

CASE STUDIES

Precast Concrete: WAM DustShake R02 Installation

Baghouse replacement eliminates dust emissions, neighborhood complaints, and costly material loss.

Introduction

This job story highlights how upgrading outdated dust collection equipment can drastically improve efficiency, eliminate waste, and, where necessary, improve or strengthen community relations. At a New England precast facility, the plant's old baghouse was failing—rusted, unreliable, and riddled with holes and missing bags. During every silo filling operation, cement dust would escape into the air, creating environmental concerns and drawing complaints from nearby residents.



Problem in more detail

The deteriorating baghouse no longer provided effective dust control. As trucks pumped off loads of cement powder—often 33 tons at a time—a steady stream of dust would seep out for 45–75 minutes straight. This not only caused material loss (the exact tonnage unknown but significant), but also posed a nuisance and health concern for the surrounding residential community. The issue created multiple headaches:

- Production losses as valuable cement powder escaped into the atmosphere.
- Environmental and safety concerns with sustained airborne dust.
- Friction with local residents due to visible plumes of dust.

Competing vendors had quoted “old school” baghouses at more than \$20,000, leaving the customer concerned about both upfront costs and ongoing maintenance.

Solution

An AIRMATIC Application Specialist recommended the WAM DustShake R02, an electric-powered dust collector ideal for cold-weather applications where compressed air units would typically be

CASE STUDIES

prone to freezing. Running only on standard 110VAC power, the DustShake offered a low-maintenance, reliable solution without the need for an additional compressor.

The installation included the WAM DustShake, flange, and a spare set of filters—all supplied for under \$4,000. AIRMATIC provided detailed instructions on removing the old unit, prepping the silo, and completing the installation with minimal downtime.



While the first truck-fill of the silo produced minor leakage (expected as initial dust sealed gaps and crevices), subsequent fills operated flawlessly—zero dust emissions and no material loss.

Conclusion

The WAM DustShake R02 transformed the precaster's operations. Material flow losses were eliminated, environmental compliance improved, and neighborhood complaints disappeared. The customer was particularly impressed with the unit's quiet operation—so quiet that it can be difficult to tell if it is running. The results speak for themselves:

- A modern dust collector solution for less than 20% of the cost of traditional baghouses.
- Seamless installation guided by AIRMATIC's technical support.
- Reliable cold-weather performance without the need for compressed air.

The facility's Plant Manager summed it up best: "Even if this thing was double the price, I still think this would be a better investment than dealing with the air in the winter. As of right now, I'm extremely happy with it. I cannot complain at all."