



Dustex is an international, full service multi-pollution control equipment supplier with EPC (Engineer, Procure, Construct) experience and unparalleled in-house engineering expertise. We facilitate our customers' ability to focus on core business while reducing environmental impact.

Our number one priority continues to be our customers. Since 1947, Dustex has partnered with customers across a variety of industries to achieve environmental compliance by executing equipment supply and EPC projects. Dustex has developed over 20 patents in the pursuit of optimal particulate matter, SOx, NOx, and mercury control technologies.



The Dustex vision is to make our great air pollution control technologies even better. We believe in simple solutions for complex environmental challenges. Our customers experience a one source quality solution and a long partnership while improving worldwide air quality.



YOUR PARTNER FOR SUCCESS IN INNOVATIVE AIR POLLUTION CONTROL TECHNOLOGIES

Our customers have a lot to say about us! Below are a few highlights.

"The Dustex scrubber (CDS) has been in operation for two years and we are well satisfied with its operation and performance... Additionally, they have added value through brainstorming with the owner to determine the best approaches to maximize the operational capabilities of the scrubber without violating their product design parameters."

"I would like to compliment you on the successful completion of the turnkey bag filter installation at our facility. The job was successful in that it was completed on schedule and within budget. My compliments on your planning and scheduling... I heard many good comments from the plant manager and plant personnel regarding your willingness to work with the plant personnel and around our manufacturing schedule. The project was completed safely during a typical cold winter and the kiln systems have operated well in the months since. Thank you for a job well done."

HISTORY

Dustex was originally founded in Buffalo, New York in 1947. During its first decade, Dustex developed a line of dry fabric filters marketed throughout North America. By the 1960s, after being acquired by American Precision Industries, Dustex had become established as the industry leader in the design and manufacture of fully portable reverse air dust collectors for the asphalt and related aggregate industries. In 1984, key employees incorporated Dustex in Charlotte, North Carolina.

In 1998, Dustex made two major strategic changes to grow and serve the needs of several industries by creating an Engineered Systems Division for custom design of Air Pollution Control (APC) equipment and adding the use of a captive fabrication shop. The captive fabrication shop, Pickaway Machine, located in Kingston, Ohio, continues to solely fabricate for Dustex. Our Engineered Systems Division, located northwest of Atlanta, Georgia, has completed over 500 major installations in the last 18 years. To parallel the growth of the Systems Division, Dustex has a wholly owned fabrication shop in Rocky Mount, North Carolina. Our installations have spanned a variety of industries: power and steam generation, industrial manufacturing, product refining, cement, biomass, steel, mining, chemical, petrochemical, and glass.

From 2007 to 2014, Dustex continued to develop APC pre-engineered and engineered systems' technologies, patenting these technologies and staying ahead of emissions regulations. In the interest of meeting all APC needs today and in the future, Dustex continues to grow. Our most recent technology additions include: Sparstane Technologies - enabling the conversion of scrubber waste to saleable products and Lundberg LLC - ESP and RTO emissions control.

We are not afraid to share our experience with our customers. What that means to you is that Dustex will provide the solution that you ask for and we will utilize our experience and knowledge to offer you the best solution. Dustex is about being the most cost effective and efficient solution for the end-user.

OUR SUCCESS IS BASED ON YOUR SUCCESS

It is Dustex's responsibility to meet your goals by:

- · Communicating effectively.
- · Remaining engaged.
- Developing processes and benchmarks to ensure the highest quality.
- Facilitating new product development and current product refinement.
- Ensuring that our clients are Dustex's best sales force!

APC INDUSTRY PATENTS + RELIABLE EXPERIENCE = DUSTEX

Operating as a fully functional EPC supplier with in-house fabrication and commissioning, our excellent reputation is supported by our satisfied customers with whom we maintain long-term relationships. Dustex remains your partner for the life of the equipment and beyond.

Our 65+ years of experience in the APC industry enables Dustex to supply its customers with innovative solutions through a wide range of disciplines. Operating as a fully functional design, fabrication, installation, and commissioning supplier, Dustex focuses on remaining highly efficient and cost effective through the use of our own developed pollution control technologies. Development of over 20 patents as a designer and fabricator enables Dustex to address particulate matter, SOx, NOx, mercury control, and much more. Through our network of North American independent manufacturers' agents and international licensees, Dustex will continue to meet emission control needs in all industries.

