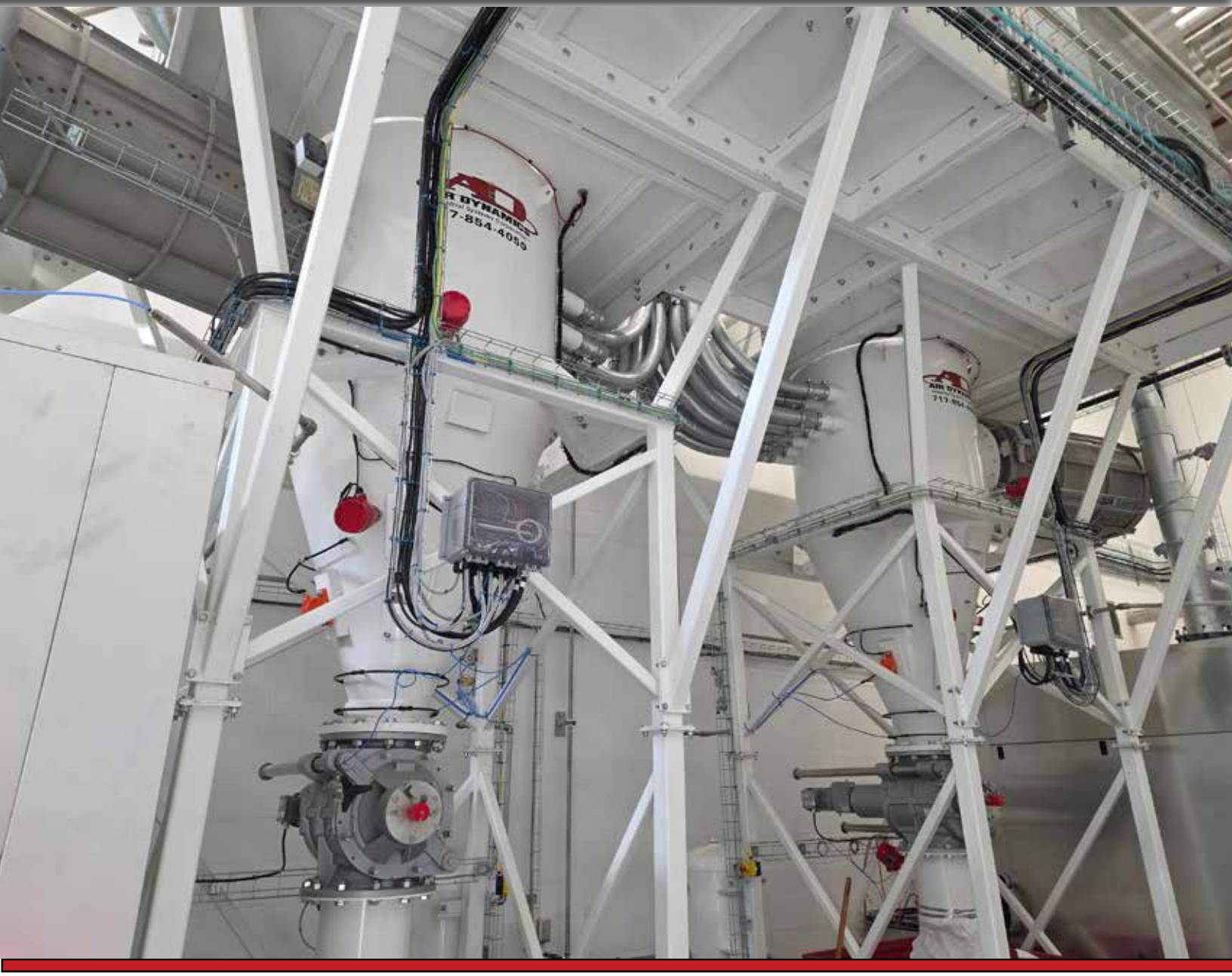
AIR DYNAMICS
Industrial Systems Corporation™

CASE STUDY

Central Vacuum System for a State-of-the-Art Pet Food Facility



Air Dynamics Industrial Systems Corporation

Serving the industrial manufacturing industry since 1991.

CASE STUDY

Scaling Sanitation: Engineering a Central Vacuum System for a 450,000-ft² State-of-the-Art Pet Food Facility

Background

Air Dynamics partnered with a global premium pet food manufacturer to deploy a large-scale industrial central vacuum system as part of a global sanitation standardization initiative. Building on the success of a pilot project for the customer's Tennessee site, Air Dynamics engineered and implemented a second system in Ohio – a scalable Dual CV-48-21 Industrial Central Vacuum System designed to support housekeeping, dust mitigation, and sanitation requirements at one of the most advanced pet food production facilities in the world.

