

## Machine Construction & Design

- » Closed-type stainless steel body construction for durability and hygiene
- » Pneumatically operated doors for safe and ergonomic operation
- » Manual door opening with gas spring assistance on compact models
- » Heavy-duty frame designed for continuous industrial use

## Working Range & Capacity

- » Available Working Widths: 1600 mm to 3400 mm
- » Batch Capacities: 100 kg to 2000 kg
- » Fabric Handling: Tensionless batch processing
- » Suitable Processes:
  - » Desizing
  - » Bleaching
  - » Washing & Rinsing
  - » Scouring
  - » Dyeing

# 7 FULLY AUTOMATIC HYDRAULIC JIGGER

Advanced Tensionless Wet Processing for Precision Textile Dyeing

The Dhara Hydraulic Jigger is a high-performance batch dyeing and wet-processing machine engineered for scouring, bleaching, dyeing, washing, and rinsing of woven and knitted fabrics. Designed for true tensionless fabric handling, the system ensures uniform shade development, zero center-selvedge variation, and complete elimination of tailing effects, even on delicate or high-value textiles.

Supporting reactive, vat, sulphur, and specialty dyes, the Dhara Hydraulic Jigger combines energy-efficient hydraulic drives, advanced liquor management, and PLC-based automation to deliver consistent, reproducible results for modern textile finishing plants.

## Model Configuration & Technical Capabilities

Model	D-500	D-800	D-1100	D-1400
Batch Capacity	100 kg	250 kg	500 kg	1000 kg
Fabric Tension Range	3–20 kg	3–30 kg	5–50 kg	5–50 kg
Hydraulic Power Pack	2.2 kW	3.75 kW	5.6 kW	11.25 kW
Direct Heating	Standard	Standard	Standard	Standard
Indirect Heating	Available	Available	Available	Available
Selvedge Shifting System	—	Standard	Standard	Standard
Pressurized Vapour Exhaust	—	—	Standard	Standard
Independent Batching Motor	—	Standard	Standard	Standard

## Semi-Automatic Configuration

- » Automatic fabric reversal
- » Automatic speed & temperature regulation
- » Electronic tension control
- » Automatic water filling and draining
- » Pendulum mode operation

## Process Enhancement Features

- » Heated hood to prevent condensation
- » High-efficiency Spray nozzles for effective rinsing
- » Automatic pendulum oscillation system to avoid batch imbalance
- » Electronic fabric tension control for uniform processing

## Digital Integration & Plant Connectivity (Optional)

- » Centralized control for multiple jigger installations
- » Remote monitoring and data acquisition
- » Direct integration with central color kitchen systems
- » Utility consumption tracking and MIS reporting

## Technical Specification (Process Parameters)

Parameter	Specification
Maximum Process Temperature	Up to 98 °C
Process Speed Range	10 – 150 m/min
Fabric Drive System	Servo-controlled
Fabric Tension Control	Electronic
Heating System	Direct & Indirect
Cooling System	Integrated
Auto Swing System	Yes

## Fully Automatic PLC-Controlled Configuration

- » Volumetric fresh water inlet for precise liquor ratio control
- » Programmable linear or flexible dosing of dyes and chemicals
- » Automatic control of: 1. Reversal 2. Speed 3. Temperature 4. Filling and draining
- » Operator-guided sampling
- » Complete recipe management system
- » Process programming from loading to unloading

## Energy-Efficient Hydraulic Drive System

- » VFD-controlled hydraulic power pack
- » Optimized power consumption with up to 40% energy savings
- » Smooth, vibration-free fabric movement for stable batch control

## Key Advantages

- » True tensionless fabric processing
- » Uniform dye penetration with no shade variation
- » Reduced energy, water, and chemical consumption
- » High repeatability and process stability
- » Scalable automation for future expansion
- » Suitable for standard and technical textiles


## The Dhara Advantage


The Dhara Hydraulic Jigger combines precision hydraulic engineering, intelligent automation, and advanced liquor management to deliver consistent quality, operational efficiency, and long-term reliability—making it a future-ready solution for modern textile wet-processing operations.


Dhara — Engineering Precision. Delivering Consistency.



## CONTACT

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