Dustex's access to vast technical archives regarding air filtration, gas conditioning and gas scrubbing systems, and newly developed APC equipment ensures that we continue to be in the forefront of the APC market. We strive to be your one source starting with design and continuing through to efficient operation at your facility. Dustex provides quality equipment, parts, and service through our aftermarket parts and control panel assembly divisions located in Acworth, Georgia, our Rocky Mount, North Carolina manufacturing facility, and our Kingston, Ohio captive shop.

INNOVATIVE SYSTEMS-PROVEN TECHNOLOGIES

Our number one priority since 1947 continues to be our customers.







"There is a good reason to select Dustex. Dustex takes good care of their customers!"

WHAT WE OFFER

Dustex offers compliance support and turnkey solutions for particulate matter, HCl, SOx, NOx, HF, Dioxins, Furans, and mercury control through the design, engineering, and manufacturing of a wide range of engineered systems and pre-engineered products.

ENGINEERED SYSTEMS

- Circulating Dry Scrubber (CDS)
- Pulse Jet Fabric Filter
- Activated Carbon Injection (ACI) System
- Dry Sorbent Injection (DSI) System
- Selective Catalytic Reduction (SCR)
- Selective Non-Catalytic Reduction (SNCR)
- Venturi Scrubber
- Wet Scrubber
- Gas Conditioning Tower
- Heat Exchanger

PRE-ENGINEERED PRODUCTS

- Fabric Filter / Baghouse
- Cartridge Collector
- Nuisance Collector
- Cyclone
- Multi-Clone

TECHNOLOGIES SOLUTIONS PRODUCTS

We can provide stand-alone flange to flange equipment or accommodate complete EPC projects. Our technology services include process analysis, system design, and CFD modeling. We utilize our own fabrication facilities and a complete UL approved electric panel assembly facility.

Our solutions have unique technical advantages that can only be developed within an organization that makes the necessary investment in design technologies and research. We are confident in our ability to provide our clients with the products and services they have come to expect in this very competitive industry.

THE OVERALL SOLUTION

Dustex performs independent project execution utilizing its own design, in-house engineering, fabrication, installation, and commissioning of the system with continuous parts and field support for the life of the system. Just ask our clients!









CIRCULATING DRY SCRUBBER (CDS)

- >99% SO₂ Removal Efficiency
- Flexible
 - Multi-Pollutant Removal
 - SO₂, SO₃, HCI, HF, Pb, Dioxins, Furans
 - Ha removal
 - NOx removal
 - Fuel Switching
 - Works in High Moisture Applications
- Low Capital Cost
 - Modular fabrication
 - Simplicity of design with small footprint
- No slurry systems
- Exotic alloys not required
- Lower Maintenance compared to other technologies
 - No slurry handling issues
 - Very few moving parts
- Operational Advantages
- Adsorption of heavy metals
- High recycle rate allows for low reagent consumption
- Lower power consumption than alternative systems
- No waste water stream

ACTIVATED CARBON INJECTION (ACI) AND DRY SORBENT INJECTION (DSI) SYSTEMS

- · ACI for mercury (Hg) removal
- DSI for reduction of SOx (SO₂, SO₃) and HCI
- · Dual loss-in-weight measurement
- Eliminated leakage
- · Stainless Steel convey lines
- · Long radius elbows
- · Low capital cost
- Small footprint
- · Integrated seamlessly
- · Flexible systems (sorbent)
- · Meet rigorous plant requirements
- Turnkey solutions
- · Years of experience
- · Operate within the required limits
- Operate for extended time periods with little or no maintenance
- Guarantees on stoichiometry (DSI only), installation, and start-up