The second project in Ohio expanded the standardized design to a scope of work approximately twice the size of the pilot site in Tennessee. This site was nearly four times larger than a typical industrial central vacuum installation. Through design-build engineering, system integration, and commissioning support, Air Dynamics delivered a centralized sanitation solution capable of maintaining consistent performance, supporting strict hygienic design standards, and improving operational efficiency across the facility.

QUICK PROJECT SUMMARY BOX

Industry: Pet Food Manufacturing
Facility Size: 450,000 ft²
Number of Production Lines: 5
Number of floors: 11 (Raw Material Zone) | 8 (Finished Goods Zone)
Vacuum inlets: 120: 73 (Raw Material Zone) | 47 (Finished Goods Zone)
System Type: Dual CV-48-21 Industrial Central Vacuum
Simultaneous Users: 12 total – 6 per system @2" ID Hoses
Site Elevation: 1,015 feet above sea level
Energy Conservation Mode: 50%+ Savings

KEY ENGINEERING CHALLENGES

Scaling standardized vacuum architecture to a 450,000 ft² facility
Expanding cleaning coverage from 65 to 120 vacuum inlets
Maintaining conveying velocity across long multi-level tubing runs
Integrating the system within limited space and active forklift traffic

Air Dynamics Industrial Systems Corp.
180 Roosevelt Ave., York, PA 17401

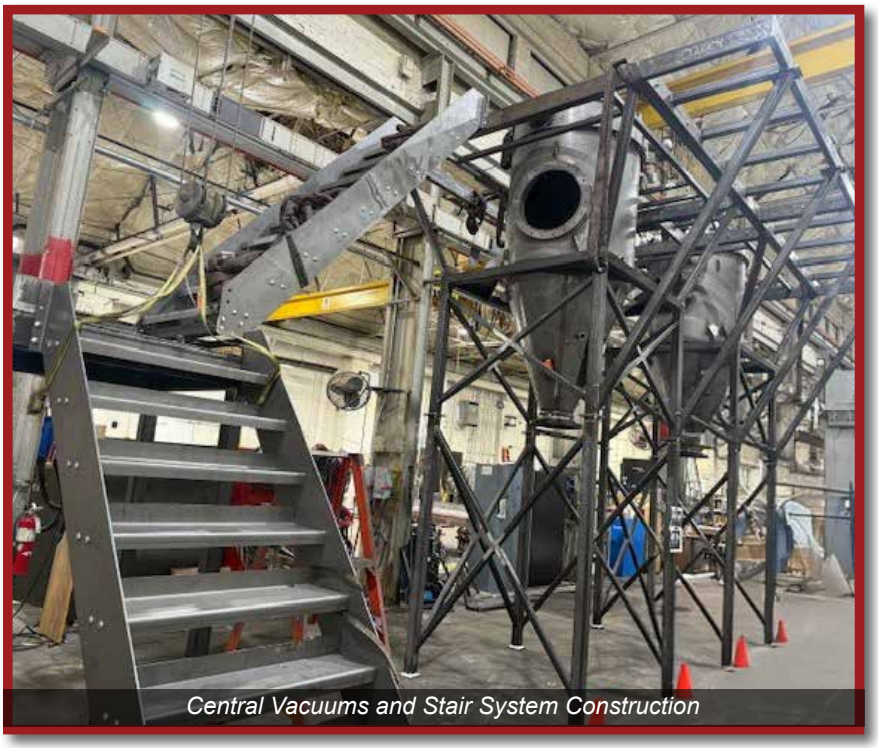
mysolution@airdynamics.net | www.airdynamics.net
P: (717) 854-4050 | F: 717-854-4020

Project Overiew

The global pet food manufacturer's facility was developed under pseudo-greenfield conditions, with construction and commissioning occurring in phases as production capacity expanded.

In this dynamic environment, maintaining strict sanitation and dust control was critical to ensuring efficient operations and protecting product quality. Dust accumulation, waste material, and housekeeping challenges contribute to microbial contamination events—commonly referred to as microhits—that have the potential to disrupt batch production and impact throughput. The primary objective for this project was to mitigate environmental hazards while providing reliable solutions for housekeeping, dust capture, and waste removal throughout the facility.

Following the success of the initial pilot project, Air Dynamics deployed a Dual CV-48-21 Industrial Central Vacuum System built on the same proven architecture. Working closely with the customer and applying lessons learned from the first installation, Air Dynamics expanded its clean design approach and applied continuous improvement metrics to further refine the engineered solution. Intentional standardization supported scalability, positioning the new mega-facility as a proving ground for Air Dynamics' design philosophy.



Central Vacuums and Stair System Construction

Paint and clear coat applied.

The system was engineered in accordance with ACGIH (American Conference of Governmental Industrial Hygienists) design principles while incorporating key insights from the first project. The resulting solution established a scalable sanitation platform capable of supporting the facility's expanded scope. It delivers consistent vacuum performance while maintaining the hygienic design standards required for modern food manufacturing environments.

