

# Air Dryer Failure

## The Challenge

**Industry:** Manufacturing & Process Control

**Problem:** Recurring downtime and contamination issues caused by an air dryer failure during a hot and humid weather stretch.

- ⚠ The customer's compressed air system experienced significant failures during consecutive summers due to high humidity overwhelming their air dryer.
- ⚠ Wet air infiltrated the compressed air system, resulting in rust contamination and machine malfunctions.
- ⚠ The failures caused downtime, increased maintenance costs, and a need for system-wide filtration upgrades.

*"The unexpected air dryer failure during peak operations disrupted our workflow and escalated costs."*

## Customer Benefit

### Key benefits:

- ✓ **Improved Reliability:** Addressed dryer failure impacts with enhanced filtration and water separation.
- ✓ **Reduced Maintenance Costs:** Proactive filter replacement reduced unplanned expenses.
- ✓ **Minimized Contamination:** Multi-tier filtration and water separators effectively removed rust and moisture.
- ✓ **Future-Proofed System:** Transitioning to aluminum piping reduced long-term risks of oxidation and rust.

*"Thanks to the upgraded air prep system, we've significantly reduced maintenance demands and production disruptions."*



High water removal filter

## Donald Engineering Solution

**Product:** Comprehensive Air Filtration and Preparation System

**Implementation:** A multi-tiered approach to tackle contamination and restore the reliability of the compressed air system.

### Key Features of the solution:

- **High-Efficiency Filters:** Installed 5-micron filters at critical points in the distribution system, along with 0.3-micron filters at ground-level machine points.
- **Water Separators:** Deployed high-volume water separators at key locations around the system's "Halo" distribution network.
- **Proactive Maintenance Plan:** Established a monthly schedule for replacing filter elements to manage debris buildup and mitigate long-term contamination.
- **Customized Piping Recommendations:** Advised on transitioning from black steel to aluminum piping to reduce oxidation and rust-related issues.

*"By upgrading our filtration system and implementing proactive measures, we restored performance and minimized downtime."*

## Let's Solve Your Challenges!



At Donald Engineering, we specialize in optimizing compressed air systems to prevent downtime and contamination. If you're experiencing challenges with air preparation or dryer reliability, our team is ready to help.

### Ask Yourself:

- ❓ Is your compressed air system vulnerable to high humidity or contamination?
- ❓ Could proactive filtration upgrades improve your system's performance?

Contact us at [sales@donaldengineering.com](mailto:sales@donaldengineering.com) to schedule a **FREE** consultation with a Technical Sales Engineer!