

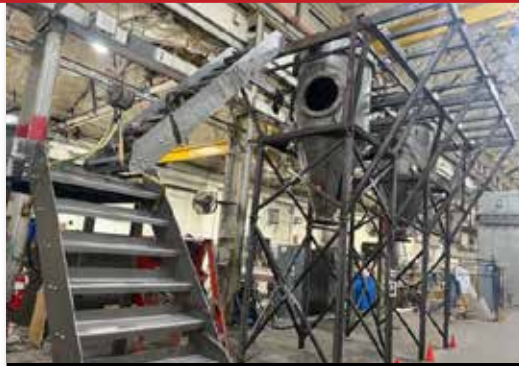


Air Dynamics Industrial Systems Corporation

Serving the industrial manufacturing industry since 1991.



Engineered Design



Fabrication & Testing



Paint & Clear Coat



Loading & Shipping



Installation Support



Start-Up & Commissioning

We deliver complete air filtration solutions that maintain clean, controlled environments across all industrial manufacturing sectors—effectively capturing fines, shavings, vapors, and airborne debris.

CAPABILITIES BROCHURE



Our Mission

To deliver scientific-driven solutions to resolve the toughest air, gas, and particle control challenges.

Our solutions result in premier, innovative products that create safe, efficient, and productive work environments.



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Tailored Solutions

We protect assets, employees, and processes by cleaning the air, controlling combustible dust, separating grease vapors, and filtering debris.

We solve complex problems where air, particles, materials, gases, temperature, and humidity meet. We have been Advancing the State-of-the-Art™ in everything we do, since 1991.

Our solutions are:

- **Engineered-to-Order (ETO):** Tailored to your facility, your process, and your goals.
- **Fully Integrated:** Designed for seamless operation within your production environment.
- **Engineered with Precision:** Using 3D CAD, digital prototyping, and CFD modeling.
- **Built to Last:** Manufactured in our 25,000 sq ft facility in York, PA.



Capabilities At-A-Glance

- **Industrial Ventilation Systems:**
Designed to meet or exceed ACGIH standards for safe air handling and contaminant removal.
- **Dust Collection & Air Scrubbing:**
Capturing airborne particles and contaminants to keep your environment safe.
- **Central & Portable Vacuum Systems:**
High-performance HEPA vacuums for critical cleaning and maintenance.
- **Textile Lint Filtration Systems:**
Advanced filtration systems specifically designed to address the unique challenges of dust and airborne contaminant control, ensuring a cleaner and safer workspace.
- **Pneumatic Conveying Systems:**
For fast, clean, and efficient material transfer of powders and granules.
- **Environmental Test Chambers:**
MIL-STD-810H systems for simulating blowing sand, dust, and extreme climate conditions.

WHO WE SERVE

Industries Served



AEROSPACE



AUTOMOTIVE



**COMMERCIAL/
INDUSTRIAL
KITCHENS**



CRUISE/MARINE



ENGINEERING



**ENVIRONMENTAL
TEST LABS**



FOOD & BEVERAGE



**GOVERNMENT/
DEPARTMENT OF
DEFENSE**



MANUFACTURING



MILLING



MINING



PET FOOD



POWER GENERATION



TEXTILE

Strategic Partnerships

**It's all in who you know, and the company that you keep,
that makes you successful!**

We collaborate with our clients to solve problems. Here are a few of our partnerships.



About Air Dynamics

Agile and robust.

We are an agile and robust engineering and manufacturing company operating from a 25,000 sq ft facility. Laser-focused on our customers' needs, we deliver precision-engineered solutions for complex air and material handling applications. Our approach combines technical innovation and operational efficiency to solve the most demanding industrial ventilation challenges.

Air Dynamics is a veteran-owned, SBA Certified Small Business based in York, Pennsylvania, dedicated to designing and manufacturing high-performance industrial systems. Our dedication to problem-solving has resulted in seven U.S. patents as a result of solving problems where there was no solution. Our engineering and process ensures every product is proudly designed and made in the USA.

We specialize in:

- Industrial Ventilation Systems
- Portable and Centralized Industrial Vacuum Cleaning Systems
- Commercial Kitchen Ventilation Scrubbers
- Resource Recovery

Solving the toughest air & particle challenges in manufacturers of any products.

From **airborne dust hazards** to **process efficiency bottlenecks**, our solutions are engineered to protect your people, preserve asset safety and health, and extend equipment life and productivity. Whether you're handling powders, creating fumes, or need to control process emissions, we deliver engineered systems that control air and move materials safely, efficiently, and reliably.