Adhering to ACGIH principles help ensure that airflow, capture efficiency, and system balance are properly engineered to control airborne contaminants at the source. This approach not only improves workplace hygiene and employee safety but also supports regulatory compliance and long-term system reliability, helping facilities maintain consistent performance as operational demands grow.

Air Dynamics Industrial Systems Corp.
180 Roosevelt Ave., York, PA 17401

mysolution@airdynamics.net | www.airdynamics.net
P: (717) 854-4050 | F: 717-854-4020

The Challenge

Size and Location Adjustments

The customer is a global premium pet food manufacturer and embarked on a **global standardization initiative** to develop one of the largest and most advanced pet food production facilities of its kind. The facility followed a phased commissioning strategy and operated under strict sanitation and product quality standards. Maintaining exceptional housekeeping and dust mitigation throughout the plant was critical to preventing contamination, reducing environmental hazards, and ensuring uninterrupted production.

The new facility presented a unique opportunity to validate the standardized design approach at a much larger scale. The project required thoughtful engineering adjustments to maintain airflow performance, system integration, and sanitary design while supporting the manufacturer's global production standards.

For comparison, the pilot facility accommodated **65 total vacuum inlets** connected to the central vacuum system, whereas the new facility required **120 vacuum inlets**. The tower structures were similar in vertical scale, consisting of **11 levels** in the raw materials zone and **8 levels** on the finished goods zone. However, the scope of work for the square footage on each level of the second facility was approximately **double that of the first**. As a result, new system calculations were required to maintain proper conveying velocity for the high-pressure, low-volume cleaning system without compromising performance.

Air Dynamics developed three key solutions to address this challenge.

First, the vacuum pump capacity was increased to support the additional number of vacuum inlets. This ensured proper material conveyance through the tubing network back to the AMS (Air and Material Separator) while preventing microhits caused by insufficient transport velocity.

Vacuum pump enclosed in steel cabinet for clearn design

Second, the tubing network incorporated long-radius elbows to reduce pressure losses and improve airflow efficiency throughout the system.

Long-radius elbows show 10 and eight lines per CV.

Third, indoor filtered energy recovery was applied to offset the utility impact associated with a larger system.

Each of these design decisions will be explained in detail throughout this case study.

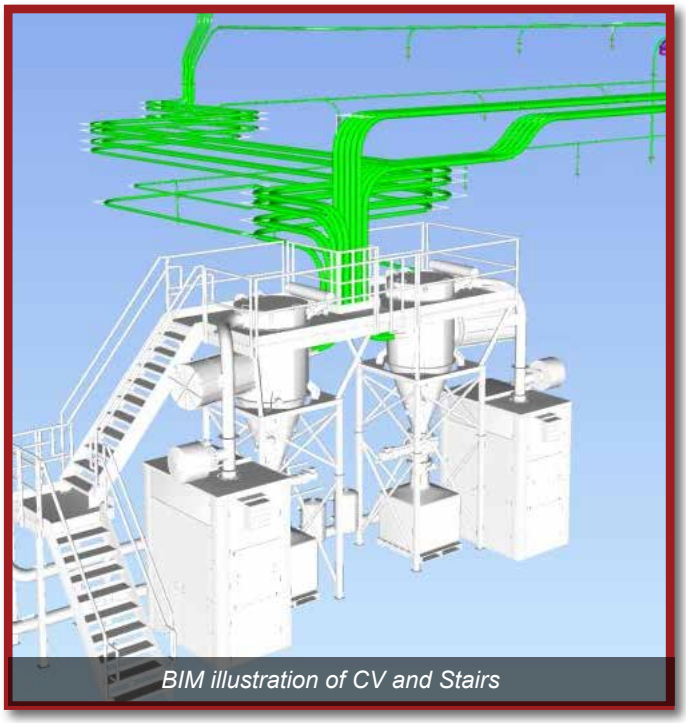
System integration presented another challenge.
The selected installation area offered limited available space and experienced regular forklift traffic. With minimal modifications, however, the standard platform design accommodated the space constraints. A turn was incorporated into the stair design to strengthen and reduce the overall footprint, and the stairs were engineered so that no component extended beyond the

furthest point of the system footprint into traffic. All engineering modifications were executed with hygienic design principles in mind, minimizing surfaces where dirt or bacteria could accumulate and ensuring smooth, cleanable surfaces that reduce the risk of microhits.

The standard Air Dynamics design for the AMS system also allows for offsetting either the dirty air or clean air sections to simplify system integration. This pre-engineered flexibility was utilized on the project to adjust the system footprint, accommodating indoor explosion vents while allowing the tubing network to wrap around the frame with tight clearances. This configuration minimized the overall footprint while maintaining safe and compliant system operation.

