

Cognito's Leak-Free Diaphragm Pump Improves Viscous Fluid Transfer in High-Volume Paint Operations

In the high-volume world of paint manufacturing, precision, reliability, and industrial pump safety are non-negotiable. A leading paint customer, operating across multiple countries, was facing persistent challenges with its existing paint transfer pumps.

Frequent breakdowns, leakage issues, and safety concerns were disrupting production and driving up operational costs.

Challenges in Final Paint Transfer

Final paint transfer is a complex application due to the fluid's high viscosity (1,000–2,000 CPS) and variable specific gravity (1.5–2.3). At a flow rate of 120 LPM at 5 BAR, the process demands pumps capable of handling thick, viscous fluids without compromising performance.

Any leakage or downtime directly impacts product quality, operational efficiency, and worker safety.

The customer had been relying on progressive cavity (single screw) pumps, but encountered these consistent issues:

- **Frequent stator and mechanical seal failures**, leading to unplanned shutdowns.
- **Leakage due to seal breakdowns**, creating safety hazards.
- **High maintenance time and costs**, with increased downtime.
- **No integrated safety mechanisms**, increasing operational risk.

The customer required a leak-free diaphragm pump with lower MTTR (mean time to repair) and higher MTBF (mean time between failures) to maintain smooth, uninterrupted paint transfer operations.

The Right Solution: Cognito's EODD Pump

After a detailed application review, the Cognito team recommended an electrically operated double diaphragm (EODD) pump, which is a low-maintenance industrial pump engineered for applications like viscous paint.

Key solution benefits included:

- **Rugged, energy-efficient design** for long-duty cycles and dry-run capability.
- **Sealless construction** with integrated leakage detection for leak-free performance.
- **Enhanced safety features**, including optional remote monitoring
- **Improved efficiency and energy savings**, supporting sustainability and cost goals.



Transformative Results

After implementing Cognito's viscous fluid transfer pump, the customer reported significant operational improvements:

- **Leak-free operation**, improving worker safety and eliminating spills.
- **Substantial reduction in downtime**, thanks to fewer failures and faster maintenance.
- **Zero spare part replacements in over a year**, highlighting long-term durability.
- **Improved efficiency and energy savings**, supporting sustainability and cost goals.

Performance, Safety, and Trust Delivered

Cognito's EODD pump has redefined final paint transfer for this global manufacturer, delivering a safe, leak-free, and low-maintenance pumping solution that enhances quality, reduces operational risk, and minimizes cost of ownership.

By providing the right solution for industrial paint transfer applications, Cognito continues to be a trusted partner for performance, efficiency, and safety in demanding environments.