Clients like **Boeing**, **Lockheed Martin**, and **MARS** trust us to provide measurable value in process efficiency, safety, and sustainable performance. We are certified with the American Conference of Governmental Industrial Hygienists, (ACGIH), SBA, NFPA, VIP and work with a wide range of industries including the following NAICS CODES: 33413 | 333310 | 333922 | 334519 | 541330 | 541420.

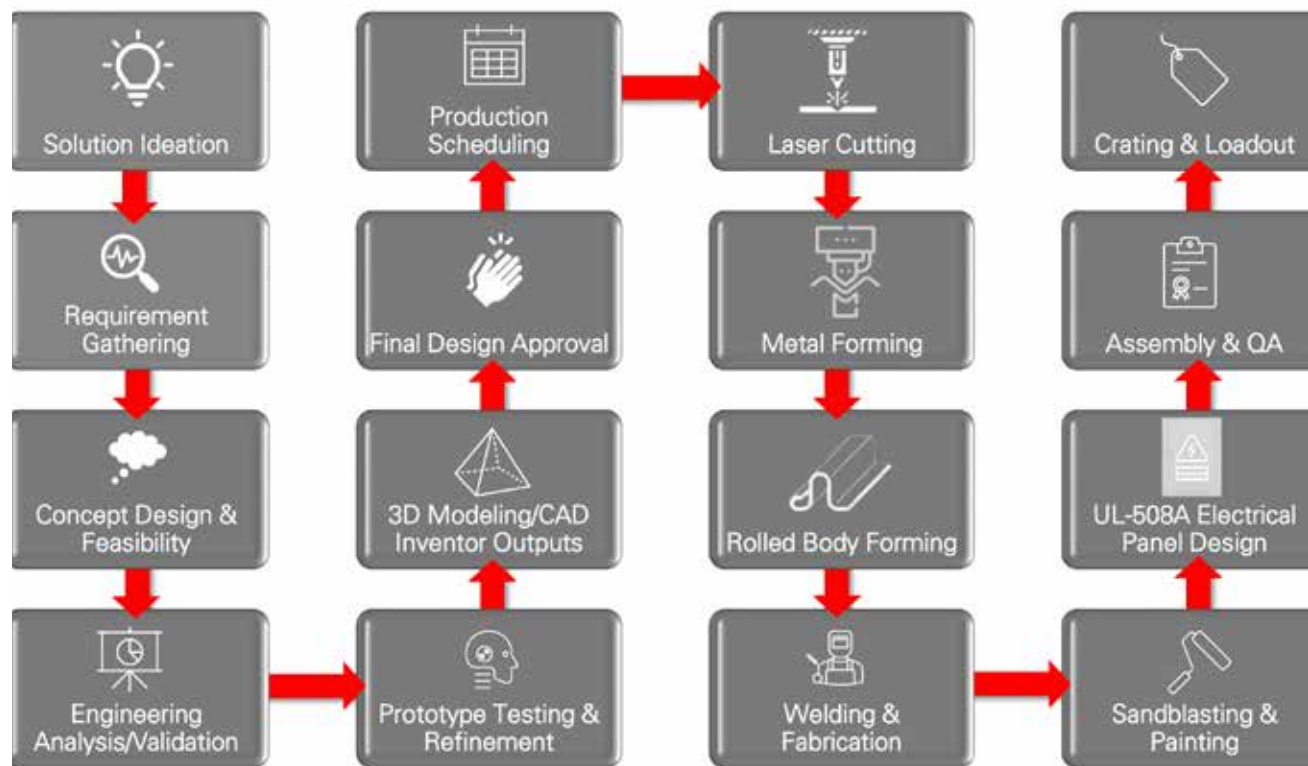


Our Process

From concept to post-commissioning, we can manage every phase of your project.

- Develop a concept where nothing exists.
- Engineering & Design - preliminary to IFC
- CFD Simulation BIM Integration
- Installation Supervision & Startup
- Project Management
- On-Site Commissioning and Training

We use programs including Autodesk Inventor, AutoCAD, Revit, NavisWorks, BIM and CFD simulation to ensure each system is modeled, tested, and refined before fabrication. The result: precision-built, performance-guaranteed systems with features like redundant operation, remote diagnostics, and long-term reliability. We conduct F.A.T. testing as required.