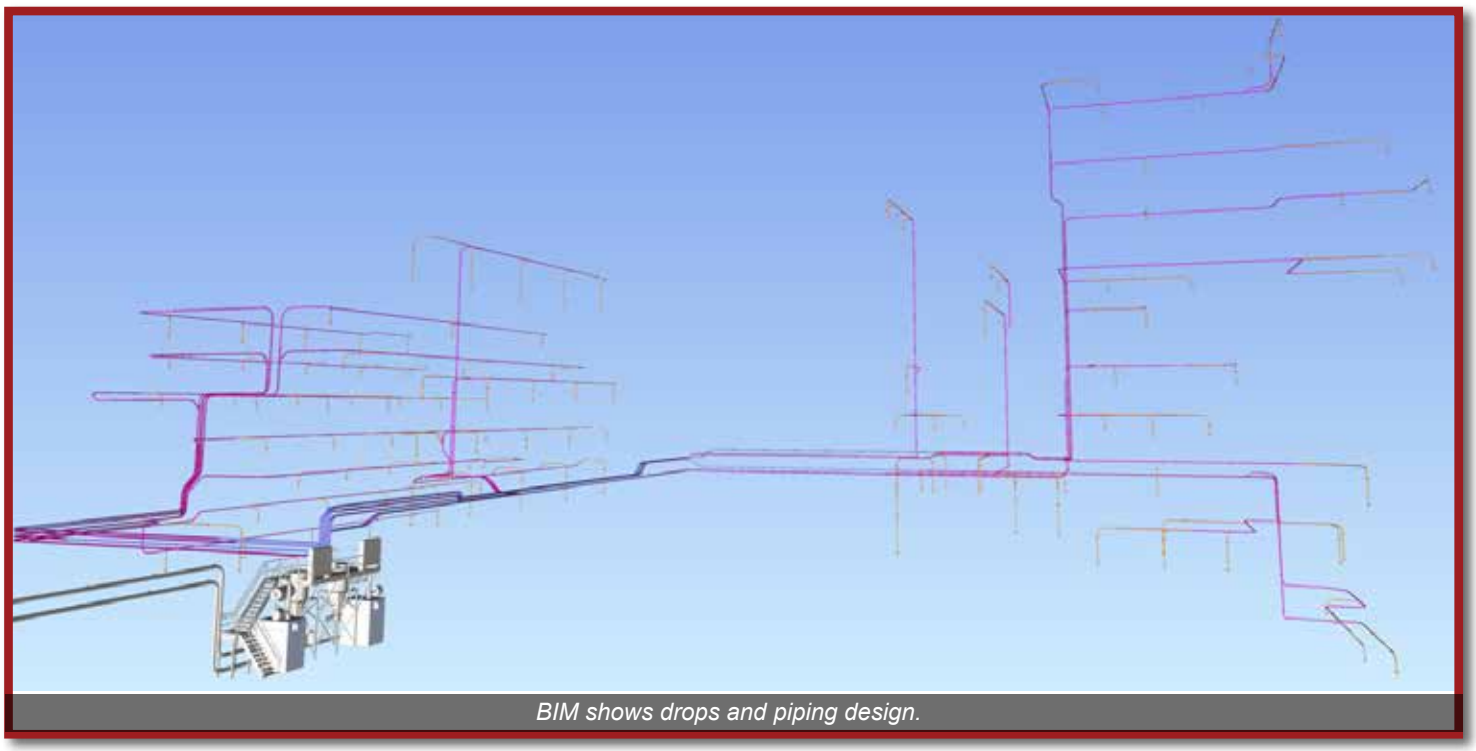
Finally, the scale of the facility and the increased number of clean-out locations required an expansion of the tubing network. The number of tubing mains increased from 10 in the pilot facility to 18 in the new installation. Because Air Dynamics design-build central vacuum systems are engineered with expansion capacity in mind, this increase remained within standard design parameters. Two additional tubing inlets were incorporated into each central vacuum system to provide the facility with greater cleaning flexibility while also simplifying coordination within the Building Information Modeling (BIM) process.

A key risk in large-scale food production environments is the occurrence of microhits—localized microbial contamination that can compromise batch integrity and lead to costly shutdowns, sanitation procedures, or product disposal. Effective removal of dust, fine particulates, and residual product throughout the facility is therefore a critical operational



BIM illustration of CV and Stairs

requirement. In tightly controlled manufacturing environments, consistent sanitation and dust management mitigate the presence and migration of microorganisms between processing areas. Reducing these risks protects product quality, supports regulatory compliance, and helps facilities avoid unplanned downtime that can disrupt throughput, supply commitments, and overall operational reliability.



BIM shows drops and piping design.

