

Cognito Empowers a Leading Indonesian Manufacturer With Efficient, Leak-Free Resin Transfer

Our customer, a leading Indonesian manufacturer of high-quality decorative paints and coatings, faced persistent challenges in resin transfer operations. Resin, with a viscosity of above 1000 cP, requires stable, leak-free pumping to ensure consistent production quality.

As a critical part of the process, the resin transfer pump must operate reliably to prevent contamination, downtime, and safety risks in paint manufacturing. However, existing equipment struggled to meet these demands.

Discovering the Customer's Need

The customer relied on gear pumps, an industrial pump technology prone to higher energy consumption in demanding applications. These caused:

- High transfer time for viscous liquids
- High energy costs and unplanned downtime
- Absence of safety provisions, creating operational risks

The customer required a modern industrial pump solution that could deliver:

- Improve operational efficiency
- Lower energy consumption
- A leak-free pump design
- Reduced MTTR (Mean Time to Repair) and MTBF (Mean Time Between Failures)
- Enhanced safety features
- Lower maintenance costs



The Right Solution: Cognito's EODD Pump

Cognito's business development team identified these pain points and proposed an electrically operated double diaphragm (EODD) pump as the ideal replacement for the existing gear pumps. This leak-free and reliable pump solution delivered a transformative impact:

- Seal-less design ensuring leak-free and environmentally responsible operation
- Integrated leakage sensor to prevent liquid spillage and enhance safety
- Robust diaphragm for long-term, stable performance in resin transfer
- Reduced downtime due to minimal maintenance interventions
- Fit-and-forget reliability, eliminating frequent failures

Customer Experience & Results

Switching from gear pumps to Cognito's diaphragm pump technology delivered significant reliability and efficiency gains. The customer reported:

- Leak-free operation with zero contamination
- Substantial reduction in maintenance expenses
- Improved workplace safety and reduced downtime
- Enhanced pump efficiency with observed energy savings

By upgrading to a modern resin transfer pump, the customer significantly improved operational reliability and process consistency.



Competitive Analysis & Energy Consumption

Parameter	Gear Pump	Cognito EODD Pump
Size of Pump	51 mm (2")	51 mm (2")
Fluid Name	Resin	Resin
Flow Rate	150 LPM	150 LPM
Discharge Pressure	2–3 barg	2–3 barg
Viscosity	1000 cP	1000 cP
Solid Particle Size	Microns	Microns
Temperature	Ambient	Ambient
Discharge Head (Sp. Gr.)	1.1	1.1
Seal Failures	Frequent	None (seal-less design)
Leakage Risk	High	Eliminated (sensor + design)
Safety Features	Absent	Enhanced
Maintenance Frequency	High	Minimal
Operational Downtime	Frequent	Significantly reduced
Energy Efficiency	Moderate	Improved
Total Cost of Ownership	Very high	Lowest



Leak-Free Operation, Reduced Downtime, & Safer Resin Transfer

By replacing outdated gear pumps with Cognito's leak-free EODD pump, the customer achieved reliable, contamination-free resin transfer.

The upgraded industrial pump solution improved safety, reduced downtime, and lowered maintenance costs, while delivering long-term reliability and cost efficiency in a demanding paint manufacturing environment.

Before



After



Resin transfer process before and after implementing Cognito's leak-free EODD pump solution.