Our innovation is evidenced by seven U.S. patents.

Our engineering and design team delivers custom, made-to-order solutions with integrated systems that have earned seven U.S. patents—proof of our innovative approach and commitment to solving complex challenges. When conventional methods fall short, we think beyond the expected. Our solutions continuously evolve to meet our clients' toughest demands.

What Sets Us Apart

The Air Dynamics Differentiator: We specialize in applying advanced technologies to solve complex industrial challenges.

Our greatest advantage is lifecycle support. We offer both standard products and fully customized solutions tailored to your specific requirements. Unlike off-the-shelf-only manufacturers, we work closely with you to develop designs that meet your unique operational needs. From concept to completion, our **value-added services** and **team** ensure the mitigation of facility pain points.

Air Dynamics' unique approach after the purchase order is issued

Once a purchase order is received, Air Dynamics enters the next phase of our ACGIH-driven process by advancing into detailed design. Unlike competitors who rely on off-the-shelf solutions, we apply **our proprietary 14+ point engineering methodology** to create systems tailored to the specific needs and technical requirements of each facility.

As a true design-build partner to our customers, we don't just sell equipment—we integrate solutions. Our systems are based on a standardized core but customized to fit seamlessly within your operation. In contrast, others offer simplified, one-size-fits-all products that can underperform or create long-term inefficiencies.



When equipment is Issued for Construction (IFC) and built, we continue adding value. Our systems include advanced PLC integrations that align with lean manufacturing and modern facility demands—streamlining communication, maintenance, and control. Others often neglect this valuable aspect of the project, delivering outdated, “drop-and-forget” systems with little support.

After commissioning, Air Dynamics transitions your project from a project manager to a dedicated account manager, ensuring continuity and post-installation support. We understand the operational shift that comes with new equipment, and we remain fully engaged to assist with training, troubleshooting, and ongoing optimization and health checks—something most providers don't offer.

The Air Dynamics' Differentiator



What customers can expect after equipment delivery

Once equipment is delivered, Air Dynamics transitions into the installation and commissioning phase — customized for each project and clearly outlined in the initial contract. To reduce on-site labor time and costs, we ship all systems in preassembled modules and subassemblies, streamlining installation.

We closely coordinate with the client's mobilization schedule to ensure delivery aligns with site readiness. Our detailed installation drawings and real-time field coordination help installers navigate challenges and stay on track.

While standard contracts do not include installation, Air Dynamics offers optional turnkey solutions and can manage the entire process. We often recommend using qualified local labor to keep costs efficient without compromising quality.

Air Dynamics' flexible solutions for installation challenges

Air Dynamics uses advanced tools like Autodesk, Revit, and Navisworks to precisely integrate equipment into the client's facility. When 3D facility models aren't available, we gather measurements during site visits and collaborate closely to understand spatial constraints and future plans for growth.

Our **proprietary 14+ point engineering process** identifies and minimizes unknowns early, streamlining installation and project management. If unexpected challenges arise—such as missing utility data or space limitations—we adapt quickly, re-engineering solutions and clearly communicating the impact of changes on the timeline and budget.

While our systems follow a standardized core, every element is fully customizable, enabling us to overcome site-specific challenges and ensure successful commissioning and long-term performance.

That's the Air Dynamics' difference!

Design Innovation

Engineered for Energy Efficiency

Air Dynamics systems are engineered with state-of-the-art design for high performance, energy efficiency, compact footprint, minimal maintenance, and Industry 4.0 integration. Confined spaces are designed out for improved safety and serviceability.



Aligned with Industry 4.0 Innovation

Air Dynamics integrates Industry 4.0 technologies—connectivity, automation, smart analytics, and customization—into its systems, enabling smart factories with real-time data exchange, predictive maintenance, and enhanced operational efficiency.