Air Dynamics Industrial Systems Corp.
180 Roosevelt Ave., York, PA 17401

mysolution@airdynamics.net | www.airdynamics.net
P: (717) 854-4050 | F: 717-854-4020

The Solution

Central Vacuum Design

The sanitation system utilizes dual-zone central vacuum design to support independent sanitation operations across the facility's raw materials and finished goods areas. Each zone operates as a dedicated system capable of supporting up to six simultaneous users while maintaining proper conveying velocity throughout the tubing network.

This design allows sanitation teams to operate independently across multiple areas of the facility without impacting system performance.

Dual CV-48-21 Indoor Combustible Dust System

Air Dynamics engineered and manufactured a Dual CV-48-21 Industrial Central Vacuum system designed specifically for combustible dust applications in food manufacturing environments.

System capabilities include:
• Design-build engineering with in-house manufacturing
• Support for 6 simultaneous users with 2 in. ID cuffs and 25 ft operator hoses
• Support for 12 simultaneous users with 1.5 in. ID cuffs and 25 ft operator hoses
• Top-loading filter design that eliminates confined space entry during filter replacement and reduces maintenance time
• Maximum vacuum level of 13 in. Hg
• 3/16 in. heavy-duty tank construction
• Pulse-jet filter cleaning system
• 525 ft² filter cleaning surface area
• Nominal airflow of 2,750 SCFM
• Positive displacement pump with automated shutdown protection
• Energy Control Valve for system efficiency
• 12 in. rotary valve discharge system
• Compressed air monitoring network with accumulator tank
• Indoor flameless explosion vent
• Exhauster safety filter
• Three high-bin level detectors providing layered operational protection
• HMI/PLC control system with touchscreen interface and HOA controls
• Extensive safety controls

Stairs and central vacuums completed at client site.

Custom Integration Platform and Stair System

Limited installation space and forklift traffic required a compact integration platform that maintained safe maintenance access while minimizing the equipment footprint.

Air Dynamics engineered and manufactured a custom Clean Design platform system that included:

- Dual maintenance platform configuration
- Stainless steel OSHA-compliant safety handrails
- Clean Design staircase with integrated platform
- 3 ft clearance at the control panel for operator access
- Minimal floor footprint that preserves unobstructed forklift traffic

Air Dynamics Industrial Systems Corp.
180 Roosevelt Ave., York, PA 17401

mysolution@airdynamics.net | www.airdynamics.net
P: (717) 854-4050 | F: 717-854-4020

Tubing Network Engineering

Air Dynamics collaborated closely with the customer's BIM contractor to ensure proper airflow and material conveyance across the facility.

Engineering support included:

- Tubing network design consultation
- Tubing diameter calculations for proper conveying velocity
- Hanger location recommendations
- Iterative drawing reviews for constructability and performance
- Weekly coordination meetings with the BIM provider
- Air Dynamics also produced the full Bill of Materials (BOM) for the tubing network, procured the required tubing and connectors, and coordinated shipment to the facility.

Energy-Efficient Design

A major design objective involved minimizing utility consumption while maintaining sanitation performance. To accomplish this goal, Air Dynamics engineered three operating states that allow the system to automatically match energy consumption with facility demand.

State 1 — Vacuum Stop

In this state, the system is on and ready to run, but no equipment is running. The system is in "idle" state. Because the system utilizes an HMI interface, operators can start or stop the vacuum directly from the touchscreen controls.

Remote HMI stations located throughout the facility allow operators to start or stop the vacuum from any level. This feature allows personnel to confirm system status before initiating cleaning activity while eliminating the need for the vacuum to run continuously. The ability to remotely control system operation significantly reduces unnecessary energy consumption.

State 2 — Vacuum Start: Energy Conserving Mode

When the vacuum system is running, but no operators are actively using the system, the vacuum enters the Energy Conserving Mode. In this mode the vacuum maintains operational readiness while reducing energy demand.
This mode delivers more than 50 percent energy savings when compared with full system operation. The feature provides substantial cost reduction for facilities that prefer to keep the vacuum system available throughout production shifts. The mode also prevents unnecessary energy consumption when an operator forgets to shut down the system after use.

State 3 — Vacuum Start: Normal Operation

Normal operation occurs when the vacuum is on and running and an operator opens a cleaning port anywhere within the tubing network. During this state the vacuum system automatically increases power output to support sanitation activity.

Long radius elbows and trunk main.

Through IntelliAccess™ control capabilities, the facility may also configure variable energy states that match specific cleaning demands or operational conditions.

Measured Energy Performance

Air Dynamics collected operational data to quantify the energy savings produced by the Energy Conserving Mode. Power consumption during full system operation served as the baseline variable, while Energy Conserving Mode represented the comparative operating condition.

Measured results demonstrated significant power reduction during idle operation.

