fully automated system engineered for superior **slurry preparation** in modern textile sizing. It integrates the **Pre-Mixing**, **Pressure Cooking**, and **Storage** stages under a centralized control architecture—ensuring consistent performance, minimal waste, and zero process variability.

## System Components with Technical Specifications

### Size Pre-Mixing Vessel

| Initial Dispersion & Pre-Heating Stage |                                                                         |
|----------------------------------------|-------------------------------------------------------------------------|
| Feature                                | Description                                                             |
| Construction Material                  | SS 304 / SS 316L grade stainless steel                                  |
| Design Type                            | Cylindrical vertical tank with dished ends                              |
| Agitation System                       | Top-mounted high-efficiency anchor-type agitator with VFD control       |
| Load Cells                             | For accurate weight-based ingredient dosing                             |
| Heating System                         | Steam jacketed or electric pre-heating coil                             |
| Instrumentation                        | PT-100 temperature sensors, level transmitters, digital pressure gauges |
| Capacity Options                       | 750 / 1000 / 1500 / 2000 / 3000 Litres                                  |
| Special Features                       | Foam-level sensors (optional), auto dosing ports for chemicals          |

### Size Pressure Cooking Vessel

| High-Temperature Gelatinization & Cooking Phase |                                                                   |
|-------------------------------------------------|-------------------------------------------------------------------|
| Feature                                         | Description                                                       |
| Construction Material                           | SS 304 / SS 316L pressure-rated stainless steel                   |
| Design Pressure                                 | 2 to 4 bar (as per process requirement)                           |
| Agitation System                                | Bottom-entry propeller agitator with variable speed drive         |
| Heating System                                  | High-efficiency steam jacket or direct steam injection            |
| Vacuum System                                   | Optional vacuum degassing unit with condensate trap               |
| Cleaning System                                 | Fully integrated CIP (Clean-In-Place) rotary spray balls          |
| Instrumentation                                 | Digital temp. & pressure transmitters, safety relief valves, RTDs |
| Insulation                                      | Double-layer with thermal cladding                                |
| Capacity Options                                | 750 / 1000 / 1500 / 2000 / 3000 Litres                            |
| Safety                                          | Pressure relief valves, rupture discs, interlocked steam control  |

### Size storage vessel

| Homogenized Storage & Feeding Phase |                                                                      |
|-------------------------------------|----------------------------------------------------------------------|
| Feature                             | Description                                                          |
| Construction Material               | SS 304 / SS 316L pressure-rated stainless steel                      |
| Design Type                         | Vertical cylindrical vessel with conical bottom                      |
| Agitation System                    | Gentle side-entry or bottom-entry agitator to prevent sedimentation  |
| Temperature Control                 | Jacketed for temperature holding with sensor-controlled steam valves |
| Instrumentation                     | Viscosity monitoring (optional), level indicator, PT-100 RTD         |
| Insulation                          | Double-layer with thermal cladding                                   |
| Connectivity                        | Multiple outlet lines with independent flow control valves           |
| Capacity Options                    | 750 / 1000 / 1500 / 2000 / 3000 Litres                               |
| Sanitation                          | Easy openable manhole, CIP compatible                                |

## Centralized Control & Automation

- 01 **Integrated PLC + SCADA**
  - > system with real-time feedback loops
- 02 **HMI touchscreen**
  - > interface for recipe management and process visualization
- 03 **Batch memory & logging for**
  - > traceability and audit compliance
- 04 **Remote diagnostics**
  - > via IoT for proactive maintenance
- 05 **Interlocks & alarms**
  - > for pressure, temperature, and overflow protection

## Key Advantages

- 01 **Repeatable Batch Quality**
  - > Intelligent gelatinization, precise viscosity
- 02 **Energy Saving**
  - > Optimized pre-heating and controlled steam usage
- 03 **Minimal Labor**
  - > Fully automated flow with process alerts
- 04 **Modular Scalability**
  - > From single-vessel setups to large-scale kitchens
- 05 **Clean & Safe**
  - > Hygienic design, pressure-certified, CIP-enabled vessels