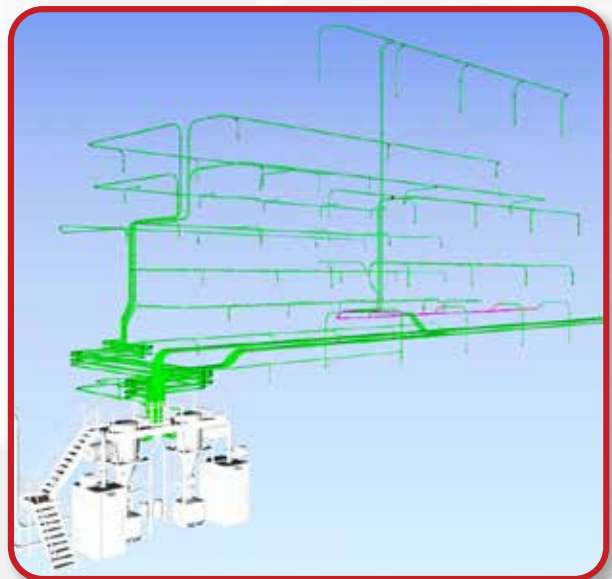
Advanced Filter Cleaning System

Our engineered filter cleaning system outperforms shaker-bag technology with three integrated cleaning methods. It uses compressed air or kinetic energy to maintain low filter pressure resistance, keeping the exhaustor in its most efficient operating range.

- Precision-designed nozzles clean each filter thoroughly.
- Pleated, surface-loading filter bags offer two-three times more media than traditional poly-felt bags, allowing higher performance with less energy at lower air-to-cloth ratios.

Optimized Piping and System Design

Vacuum piping is tapered and tailored to maintain optimal transport velocities based on product bulk density, maximizing exhaustor efficiency at reduced energy use. Proprietary system design minimizes pressure drop from tool to exhaustor, ensuring peak performance and low energy absorption.



Value-Added Services

When you partner with Air Dynamics, you gain more than just high-performance air, gas, and particle control systems. You gain a dedicated team committed to your success—from planning, through long-term support. Whether you're integrating a custom ventilation system or managing a large-scale capital project, our value-added services are designed to reduce risk, streamline coordination, and deliver peace of mind, allowing your team to focus on manufacturing your products.

Clear, consistent communication

To simplify complex projects, you'll be supported by a dedicated team:

- **Your Account Manager** is your advocate from the start. They help you navigate planning, purchasing, and long-term service, including spare parts and maintenance needs.
- **Your Project Manager** steps in post-purchase to guide design reviews, manage change requests, and ensure your project stays on track. They're also your on-site contact for installation guidance, quality control, and training.

You'll always know who to call, and you'll always reach someone familiar with your project.



On-site support when you need it

Every engineered system we deliver is designed to fit your facility and meet your exact needs. Our on-site services ensure everything fits, functions, and performs as expected:

- **Site Walkthroughs:** Early visits help us understand your space and gather the data needed for accurate system design.
- **Installation Guidance:** When your system arrives, we're on-site to support your contractors and ensure smooth integration.
- **Commissioning:** We perform detailed functional tests to confirm that your system works as designed.
- **Operator Training:** Your team will learn how to operate and maintain the system with confidence, ensuring long-term reliability.
- **Periodic Evaluations:** If you need ongoing support, we're available to assess performance, recommend improvements, and help you avoid downtime.

Designed for ease of installation

- **Installation Drawings:** Choose from clear, color-coded 2D layouts or detailed 3D models, tailored to your contractor's experience.
- **As-Built Models:** You'll receive updated 3D files after installation, ensuring your records match your installation.

Support after start-up

We don't disappear after commissioning. Our post-installation services are built to ensure your long-term success:

- **Weekly Startup Check-Ins:** For the first 30 days, we schedule regular support calls to help your team adjust and troubleshoot.
- **Timely Review Meetings:** We check in at key points to answer questions, review system behavior, and identify any support needs.
- **Remote Troubleshooting:** With optional secure VPN access, we can help resolve issues quickly—without waiting for a site visit.
- **Maintenance Plans & Spare Parts Lists:** We'll help you plan for filter changes and part replacements based on your usage and criticality.
- **Comprehensive O&M Manuals:** Every system includes a detailed manual to support your operators and maintenance teams.

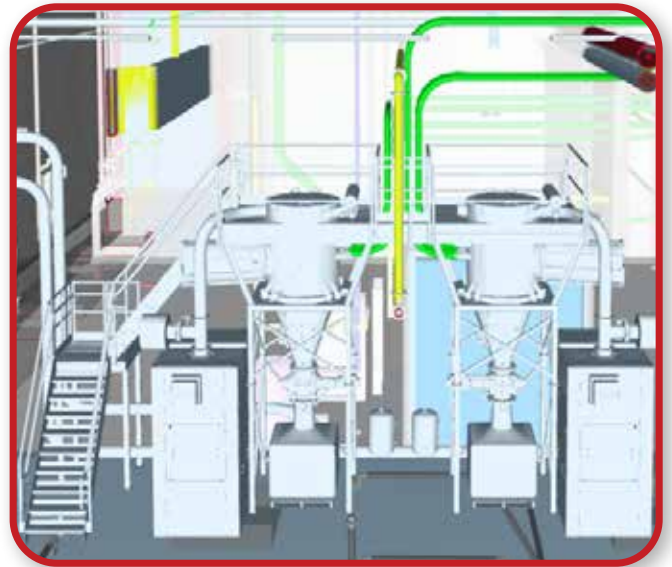
Applied Engineering

We utilize cutting-edge technology

Innovative Engineering & Design: We use 3D CAD software, such as Autodesk Inventor, to design customized systems, ensuring seamless integration into existing facilities.