- Energy usage during full operation: 61.4 amps
- Energy usage in Energy Conserving Mode: 29 amps
- Power reduction: 53 percent

Because sanitation schedules vary by facility, the resulting cost savings depend on site-specific operating patterns. Facilities can estimate energy savings by comparing the duration of Energy Conserving Mode with the duration of full operational demand.

Air Dynamics Industrial Systems Corp.
180 Roosevelt Ave., York, PA 17401

AIR DYNAMICS
Industrial Systems Corporation

mysolution@airdynamics.net | www.airdynamics.net
P: (717) 854-4050 | F: 717-854-4020

Operational Impact

The central vacuum system also produced measurable improvements in housekeeping efficiency.

Average reduction in housekeeping labor time: 60–75%.

The facility can also do an independent analysis using IntelliAccess™ sanitation reporting data. The system records cleaning duration at each port location and tracks bag removal intervals. These data allow facility managers to compare actual cleaning time against traditional housekeeping methods such as push brooms and manual debris collection.

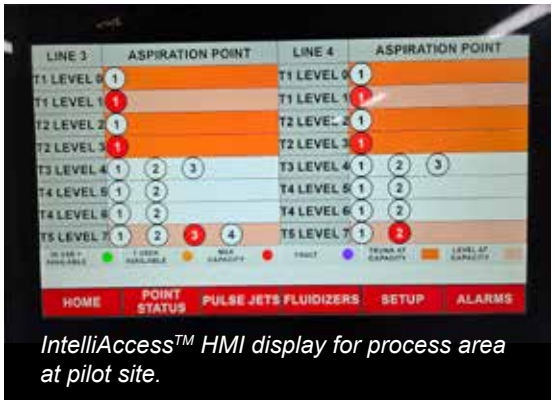
Sanitation reports export as CSV files, which allows facilities to develop custom dashboards that analyze sanitation performance and identify areas requiring operational improvement.

IntelliAccess™ User Control System

The IntelliAccess™ control system provided operator-level system control and monitoring capabilities throughout the facility.

Key features included:

- Remote HMI operator stations
- Remote system start and shutdown capability
- Operator controls intelligence
- Sanitation reporting functionality
- Clean Design Z-bracket mounting system



IntelliAccess™ HMI display for process area at pilot site.

Evolved IntelliAccess™ HMI display for process area at current site.

Air Dynamics' electrical engineer tests panel IO safety features.

Operator Tool Hoses and Cleaning Kits (Static Conductive)

To support sanitation performance, Air Dynamics manufactured and supplied static-conductive operator cleaning kits.

Each kit included:

- Clear static-conductive operator hoses with non-marking cuffs
- Crevice tool
- Dust brush with adapter
- Double-bend ergonomic wand with floor squeegee

Clean Design 5S operator tool housings with Z-bracket mounts provided organized storage at designated sanitation locations.

BIM Design and Coordination

The facility subcontracted BIM design to a third-party engineering firm located near the project site. This proximity allowed rapid site access when design clarification required field verification.

Air Dynamics remained responsible for tubing network engineering and performance validation. Attention focused on maintaining calculated conveying velocity from the most distant vacuum inlets to the Air and Material Separator (AMS), even under maximum operating conditions with six simultaneous users.

Weekly coordination, hosted by the facilities senior project manager, maintained alignment among all project stakeholders and allowed rapid resolution of design questions.

Following each BIM revision, Air Dynamics reviewed tubing layouts and verified:

- Tubing diameter selection
- Hanger placement
- Conveying velocity calculations

Air Dynamics Industrial Systems Corp.
180 Roosevelt Ave., York, PA 17401

mysolution@airdynamics.net | www.airdynamics.net
P: (717) 854-4050 | F: 717-854-4020

System design parameters included:

- Longest tubing run: **~540 ft**
- Maximum elevation difference: **~145 ft**

Following project completion, both project teams identified an opportunity for continuous improvement. Future projects will place BIM coordination directly under Air Dynamics engineering oversight to streamline decision-making and improve design efficiency.

Air Dynamics tubing network architecture **allows scalable system expansion without performance degradation**, providing a significant advantage over conventional industrial vacuum installations.

Sanitation Design & Mitigating Microhits

When engineering a sanitation solution for a food processing facility, one of the most critical risks involves the occurrence of **microhits**. Microhits refer to localized microbial contamination within the process environment that can compromise batch integrity and lead to costly product loss. Preventing these events requires strict sanitation standards and equipment designed to eliminate locations where residue, dust, or microorganisms could accumulate.

A central requirement for achieving this objective involves maintaining sufficient conveying velocity throughout the vacuum network. Proper airflow ensures that any material collected at a cleaning location travels the full distance through the tubing network to the Air and Material Separator (AMS) and into waste containment without settling within the tubing system.

