



Dyrama: Tecnorama's Robotic Dyeing Module for Small Batches

With experience dating back to 1984 in the development of advanced solutions for dispensing and dyeing in the laboratory — perfected with the globally recognized and appreciated **Dos&Dye®** system — Tecnorama now introduces ***Dyrama 4R***, a new series of automatic modules for “Just in Time” small batch dyeing. Available in three models – 4R/1000, 4R/2500, and 4R/6000 – these dyeing modules meet the growing demand for flexibility, precision, and productivity in the textile sector.

Extremely **versatile in load modularity**, the Dyrama systems support dyeing loads from 1 kg to 6 kg, depending on the model, and are suitable for dyeing yarns in packages, ribbons and zippers. Each module features four independent autoclaves, each with individual loading capacity, autonomous heating/cooling control, and programmable reversible circulation pumps for adjustable speed and flow.

At the heart of the system is an advanced robotic arm capable of transferring material holders from the parking area to the dyeing units and back, enabling continuous, round-the-clock operation, 24/7. This automation eliminates human error and delays, minimizes downtime, and optimizes production flow.

The process is managed by proprietary customized software that leverages Tecnorama's decades of “**right first time**” expertise in dispensing and dyeing. It ensures consistent quality and accurate color reproduction from the very first batch – a key requirement for “Just in Time” solutions that involve frequent, varied production runs without compromising dyeing results.

Two particularly innovative applications stand out:

1. An exclusive Tecnorama **patent** for the automatic dyeing of zippers — a unique solution in the textile machinery landscape.
2. The ability to dye **micro-batches of yarn** — a strategic advantage for fashion houses that need rapid, customized sampling without compromising quality.

With **Dyrama 4R**, Tecnorama offers a highly advanced solution for small-batch dyeing: an automated, modular, and precise system that guarantees “right first time” results. It's ideal for textile manufacturers focused on high quality, flexibility, and fast turnaround to meet market demands.

Key Competitive Advantages of the Dyrama 4R System:

- ✓ **Reduced corrections and re-dyeing** thanks to precise dosing and dedicated software for dyeing process control.
- ✓ **Fast production times** with quick batch changes and automated loading enabled by the robotic precision of the system.
- ✓ **Complete flexibility** with the ability to manage 4 or 8 different dye baths simultaneously.
- ✓ **Energy efficiency**, thanks to each autoclave's thermal independence and the option for electric heating.

Tecnorama @ ITMA ASIA – Singapore

Tecnorama confirms its presence at one of the most prestigious Asian events in the textile machinery sector: **ITMA ASIA**, held in Singapore. The company will showcase its latest innovations for laboratory and small-batch automatic dyeing — **Hall H7 – Stand A413**.