Design-Build Custom Manufacturing

We design to the American Conference of Governmental Industrial Hygienists, (ACGIH), using recommended practices. We provide Engineer-to-Order (ETO) products designed and manufactured based on specific customer requirements. Our processes allow for tailored solutions, whether for one-of-a-kind systems or continuous product manufacturing.



UL 508A Industrial Controls In-House Manufacturing.

3D Laser Scanning & Metrology

We offer precise digital 3D scanning for both interior and exterior spaces, capturing high-definition images and thermal data to ensure accuracy and minimize errors during renovations or installations.

Technological Excellence

Our seven patents, issued by the U.S. Patent and Trademark Office, stand as a testament to our thorough process. Our patents and systems are a demonstration of our innovative problem solving for our clients. We continually **Advance the State-of-the Art** in air and material moving systems, providing reliable and sustainable solutions.

Our commitment to innovation, precision, and quality, drives us to deliver superior results for our clients, ensuring safe, efficient, and productive environments.

Our Products

Central Vacuum Systems

Air Dynamics is a leading manufacturer of industrial central vacuum systems designed for efficiency and reliability. Our systems reduce energy consumption, maintenance, and operating costs compared to poorly selected components. With over 30 years of experience, we tailor each vacuum cleaning system to meet client needs, ensuring long-lasting performance.

We offer turnkey solutions, from design to installation, using materials such as carbon steel, aluminum, and stainless steel. Our systems are ideal for 5S Lean, hazardous materials cleanup, combustible dust management, and plant sanitation. We also provide vacuum levels up to 16" Hg, with low maintenance, built-in safety features, and real-time monitoring via PLC control and remote access.

Our central vacuum systems can support your high-value production line with 100% uptime and redundancy.



CV-60 Central Vacuum System.

Portable Vacuum Systems



Air Dynamics' portable industrial HEPA vacuum, the **PLÉCO™**, is designed to handle the toughest jobs in manufacturing, including fine silica dust and hazardous combustible materials. Its versatile power even allows it to convey fine grains of sand, grain, and wet plastic materials.



PLÉCO™ HEPA Vacuum System and Pre-Separator.

Built with a HEPA filter in every unit (U.S. Patent 8,888,880), the PLÉCO™ ensures the safety of your work environment by capturing harmful particles before they enter the air. This continuous-duty vacuum is essential for environments where dust is a constant byproduct, delivering reliable, high-performance cleaning on the production floor.

With sizes ranging from 11.5 to 30 HP, the PLÉCO™ is perfect for hazardous environments like Class II Division 2, and it's equipped to safely handle asbestos, lead, and combustible dust. Designed for integration with continuous industrial processes, our portable vacuums offer efficient dust management, ensuring a cleaner and safer workplace.

Ask about our risk-free performance guarantee and let our application engineers help you implement this cutting-edge technology for your process.

U.S. Patents: US 8,733,186 B2, US 9,677,991.

Our Products

Dust Collectors

Our industrial dust collectors capture dust, smoke, odors, and fumes to maintain a cleaner, safer workspace. Built from welded carbon steel with direct-drive, high-efficiency fans, they feature advanced pulse-jet cleaning with supersonic nozzles and a low-pressure design that cuts energy use by up to 30%.



ActiveWall™ Dust Collector

Air Dynamics' ActiveWall™ Dust Collector is a compact, high-velocity system that captures airborne pollutants at the source. Designed for blasting and sanding booths, it delivers efficient performance with minimal energy use—ideal for tight, high-demand manufacturing spaces.