Global Pet Food Manufacturing Plant

To support this requirement, Air Dynamics increased the capacity of the system exhauster and incorporated long-radius elbows throughout the tubing network. A larger pump capacity improved the system's ability to convey material from the most distant vacuum inlets back to the AMS within seconds. Long-radius elbows reduced pressure losses at directional changes and preserved conveying velocity, preventing conditions that could allow material to accumulate or stall within the network.

Additional mitigation strategies focused on hygienic **Clean Design** principles throughout the equipment platform. These features included curved kickplates, integrated Z-shaped stairs supported by a single floor connection, stainless steel safety handrails, and the elimination of bar grating or expanded metal surfaces that can trap debris. Walking surfaces were designed with sufficient width and smooth geometry to allow complete cleaning without hidden corners or debris collection points.

The tubing network also incorporated sanitary stainless steel hangers secured with sanitary clamps. This approach minimized locations where dust, debris, or microbial growth could accumulate within the system infrastructure. Through these hygienic design strategies, the system eliminates inaccessible surfaces and ensures that any contamination risk remains visible and easily removable during routine sanitation procedures.

Operator tools and training also played an important role in reducing microhit risk. Air Dynamics supplied **2-inch ID aluminum operator tools**, which improve airflow performance while reducing operator fatigue during extended cleaning operations. One primary cleaning attachment included an ergonomic double-bend wand paired with a floor tool designed for contamination-free waste removal.

Traditional bristle brushes were intentionally removed from the floor tools because trapped product residue within the bristles can promote microbial growth. These brushes were replaced with **sanitary floor squeegees**, which allow complete cleaning and easy sanitation after use. Even the most carefully engineered system cannot achieve its intended performance without proper operator understanding. For this reason, the facility selected key sanitation personnel to participate in structured training sessions led by Air Dynamics. The training included recorded instruction, an open question-and-answer session, and hands-on system operation to reinforce proper cleaning procedures. This process helped establish clear standard operating procedures, labeling practices, and sanitation protocols that support consistent system use across the facility.

Central Vacuum Systems and platform prior to tarping. All systems are preassembled and wired to expedite installation.

Shipping

Logistics for a Pseudo-Greenfield Installation

Large pseudo-greenfield projects often present significant logistical challenges. With multiple vendors shipping equipment to a single site, even well-developed staging plans can become difficult to maintain once deliveries begin to overlap. Air Dynamics anticipated these conditions and implemented several strategies designed to simplify installation and reduce the time required for system assembly.

Several practical measures supported efficient identification and installation of system components:

1. Pre-assembly at the Air Dynamics facility
As much assembly work as possible was completed in-house prior to shipment. This effort included pre-wiring, assembly, and completion of finished goods assemblies. Pre-assembly significantly reduced field installation time.

2. Installation drawings attached to equipment
Each major component shipped with a corresponding installation drawing attached directly to the equipment. The drawing highlighted the specific component location within the system layout. With six trucks of equipment arriving at the site, excluding tubing, this visual reference allowed installers to quickly identify the destination for each component.

3. Independent packing slips for each box
Every box included its own packing slip identifying the contents inside the box rather than the pallet. This practice ensured that even if packaging became separated during staging, each component could still be identified and placed correctly.

4. System zone identification
Because the project involved twin vacuum systems, each packing slip included a zone designation identifying which system required the component. This approach reduced installation uncertainty and shortened installation timelines.

5. High-visibility packaging identification
All boxes associated with the central vacuum system were labeled externally with a bright green packing slip. This visual indicator allowed installers to quickly identify system components within crowded staging areas.

6. Truck-level shipment tracking
Each truck shipment was documented with detailed records identifying which components shipped on which date. This tracking allowed rapid reconciliation if any items became misplaced and enabled quick response when replacement parts were required.

These straightforward logistical practices allowed installation teams to focus on system assembly rather than inventory management. As a result, mechanical installation of the AMS, platform, exhausters, and clean-air sections was completed within one week without crane assistance.

Commissioning

IntelliAccess™ System Adaptation
The large facility footprint and complex tubing network created an unexpected challenge for the IntelliAccess™ user management system.

In typical installations, IntelliAccess™ manages operator access - based on facility levels - because tubing networks often serve individual floors. In this project, however, each level covered significantly larger square footage. Multiple trunk lines were routed across each level to maintain airflow velocity and control system costs.

Because of this configuration, level-based usage control would have limited system performance. Restricting system access - by level - may have prevented operators from using trunk lines that were otherwise available.

Therefore, Air Dynamics and the facility modified the IntelliAccess™ control strategy to manage system usage by **trunk line rather than by facility level**. This approach allowed the system to operate at full capacity while still maintaining controlled operator access.

Operators retained full visibility of system status through IntelliAccess™ automation features. Visual indicators at each cleaning port and level-mounted HMI screens provided clear information regarding system usage and availability without requiring additional operator intervention.

