

## Signature Series



Leading Through  
**Innovation**



Holistic Solution for  
Dyeing and Finishing



Superior Quality and  
Efficient Production-  
On-Demand



Agile Technology for  
a Climate Positive  
Tomorrow

# Thies' Signature **Innovation** for **Sustainable Dyeing**

**Sustainability is a driver for change, and change is coming to the fashion and home textile industries.**

While there's no shortage of news about the global impacts of textiles, fast fashion and the resources involved in fabric dyeing and finishing, we'd like to share a significant leap forward that will change the conversation in our industry.

Meet the Signature Series from Thies GmbH & Co. KG – engineered for functionality, efficiency and sustainability, and delivering improved dyeing and finishing quality.

With significant innovations in fabric transport, water management, and dye and chemical dosing, the Signature offers measurable solutions for today's wet-process challenges.



## Leading Through Innovation

Major brands know transparency is key in building consumer trust, so as they share their climate-positive leadership stories with consumers they must also proactively address the waste, water consumption and pollution issues traditionally associated with fabric dyeing and finishing.

For this, fabric manufacturers are counting on their supply and technology partners to help them lead with sustainable innovation.

The Signature Series offers real-world, scalable solutions for today, by radically reducing the amount of water, dyestuff, salt and chemistry required for dyeing and finishing, reducing effluent, and minimizing operating costs.

### Signature Series plug and playing sustainability



## Holistic Solution for Dyeing and Finishing

The challenges faced by the dyeing industry require refining and, where possible, consolidating several interrelated steps of the process. This is how the Signature Series maximizes efficiencies and resource reduction across all steps of coloration, including pretreatment, dyeing, and after-treatment.

When accounting for the environmental impacts of dyeing, the water and energy required for fabric preparation, in particular, should not be overlooked. This is where the Signature Series offers a significant advantage: almost all wet treatments can be carried out on this single machine. A wide array of fiber types and fabric structures can be successfully processed, including woven fabrics, warp knits, spacers, and circular knits.



## Superior Quality and Efficient Production-On-Demand

Building on Thies' successful iMaster H2O machines that reduced the amount of water required for dyeing and finishing by roughly 75 % compared to 1980, the Signature Series is a radical step forward in increasingly sustainable production.

With its novel ability to precisely dose concentrated chemistries and flexibly use less water to transport fabric, the Signature Series is capable of delivering highly consistent results with liquor ratios starting at 1:2.1. Confirmed by hundreds of field trials, water consumption is reduced up to 25 %, dyeing uniformity is improved, and batch times are shorter.

Signature's ultra-low liquor ratio has multiple cost and environmental benefits. Dye consumption is reduced up to 20% while achieving the same shade, less energy is required for heating water, and the treatment of water is less costly because the Total Dissolved Solids (TDS) is reduced up to 50 %.

Thies' analytical methodologies allow for real-time, in-process monitoring and control to monitor pollution reduction and reporting. The Signature Series can be equipped with EnergyControl, DyeControl, Conductivity measurement and other monitoring systems.

To ensure compatibility with existing dyehouse procedures and know-how, it was important to Thies that the Signature Series operates very much like existing dye machines. It is fully compatible with existing dosing systems and Manufacturing Execution Systems (MES) software, and it utilizes standard dyes and chemistry.

The flexible operating modes of transporting fabric – conventional water, combined water and air, and the "Signature" mode – allow dye houses to tailor production to their exact needs, while still achieving speeds up to 600 meters per minute.

Extensive field testing has shown that the Signature Series offers superior fabric quality, washfastness, rub fastness, levelness, and fabric handle without sacrificing lot size flexibility or color choice.



## Agile Technology for a Climate Positive Tomorrow

As a fifth-generation family-owned company, Thies GmbH & Co. KG is dedicated to serving the fashion and textile industry with flexible and innovative solutions for dye houses of all sizes, in all parts of the world, with the goal of helping brands make a more climate-positive future for all.