Benefits & Applications of Dust Collectors

Dust Collector Type	Best For	Filtration Method	Benefits	Ideal Applications
Baghouse	Heavy-duty dust collection for fine particles	Fabric filter bags	- High dust collection efficiency for fine particulates - Can handle high air volumes - Long filter life	Woodworking, cement, metalworking, food processing
Bin Vent	Dust collection from bins, silos, or hoppers	Cartridge or bag filters	- Prevents airborne contamination from bulk storage - Compact design - Easy maintenance	Grain handling, chemical processing, pharmaceuticals
Cartridge	Small to medium dust particles	Pleated cartridge filters	- Compact and efficient - Smaller footprint - High filtration efficiency for medium particles	Pharmaceutical, food production, small manufacturing
Combustible Dry	Dry combustible dust collection	Specialized filters and explosion protection	- Prevents risk of explosion - Effective for hazardous dusts - Compliance with safety standards	Woodworking, metal grinding, paper processing
Combustible Wet	Wet or sticky combustible dust	Wet filtration or scrubbers	- Designed for handling hazardous wet or sticky dust - Prevents dust explosions	Woodworking, automotive, paper mills, textiles
Cyclone	Heavy particulate matter and coarse dust	Centrifugal force	- Handles large particles - Low maintenance - Low energy consumption	Mining, cement, woodworking, agriculture
Fabric	Variety of dust types (including industrial fine dust)	Fabric filters	- High-performance filtration - Ideal for fine industrial dust - Durable and long-lasting	Metalworking, coal, pharmaceuticals, food industries
Makeup Air	Continuous supply of fresh air and dust removal	Air filtration and ventilation systems	- Ensures proper ventilation - Reduces dust concentration in air - Energy-efficient	Industrial environments, construction, manufacturing
Textile Filtration	Textile manufacturing environments	Fine particle filtration (fabric or pleated)	- Removes fine textile dust - Enhances air quality - Minimizes respiratory risks	Textile mills, fabric processing, garment factories

Our Products

Air Cleaning & Purifying: Scrubbers

An industrial scrubber, also known as an air cleaning device, is often used interchangeably with wet or dry air stream scrubbers. Our “wet scrubber” is specifically designed as a hydrodynamic scrubber.

Wet scrubbers are effective for capturing pollutants in vapor form, especially in hot process air streams. For instance, when liquid pollutants evaporate in industrial ovens, the exhaust may contribute to air pollution. A wet scrubber captures these vapors, converting them to solid droplets, which can then be filtered and disposed of safely.



Properly designed, wet scrubbers are a reliable solution for controlling pollutants, including rendering hazardous combustible dust, like aluminum dust, inert.

Commercial Kitchen Ventilation

We provide advanced Commercial Kitchen Ventilation (CKV) solutions for food manufacturing and commercial cooking operations, focusing on odor, smoke, carbon, and grease abatement.

Kitchen Sentry™

The Kitchen Sentry™ is designed for efficient removal of grease vapors, smoke, and odors in commercial kitchens. This system captures over 90% of grease before it enters the ductwork, ensuring trouble-free operation. It combines a high-efficiency air scrubber and hood in one unit, making it perfect for retrofitting existing Type I hoods. Ideal for industrial food applications, the Kitchen Sentry™ provides superior grease vapor and particulate capture, ensuring a safer, cleaner kitchen environment.



U.S. Patents: 8,012,249 / 8,771,408.

Key Features:

- Heavy-duty 304 stainless steel construction
- 24/7 continuous operation
- Prevents flammable grease buildup in ducts
- Reduces fire risk in hoods and exhaust ducts
- Patented design, over 90% grease removal efficiency

Our Products

Lint Removal Systems

Protect your process, people, and equipment —onshore or offshore.

Air Dynamics' Lint Removal Systems™ (LRS™) are engineered for clean air and safe operations. They are purpose-built to capture airborne lint and fine particulates from textile manufacturing, screen/digital printing, and drying operations—on land or at sea.

With capacities from 120 to 35,000+ CFM and filtration down to 0.5 microns, LRS™ systems ensure compliance with environmental and marine safety standards, including SOLAS.



Key Benefits:

- Exceptional air filtration & fugitive lint capture
- Durable, low-maintenance design
- Certified for marine & industrial environments
- Supports sustainability and energy efficiency

Pneumatic Conveying Systems

Efficient Bulk Powder Transfer & Dispensing

Air Dynamics' Pneumatic Conveying Systems ensure fast, clean, and reliable transfer of powders and granules—keeping your process efficient and compliant.

Customizable & Flexible

Available as portable or centralized units, systems operate under vacuum or pressure and are tailored to your space, flow rate, and material needs.