FABRIC FILTER

- State-of-the art technology designed for low maintenance and easy operation
- Design based on the plant-specific application, layout, and performance and installation requirements
- A cost effective design without sacrificing performance
- Modular or panelized solutions to meet site erection and application requirements
- · Patented Top Door or Walk-In Plenum
- · Constructability and Quality
 - Side Plenum Modular Fabrication
 - More high quality shop welds, less field welds
 - Shop Insulation and Cladding
 - Less work at elevation in the field
 - Quality control installation
 - Advanced Inlet Designs
 - Long Bag Technology
 - High Side Entry
 - Less re-entrainment

CARTRIDGE COLLECTOR

Innovative features which allow for:

- Accurate and effective air jet design
- · Long cartridge life
- · Ease of maintenance
- · Leakage prevention
- Formation of a deep and porous dust cake
- Uniform cleaning
- 750 to 92,000 CFM

HEAT EXCHANGER

- For gas cooling and heat recovery purposes
- Custom design to handle abrasive particulate laden gas and inlet temperatures up to 1200°F
- Tubular forced-convective and U-tube radiant-convective
- Multi-pass configurations for process heat recovery
- Common applications: cupolas, electric arc furnaces, clinker coolers, and air pre-heaters

CYCLONE AND MULTI-CLONE

Dustex designs and manufactures five distinct cyclone collector types dependent on the application.

- ST Series of high efficiency single tube cyclones
- PC Series of heavy duty primary pre-cleaner cyclones
- ST-10 Series of steel high efficiency multiple tube cyclones
- M-40A cast aluminum microclone
- · Dustex series of cast iron multi-clones

SCR AND SNCR

EPA regulations support or require NOx control installations to achieve the lowest emissions level possible. Two of the solutions for post-combustion control systems are Selective Non-Catalytic Reduction (SNCR) and Selective Catalytic Reduction (SCR). Both are of the most cost-effective and fuel efficient technologies used to reduce stationary source emissions. Utilizing our field experience and injection technology, Dustex offers complete SCR and SNCR NOx control systems for various plants. State-of-the-art design, simulation, and technology ensure advantages with results that will surpass your requirements and meet quarantees.

SNCR TESTING

Dustex has the capability to provide NOx testing via our portable ammonia injection system and stack testing via our CEMS (continuous emissions monitoring system) trailer.

VENTURI SCRUBBER

- New state of the art adaptation of the well proven technology
- Efficient, cost effective approach for removal of particulate matter and/or gaseous pollutants
- Designed of heavy duty construction
- Effectively uses the inlet gas stream's energy to further atomize the injected liquid droplets
- Proper injection design eliminates the wet and dry area build up problems

CONTROL PANEL

- · Wired and tested at Dustex's on-site facility
- Around-the-clock troubleshooting
- Electrical maintenance
- Remote access

AFTERMARKET PARTS AND SUPPORT

Dustex Aftermarket Parts and Support, along with our pre-contract and post-contract team, round out our ability to be your overall solution even after commissioning. Dustex is your single source supplier and manufacturer for maintenance and replacement parts.

- Support all OEM's air pollution control equipment
- Audit to identify issues and/or potential for future issues
- · Minimize future costs
- Support compliance needs





HOW WE DO IT

Dustex understands that APC design and fabrication is not our customers' primary focus. The beauty in working with Dustex is that we work with you to design a system that is optimal for your specific needs. We recognize that these decisions are long-term. We ask the questions that ensure we can offer you a solution or several solutions. Dustex is committed to your understanding of the benefits and impacts of each solution prior to any decision.

THE CHALLENGE

Dustex appreciates the challenge. We use our relatable experience to develop unique solutions no matter how unusual the process may be. This is apparent by Dustex's ability to remain in the forefront of APC technologies and to provide solutions for the unique industries that we serve.





WHAT SETS DUSTEX APART

- Superior technical knowledge resulting in superior technical solutions
- Innovative designs resulting in added value
- Efficient operation resulting in cost effective approach

IN-HOUSE CAPABILITIES

- Engineering
- Mechanical, Electrical, Environmental, Chemical, Civil/Structural
- 3D CFD Modeling
- Fabrication
- Installation and Commissioning
- Design-Build Project Management
- Controls and Automation
- Aftermarket Sales and Support

EXPERIENCE MATTERS

Dustex has extensive experience working with utilities, cement companies, and waste-to-energy (WTE) plants (municipal solid waste boilers) as well as biomass, carbon black, copper, pulp and paper, primary and secondary metals, and steel. Experience across a wide variety of industries provides our engineers with knowledge and skills which are applied to any design challenge. We are the company that can address your APC challenge and meet the guarantee!

