

Media Release

Arvind, H&M Group, and Deven Supercriticals inaugurate India's first supercritical CO₂ dyeing machine, a breakthrough in sustainable textile manufacturing

Ahmedabad, September 09, 2025: Arvind Limited, one of India's leading textile-to-retail conglomerates, in collaboration with leading fashion brand, H&M Group and Indian innovation start-up Deven Supercriticals Pvt. Ltd., today announced the inauguration of India's first supercritical CO₂ dyeing machine at Arvind's facility in Ahmedabad.

This pioneering technology, globally patented under the SUPRAUNO® brand, reduces the use of water in the fabric dyeing process by using supercritical carbon dioxide. At a commercial scale, it delivers up to 76% water savings, ~67% energy savings, and ~90% reduction in chemical usage within the coloration stage compared to conventional dyeing methods, while also significantly reducing effluent discharge.

The inauguration marks the culmination of a unique three-way partnership: Deven Supercriticals bringing cutting-edge Indian innovation, Arvind enabling large-scale industrial deployment, and H&M Group supporting the adoption of disruptive solutions in line with its sustainability ambitions. This is a first of its kind approach to enable scaling of Innovation from Lab to Bulk scale.

Speaking on the occasion, Mr. Punit Lalbhai, Vice Chairman, Arvind Ltd., said, "This inauguration represents a defining moment for the Indian textile industry. By hosting the world's first commercial-scale SUPRAUNO® machine at Arvind, we reaffirm our commitment to pioneering sustainable solutions and setting global benchmarks. This collaboration is proof that innovation, scale, and sustainability can go hand in hand."

Mr. Omang Narang, H&M Group's Production Manager for India, added: "We recognize that electrification is essential for making the textile industry fossil-free. Wet processing is the single most impactful area in the value chain for fashion brands like ours, and water- and energy-efficient technologies like this one make further electrification more feasible. We are proud that our support helps drive the entire industry forward."

Dr. Swapneshu Baser, Founder, Deven Supercriticals Pvt. Ltd., said, "We are immensely proud to see our patented SUPRAUNO® technology being inaugurated at commercial scale in India. This machine is not just a technological milestone but also a step towards safeguarding water, energy, and health for future generations. We are grateful to H&M Group and Arvind for their faith in this innovation and for making this vision a reality."

The Ministry of Textiles has also strongly supported the initiative. This milestone strongly supports the Government of India's vision of building a sustainable, circular, and globally competitive textile sector showcasing Indian innovation at the forefront of global textile transformation.