Powerful Reach: Convey materials over hundreds or thousands of feet.

Compliant & Safe: Designed to meet USDA, FDA, ACGIH standards.

Ideal for: food ingredients, grains, chemicals, plastic pellets, metal powders, small parts, and more.



Applications:

- Ingredient batching
- Dust collector discharge
- Railcar/silo unloading
- Hopper-to-mixer transfer

Benefits:

- Custom CAD design for seamless integration
- Reduces dust, waste, and material loss
- Manual or automated feed options

Our Products

Patented, Blowing Sand and Dust Environmental Test Chamber

The military and commercial manufacturers have long sought the ability to simulate desert conditions for testing equipment and personnel in harsh environments. The **Desert Wind™** stationary blowing sand and dust chamber provides a unique solution for this need, offering real-time, recorded data on key test parameters such as particle concentration, particle velocity, and air velocity—ensuring consistent, repeatable testing. This is a major advancement over existing equipment, which often fails to deliver predictable or repeatable results due to variable particle distribution and other shortcomings.

Designed to meet MIL-STD-810H, the Desert Wind™ is the only system capable of maintaining a precise, repeatable concentration of sand or dust during testing. Our chambers



also exceed the parameters of MIL-STD-202, DO-160G, and AECTP 300 Method 313, offering versatility for various testing needs.

Each system is customizable to blow sand or dust at any concentration and velocity requested, providing automated, consistent testing to meet industry standards. Ideal for manufacturers and testing laboratories seeking certification or performance validation, the Desert Wind™ is essential for those striving to meet or exceed MIL-STD-810H, DO-160G, MIL-STD-202, and AECTP 300 standards.

"The Desert Wind is the best technology we have found for testing and calibration laboratories. We use it within the aerospace and military sectors to assist in parts development and certification."

— Stephane Carpentier, Director of Innovation & Development, CTA



U.S. Patents: US 8,733,186 B2, US 9,677,991

Case Study

Central Vacuum System for MARS Petcare



When the world's leading pet food producer, MARS Petcare, needed an industrial housekeeping solution, they partnered with Air Dynamics Industrial Systems Corporation. Tasked with designing a robust central

vacuum system to manage combustible organic dust and kibble debris, Air Dynamics delivered a custom-engineered solution that met strict MARS corporate standards and regulatory guidelines, including those from OSHA and the NFPA.

The system was built to serve six operators across 50 collection points in four production areas, spanning over 800 feet. It included advanced safety features such as deflagration protection, explosion vent monitoring, intrinsically safe tools, and high-efficiency filtration (99.9% at 0.5 microns). Designed for high-demand use—six hours daily, year-round—the vacuum system maintained noise levels below 80 dB(A) and operated effectively in high-heat environments up to 122°F.

From 3D CADD design and automation controls to commissioning and training, Air Dynamics managed the entire scope. The final system passed all performance, safety, and hygiene inspections, earning praise from operators and project leaders at MARS. The result was a reliable, energy-efficient sanitation system that supports food safety, protects workers, and reduces combustible dust hazards.

Cost-Effective, High-Efficiency Wet Scrubber Retrofit for Armstrong World Industries



Armstrong World Industries, a major manufacturer of vinyl flooring, partnered with Air Dynamics Industrial Systems Corporation to replace an outdated 1970s wet scrubber system that was costly, inefficient, and maintenance-heavy. The original system cost over \$187,000 annually to operate and required 16 hours of maintenance per week.

Air Dynamics engineered a custom hydrodynamic wet scrubber featuring a four-stage air cleaning process, permanent filtration media, and PLC automation. The result:

- 96% reduction in operating & maintenance costs
- 74% lower energy usage
- 40% reduction in emissions
- \$100,000 annual savings on media replacement
- 75% less maintenance—now just 4 hours per month

Built with 304 stainless steel and designed for easy access, the new system is more compact, efficient, and cost-effective. Armstrong now benefits from a cutting-edge air pollution control solution that meets environmental standards while delivering significant long-term savings.

Case Study

High-Efficiency Lint Filtration for Peppermill Casino



Peppermill Casino in Reno, Nevada, faced a growing safety concern due to excessive textile lint generated by its 24/7 laundry operations. Their outdated filtration system was failing to capture fine lint particles, increasing the risk of fire. Seeking a more effective solution, Peppermill partnered with Maxwell Mechanical and Air Dynamics Industrial Systems Corporation to replace the aging infrastructure.