## Applications

Ideal for preparing size slurries for

**Cotton, Polyester, Viscose, and Blended Yarns Used in**



Apparel Weaving



Technical Textiles



Industrial Fabrics

## DHARTEX SIZELINE™

Where Efficiency Meets Intelligence

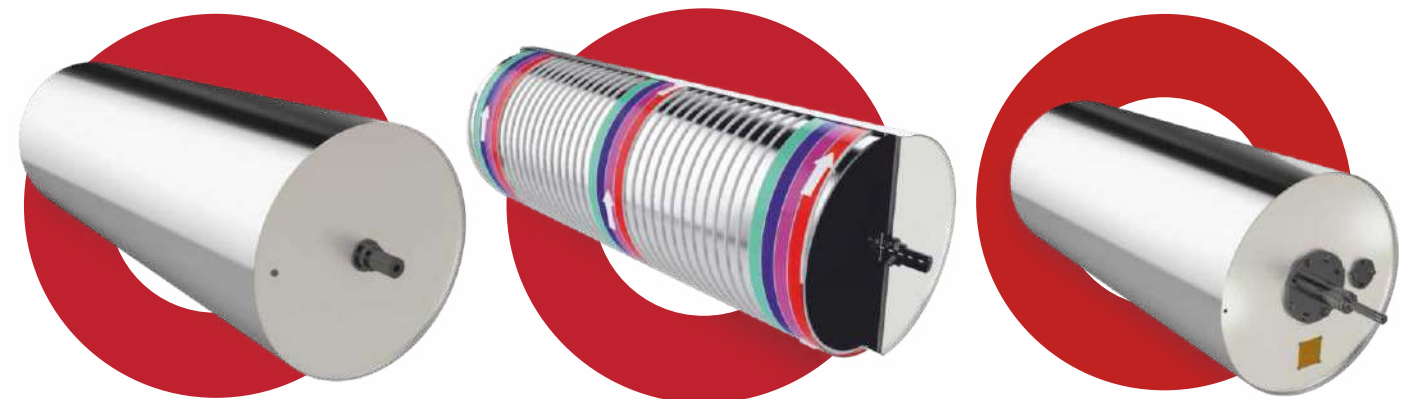
Deliver precision sizing with confidence. Whether you're running high-speed looms or technical fabric lines

**DHARTEX SIZELINE™** ensures the perfect size, every time.

## DHARTEX DRYLINE CYLINDERS

Precision Engineered for Superior Drying Performance

At **DhartexLine**, we build cylinders that drive your production forward. With over 35 years of specialized experience, we manufacture thin-walled steam, thermo oil, electrically heated, and water-cooled drying and cooling cylinders designed to meet the highest quality and safety standards.



Our cylinders are a trusted choice across a variety of applications, including sizing machines, non-woven production lines, and both textile and technical fabric finishing processes. Built with precision and innovation, **DHARTEX DRY LINE CYLINDERS** guarantee exceptional temperature uniformity, minimal radial run-out, and flawless welding quality for optimum performance and durability.

## Cylinder Types



Steam Heated



Thermo Oil Heated



Electrically Heated



Water Cooled

## Ready-Assembled Accessories

- > Heavy-duty, grease-lubricated pillow block bearings designed for high-temperature use
- > Stainless steel siphon pipes for safe condensate removal
- > High-quality two-way rotary joints with integrated vacuum breakers
- > Flexible, corrugated stainless steel hoses for reliable fluid transfer

#### TECHNICAL DETAILS

|                         |                                     |
|-------------------------|-------------------------------------|
| Diameter                | 400mm to 800mm                      |
| Working Width           | 1000mm to 4500mm                    |
| Hydraulic Test Pressure | 3 Bar to 12 Bar                     |
| Working Pressure        | 1 Bar to 6 Bar                      |
| Shell Thickness         | 2mm to 4mm                          |
| Surface Finish          | 55304/55316 Polished/ Teflon coated |

#### Key Features

- 01 Robust Construction**
  - Thin-walled cylinders built as pressure vessels, certified to international standards including CE.
- 02 Wide Operating Range**
  - Steam pressure up to 6 bar (165 °C saturated steam) and electric heating up to 210 °C.
- 03 Flexible Dimensions**
  - Standard diameter of 800 mm (custom sizes 400 mm to 800 mm), surface widths up to 4500 mm.
- 04 Premium Materials**
  - Outer shells crafted from high-grade stainless steel (AISI 304, AISI 316L) with wall thicknesses up to 5 mm.
- 05 Superior Surface Quality**
  - Highly belt-ground surfaces polished with optional Teflon and custom non-stick coatings.
- 06 Durable Side Plates & Journals**
  - Made from high-grade carbon steel with advanced insulation and bolted journals featuring special high-temperature sealing.
- 07 Precision Tolerances**
  - Typical true running less than 0.1-0.8 mm and diameter tolerance  $\pm 0.4$ -0.6 mm ensure smooth, reliable operation.

#### Why Choose DHARTEX DRY LINE CYLINDERS?

Because your production deserves cylinders that combine **cutting-edge engineering**, **proven durability**, and **consistent, top-quality drying results** – every time.

# INDUSTRY LEADING



TM

# DHARTEX

DRIVEN BY INNOVATION  
TRUSTED BY INDUSTRY

## CONTACT US



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### REGD. OFFICE

Plot no. L-4103/1, Phase-4, Vatva, G.I.D.C.  
Ahmedabad - 382445 Gujarat India



### MANUFACTURING UNIT

Plot no. 3703/E, Phase-4, Behind new Nirma Vatva  
G.I.D.C. Ahmedabad - 382445 Gujarat India

**Dhartex Machinery India Pvt Ltd**