Tubing and Electrical Commissioning

During system commissioning, Air Dynamics performed **ultrasonic leak detection** throughout the tubing network. Leak detection is critical because even small leaks accumulate and reduce the system's ability to support multiple simultaneous users.

Initial testing revealed sufficient cumulative leakage to reduce system performance to approximately four simultaneous users and one user per trunk. After identifying and correcting the leaks throughout the network, the facility was able to safely achieve the full system capability of **six simultaneous users and two users per trunk**.

The installers demonstrated excellent workmanship throughout the tubing installation. Large industrial tubing networks frequently contain numerous leaks when first commissioned due not being able to confirm quality until the vacuum is on. In this case, only minimal leakage required correction, and most issues were resolved quickly during the commissioning period.

Another challenge involved the structural support of some of the tubing drops. **Clean Design** principles prefer structural support from ceilings or walls rather than from the floor. In areas with long vertical drops, additional horizontal bracing became necessary. Air Dynamics specified locations for the hangers and the facility designed and installed the hanger structures according to those specifications.These reinforcements ensure long-term stability of the tubing network while minimizing the risk of leaks caused by operator use.

Commissioning also required extensive electrical integration for the IntelliAccess™ network. The large facility footprint required significant cable runs throughout the building. Long cable distances can introduce voltage loss that affects control system performance.

Air Dynamics identified minor voltage losses within the initial wiring configuration. In collaboration with the electrical installation team, the routing and power distribution strategy was revised to restore IntelliAccess™ network performance. Additional adjustments improved system reliability and clarified the routing logic implemented by the electrical contractors. Careful planning and coordinated installation ensured stable network operation throughout the system.

Training

To ensure long-term system performance and operator safety, Air Dynamics implemented a structured three-stage training program for facility personnel.

1. **Comprehensive maintenance training led by Air Dynamics**
2. **Rotary valve maintenance training provided by the equipment vendor**
3. **Recorded and hands-on operator training conducted by Air Dynamics**

These programs involved key personnel responsible for daily operation and maintenance of the central vacuum system.

Training sessions covered:
- System theory of operation
- Component identification and maintenance procedures
- IntelliAccess™ operation and user controls
- Proper cleaning techniques and sanitation practices
- Operational best practices and prohibited actions
- Risk awareness and troubleshooting procedures

Each session included dedicated time for questions and hands-on interaction with the system to ensure operators developed confidence in daily system use.

This structured training approach established clear standard operating procedures, reinforced sanitation practices, and ensured the facility could fully utilize the capabilities of the central vacuum system.

Results

The system validation demonstrated that the scaled central vacuum design could maintain full performance across the larger facility. The engineering objective required maintaining system performance while supporting a significantly larger facility footprint.

System validation occurred under intentionally demanding operating conditions. Stress testing simulated a worst-case scenario by operating the maximum number of simultaneous users while minimizing available vacuum assistance. These conditions ensured the system could maintain proper conveying velocity even during peak sanitation activity.

Within the Raw Materials area, the system exceeded the required performance metrics by reliably conveying fine particulate material through the full tubing network without performance degradation.

The Finished Goods area demonstrated even stronger performance due to shorter tubing distances when compared with the raw materials zone. Under the same validation conditions, all conveyed material traveled immediately back to the receiver without accumulation within the network. With facility approval, the system successfully completed the validation process.

Key Project Metrics

- Facility Size: 450,000 ft²
- Vacuum inlets: 120 total
- Longest Tubing Run: ~540 ft
- Maximum Elevation Difference: ~145 ft
- Simultaneous Users: 12 total (6 per zone)
- Energy Reduction in Idle Mode: 53%
- Housekeeping Labor Reduction: 60–75%

Services Provided

Air Dynamics delivered a full design-build engineering scope, including:

- Design-build engineering & manufacturing
- Structural design & manufacturing
- System integration
- User control and information feedback system (IntelliAccess™)
- Operator tool kits design
- Operator tool housings design & manufacturing
- Tubing network design, consultation and coordination
- Commissioning and operator training

Conclusion

The project demonstrates how scalable engineering, hygienic design, and intelligent system integration support sanitation performance within large-scale food manufacturing environments.

By expanding the successful pilot system and incorporating improvements in airflow performance, sanitary design, and energy efficiency, Air Dynamics delivered a central vacuum system capable of supporting one of the most advanced pet food production facilities in the world and validated the central vacuum system design as a scalable standard for future facilities. The project reinforces Air Dynamics' role as an engineering partner for complex food manufacturing environments requiring strict sanitation standards and microbial contamination prevention.

Air Dynamics Industrial Systems Corp.
180 Roosevelt Ave., York, PA 17401

AIR DYNAMICS
Industrial Systems Corporation

mysolution@airdynamics.net | www.airdynamics.net
P: (717) 854-4050 | F: 717-854-4020