

# Jeyavishnu Clothing Achieved 25% Energy Reduction in RO Treatment for ZLD Process

## About the Customer

**Jeyavishnu Clothing Private Ltd.**, based in Tirupur, Tamil Nadu, known as the "Knitwear Capital of India," is one of the leading garments exporters and the largest dyeing units.

Jeyavishnu Clothing, established in 2008, is part of the K.M. Knitwear group of companies and is a homegrown brand from Tirupur. They process over **50 tons of knitted fabrics per day**, along with 100,000 pieces of placement prints for cotton and activewear.



### Focus on Sustainability

As a water-intensive industry, sustainability was crucial to Jeyavishnu Clothing, because of which they had implemented comprehensive water conservation and energy-saving initiatives.

Their zero liquid discharge (ZLD) system and effluent treatment plant ensured responsible water management. The Tamil Nadu Government facilitated Jeyavishnu Clothing with the **"Green Award"** in 2018 recognizing their eco-friendly practices.



### Pumping Systems in ZLD Process

Pumping systems were crucial to their ZLD process, integral at every stage, right from wastewater collection to final treatment. These systems ensured efficient water treatment and recycling, supporting Jeyavishnu Clothing's commitment to sustainability and quality in textile production.

## The Situation

Jeyavishnu Clothing was planning for a new RO plant for their ZLD treatment with increased capacity in line with the increase in their production.

They were looking for energy-efficient pumping solutions for their end-to-end process in ZLD, i.e. raw effluent transfer to reject water RO treatment. The ROs were designed for a series of operations and the pumps were required to meet the high inlet and outlet operating pressures in consecutive stages with less energy consumption and operating costs.

## The Challenge

The conventional pumping systems used by Jeyavishnu Clothing for their RO processes were functional but not optimized for energy efficiency or smart operations. The plunger or piston-type pumps used in the process were problematic and required extensive maintenance every three months.

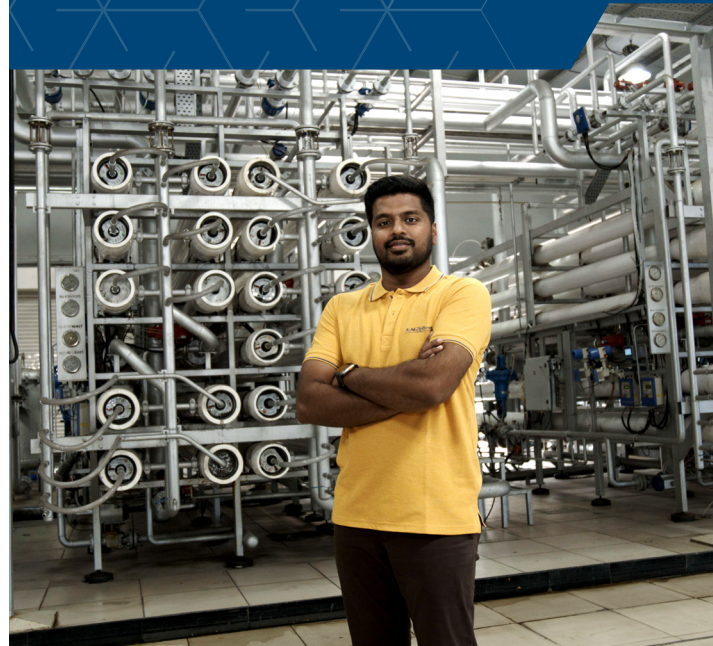
Due to high failure rates, Jeyavishnu Clothing faced frequent downtime, significantly impacting their operational efficiency.

## The Solution

Grundfos provided the technical expertise and full-line pumping solutions for their end-to-end process, from raw effluent to reject water treatment.

The comprehensive solutions offered by Grundfos were tailored to their needs, providing them with a wide range of solutions, from standard to high-pressure pumps.

Grundfos also delivered smart solutions like the MPC controller and CUE drives for better control and monitoring of their RO processes.



## What Grundfos Supplied



SL pumps and CUE Drives for raw effluent transfer.



NK pumps for the RO feed.



High-pressure CRN pump for the 1st stage in the RO process.



CRN booster pumps (with bearing flange and thicker sleeve PN40) for the 2nd stage in the RO process.



BM booster pumps for the 3rd and 4th stages in the RO process.



High-pressure BMS pump with MPC panel and VFD, and BM booster pump for the 5th stage in the RO process.

## THE OUTCOME

These features improved Jeyavishnu Clothing's productivity, reduced its operational costs, and allowed it to be energy efficient.

**Implementing Grundfos' solutions led to significant operational efficiencies and reduced energy consumption by up to 25%.**



We see Grundfos as a reliable solution partner helping us improve our efficiency and our goal to reduce the overall carbon footprint.



**K.S Vishnu Prabhu,**  
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