SUPER-DRY
NO MORE WATER.

Case Study

Preventing Aerator Clogging and Cement Buildup with Dry Compressed Air

The Challenge

A leading ready-mix concrete producer was experiencing recurring issues with clogged aerators and material flow disruptions in their cement silos.

The problem originated from moisture in the compressed-air system, supplied by an Ingersoll Rand 15 HP compressor.

When humid air reached the aeration lines, two major problems occurred:

Clogging and Blockage of Aerators:

Moisture mixed with fine cement dust, forming a sticky paste that accumulated inside the aerator's porous elements (sintered bronze or polyethylene). This buildup restricted airflow, reducing the effectiveness of aeration and flow promotion in silos and hoppers. Over time, airflow became uneven, leading to poor discharge or complete flow stoppage.

The plant needed a reliable, low-maintenance air-drying solution to keep aerators free-flowing and maintain smooth cement discharge.

The Super-Dry Solution

Super-Dry recommended a three-stage moisture-control setup installed downstream of the Ingersoll Rand compressor:

- FSD Water Separator – removes bulk liquid water and condensate.
- SAF Filter – captures fine oil aerosols and particulates.
- D2 Desiccant Air Dryer – absorbs remaining humidity, ensuring a consistently low dew point.

This configuration guaranteed that only clean, dry air reached the silo aerators.

The compact design, simple cartridge replacement, and no-power operation made it ideal for rugged cement-plant environments.

Results

No More Aerator Blockages
Continuous, even airflow through aerators with no paste or clog formation.

Improved Silo Discharge
Cement flowed freely, eliminating downtime caused by poor material flow.

Reduced Cleaning and Maintenance Costs
No more hardened deposits or manual silo cleaning — lowering maintenance time and cost.

Improved Process Efficiency
Stable, predictable discharge improved batching reliability and overall productivity.

Outcome Summary

The Super-Dry system provided a simple, effective, and long-term solution to moisture-related flow problems.
By eliminating water at every stage — separation, filtration, and drying — the plant achieved uninterrupted operation, lower maintenance, and consistent product quality.

Product Highlight

Compressor Used: Ingersoll Rand 15 HP

Installed System: FSD Water Separator → SAF Filter → D2 Desiccant Air Dryer

Application: Silo aeration air supply

Result: Reliable, moisture-free air ensuring clog-free aeration and smooth material discharge

Client Description

A reputable ready-mix concrete producer serving the Atlantic Canada region, providing high-quality concrete for both residential and commercial construction.
The company operates modern batching facilities and a delivery fleet focused on mix consistency, equipment reliability, and sustainable practices.

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