INDUSTRIAL PROCESSES

- Carbon Calcining Petroleum Coke
- Food
- · Gas Cooling and Conditioning
- Lead and Copper Smelters
- Medical Waste Incinerators
- Woodworking Applications
- Welding, Cutting, Machining Centers
- Carbon Black

POWER/STEAM GENERATION

- Coal Fired Boilers (Spreader Stoker, Circulating Bed)
- PC Fired Boiler Emissions Controls and Dry / Semi-Dry SO₂ Control
- Biomass Fired Boilers
- Coal Handling
- Coal Car Unloading Stations
- Waste-to-Energy Incinerators

CEMENT

- · Raw and Finish Mills
- · Material Handling
- Kilns
- Alkali By-Pass
- Clinker Cooler
- · Separators & Finish Mills
- · Ready Mix / Sand Dryers
- Stockhouse

FOUNDRIES, FERROUS & NON-FERROUS

- Cupola
- Lead Pots
- Mold LineCore Making
- Ferro-Alloy FurnacesCopper Reverberatory

PULP & PAPERPaper Handling

Binder ApplicationsBoiler Applications

- Pouring Line
- Furnaces
- Shake-out
- · Shaft Furnaces
- Mixers. Mullers
- · Sand Reclaim and Handling
- Induction Furnaces
- · Inoculation Stations, Ladle
- Shot Blasting
- Aluminum Reduction Furnaces

MARKETS AND APPLICATIONS

DryersSmelters

Concentrator PlantsMaterial Handling

MINING

Crushers

Multi-Pollution Control Technologies

PETRO-CHEMICAL

- Spray Dryers
- RTO Pre-cleaners
- Pneumatic Receivers
- · Silo / Bin Ventilation
- · Mixing, Blending, Bagging

GLASS

- Furnaces
- Raw Materials / Cullet Handling

AGGREGATES

- Spray Dryers
- Mills
- Calciners
- Rail & Truck Loading

STEEL MAKING

- Arc Furnaces
- Ladle Transfer Stations and Furnaces
- Casthouse
- Blast Furnace
- B.O.F. Charging Isle
- Desulfurization Stations
- Casters

We ensure that our clients reach their Air Pollution Control Targets. We provide highly efficient, cost effective, and reliable solutions.





EMISSIONS AND ENERGY EFFICIENCY

Dustex offers a complete portfolio of emissions control and energy recovery technology solutions with the addition of Lundberg LLC. With a proven history since 1976, Lundberg solutions help clients manage emissions with its exclusive brand of Geoenergy® E-Tube wet electrostatic precipitators (ESP) and GeoTherm® / GeoCat® regenerative oxidizers, improve energy efficiency, and/or increase revenue through the recovery of valuable system byproducts.

The complementary fit provides additional scale and the ability to expand into an even wider array of industries and geographies, further enhancing our never-ending goal of presenting the optimal solution for every application. Lundberg broadens the custom solutions' scope of design and supply, further enabling us to meet each client's unique environmental and energy efficiency needs, as well as evaporation and chemical processing needs.



SCRUBBER WASTE CONVERSION

True to the Dustex mission and vision of being in the forefront of innovative solutions, Dustex has acquired a unique technology. Sparstane is the solution for Flue Gas Desulfurization Gypsum (FGD Gypsum), a byproduct of coal-fired power plants. Sparstane converts FGD Gypsum into two high value materials - ammonium sulfate fertilizer and recycled calcium carbonate.

While there are many commercial uses for FGD Gypsum, such as wallboard and cement, the large volumes produced each year exceed the demand by over fifty percent. The wide gap between supply and demand forces the industry to store over half of the FGD Gypsum produced every year in expensive lined storage ponds and monitor them indefinitely. Dustex's Sparstane technology eliminates this problem.



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