After a thorough site assessment, Air Dynamics determined that a retrofit was not viable and proposed the LRS II—a high-efficiency lint removal system designed for heavy-duty laundry environments. Capable of filtering at 99.97% efficiency down to 0.5 microns, the LRS II system replaced the outdated mesh filters, which could only handle particles as large as 74 microns. This upgrade offered a dramatic improvement in fire prevention and air quality.

The project included custom compound hoods with boost fans to capture lint directly from two large ironers, ducted through ACGIH-certified ventilation and controlled via a safety-focused control panel. Air Dynamics also provided on-site commissioning, operator training, and a full documentation package, ensuring Peppermill's staff could maintain peak performance long term.

By delivering a made-to-order solution tailored to Peppermill's facility and operational needs, Air Dynamics significantly improved lint filtration, workplace safety, and energy efficiency—setting a new standard for industrial laundry air quality.

PLĒCO™ Vacuum System Solves Wood Dust Challenge at Matthews International



Matthews International, a global supplier of ornate wooden caskets, faced a growing wood dust problem across its production facility. With four high-volume sanding lines generating truckloads of fine wood dust daily, their existing cleaning process—relying on compressed air and overloaded shop vacs—proved ineffective and even dangerous, culminating in a fire caused by a clogged unit. Air Dynamics provided a safer, more efficient solution.

Air Dynamics engineered a solution around its PLĒCO™ Portable Industrial HEPA Vacuum System, starting with the PPR22 model. Featuring an 11.5 HP regenerative blower and a custom cyclonic separator, the system was designed to handle fine combustible dust in compliance with NFPA 654. Air Dynamics also implemented a custom tubing layout integrated with sanding equipment, allowing the vacuum system to serve up to seven workstations simultaneously. Additional utility vacuum outlets and tool kits improved worker access and efficiency.

Impressed by the performance, Matthews International expanded their investment, purchasing two more PLĒCO™ systems. The solution not only eliminated the wood dust hazard but also cut Matthews' estimated system cost by 70% compared to traditional central vacuum systems.

Air Dynamics delivered a safe, cost-effective, and scalable housekeeping solution that exceeded expectations in performance and affordability—reinforcing their reputation for precision-engineered industrial cleaning systems.



Daniel Lehman, President

Made in the U.S.A.



Our History

Air Dynamics Industrial Systems Corporation designs and manufactures high quality industrial ventilation systems, portable and centralized industrial vacuum cleaners, and commercial kitchen ventilation scrubbers. Our products are utilized extensively throughout numerous industries and applications.

Air Dynamics is a veteran-owned small business based in York, Pennsylvania, that specializes in advanced air and particle control solutions for industrial manufacturers. We take pride in our extensive product line which includes seven USPTO patents. Since our incorporation in 1991, we've set ourselves apart from the competition with an unwavering commitment

to innovation, and our promise that all air dynamics products are designed and manufactured in the USA. The founder and president, Daniel Lehman, has over 35 years of experience, and has built a company dedicated to enhancing personnel safety, protecting assets, and ensuring system reliability across various industries, including aerospace, food processing, metal fabrication, and agriculture. His leadership and innovative approach has positioned the company as a trusted provider of air quality, dust collection, and explosion protection systems. Air Dynamics' differentiator in the industry is the dedication to innovation and customized solutions for each and every client.

Our Facility

The black and white photos to the right were taken after 1933, of what today is Air Dynamic's home base. A portion of the original structure houses Air Dynamics administrative offices and 25,000 sq ft manufacturing facility. The facility contains fabricating equipment for sheet metal services including a laser cutting table, brake-press bending services, welding and laser welding, electrical panel building, and more.

The colored photo to the bottom, right, is what the complex looks like today.

In the late 1880s, the York Manufacturing Company, (YMC), was one of the nation's leading producers of refrigeration equipment and established its plant here on Roosevelt Blvd. In the early 20th century it helped establish experimental and verifiable industry standards through the efforts of its testing laboratory. YMC pioneered new applications of cooling, including dehumidification. Architect J.A. Dempwolf designed the original core group of buildings in 1895 and made the first enlargement to the plant shortly thereafter. Subsequent expansions and updates were made from 1909 through 1994.





83,000 cfm dust collector.



Welding in our facility.



Central Vacuum System.



PLÉCO™ Portable Vacuum | Tophat Separator.



Central Vacuum 48.



Air Dynamics' Textile Lint Collection System.



CKV Scrubber.

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