



KERONE
Kerone Engineering Solutions Limited



50⁺ Years
Of experience

INDUSTRIAL DRYERS



ISO 9001:2015 | ISO 14001:2015 | ISO 45001:2018

ABOUT US

Kerone Engineering Solutions Ltd is a global leader in advanced industrial heating, drying, cooling & end to end process engineering solutions. With over five decades of proven expertise, we specialize in designing, manufacturing, and delivering highly customized, cutting-edge systems tailored to the evolving needs of industries worldwide.

Our commitment to engineering excellence, sustainability, digitalization, and technological innovation has positioned us as a trusted partner for businesses across multiple sectors. By integrating Artificial Intelligence (AI), Machine Learning (ML), and Internet of Things (IoT) technologies into our systems, Kerone ensures smarter automation, real-time monitoring, predictive maintenance, and data-driven process optimization—empowering our clients to achieve greater productivity, efficiency, and reliability.



50+

Years of Experience



10,000+

Satisfied Clients



500+

Employee



100+

Experts



50+

Global Presence



50+ Years Manufacturing Excellence



Great Sale Support



Highly Customized Product



Adherence to Standards



Sound Infrastructure



Team of experts Delivering Quality



Timely Delivery



Cost Effective Solutions



INDUSTRIES WE SERVE

- ✓ Food Processing & Agro-Processing
- ✓ Chemicals & Petrochemicals
- ✓ Pharmaceuticals
- ✓ Textiles, Automotive & Aerospace
- ✓ Paper & Packaging
- ✓ Ceramics & Glass
- ✓ Rubber & Plastics
- ✓ Environmental & Waste Management
- ✓ Oil, Gas & Steel Industries



- ✓ Industry Expertise – Over 50 years of global engineering leadership.
- ✓ Custom Solutions – Tailored engineering that meets unique industrial requirements.
- ✓ Global Reach – Trusted by industries across continents with proven reliability.
- ✓ Digital & Smart Systems – AI/ML-powered automation, IoT-based monitoring, and predictive insights.
- ✓ Cutting-Edge Technology – Continuous innovation in heating, drying, and advanced processing.
- ✓ Energy Efficiency – AI-optimized designs for lower energy consumption and sustainability.

QUALITY & COMPLIANCE

At Kerone, quality and compliance are non-negotiable. All our solutions are engineered in adherence to international standards and industry best practices, ensuring maximum safety, durability, reliability, and efficiency. With integrated digital technologies, we enable smarter quality control and compliance tracking across all operations.





Powered by AI/ML & IoT

Industrial Dryers

Industrial dryers are used to efficiently process large quantities of bulk materials that need reduced moisture levels. Depending on the amount and makeup of material needing to be dried, they come in many different models constructed specifically for the type and quantity of material to be processed. These machines are the backbone of moisture control in manufacturing, working by applying heat and airflow to vaporize moisture from materials – a process that involves both heat and mass transfer operations simultaneously.

Industrial hot air dryers play a key role in extracting moisture from various materials in factories and processing plants. They employ a wind tunnel design, pushing heated air through the product, accelerating drying while assisting in reducing waste and energy. At the heart of their effectiveness is how they circulate heated air, maintain temperature control, and accommodate various material types. From pharmaceuticals and food to chemicals and textiles, these machines are engineered to meet the precise drying demands of each unique industry.

Key Features

- **Precision Temperature Control**
Advanced sensors and PLC systems maintain exact heat levels throughout the drying cycle, preventing product damage from overheating or under-drying.
- **Powerful Airflow System**
Key parts consist of blowers, heating elements, control systems, and air filters, all having a vital part in efficient and energy-saving operation.

- **Continuous or Batch Operation**
Conveyor systems or feed hoppers in continuous dryers move materials steadily through the drying chamber for consistent results.
- **Advanced Safety Systems**
Advanced dryers may also feature explosion-proof design, HEPA filtration, heat recovery systems, and integrated dust collection to meet industry-specific regulations.
- **Heavy-Duty Stainless Steel Construction**
Stainless steel chambers or drums provide corrosion-resistant housings for durability and sanitary processing.
- **Integrated Sensors & Gauges**
Gauges and sensors allow for precise monitoring of temperature, pressure, humidity, and airflow in real time.

Advantages

- **Higher Productivity**
Automated drying systems accelerate processing times and enable higher production throughput, reducing bottlenecks.
- **Consistent Quality**
Advanced controls ensure uniform moisture content, color, and texture across every batch.
- **Energy Savings**
Heat pump dryers allow energy savings of up to 60% compared to a standard dryer.
- **Cost Reduction**
Efficient drying reduces labor, energy consumption, and waste management expenses.
- **Versatility**
With multiple dryer types and configurations, manufacturers can process a wide range of products – from delicate pharmaceuticals to abrasive minerals.

Types Of Industrial Dryers

Microwave Heating Dryer

Radio Frequency Heating Dryer

Conventional Heating Dryer

Infrared Dryer

Hot Air Dryer

Pneumatic/ Flash Dryer

Drum Dryers

Box Dryer

Heat Pump Dryers

Imperial and Band Dryer

Coal/Briquette Dryer

Tunnel Dryer

Agitated Thin Film Dryer

Fluidised Bed Dryers

Tower Dryer

Rotary Dryers

Tray Dryer

Fish Dryer

Spiral Conveyor Dryer

Microwave Spices Dryer

Food Dryer

Grain Dryer

Freeze Dryer

Coir Pith Dryer

Conveyorised Organic Waste Dryer

IR Dryer

Slag Dryer

Pulp Packaging Dryer

Umbrella IR Dryer

Coal Dryer

Spray Dryers

Sludge Dryers



Microwave Heating Dryer

A Microwave Heating Dryer is an advanced drying system that uses microwave energy to heat and evaporate moisture directly from within the material. This internal heating method ensures rapid, uniform drying with improved energy efficiency. It is widely used for drying food products, chemicals, pharmaceuticals, and other heat-sensitive materials.



Radio Frequency Heating Dryer

A Radio Frequency Heating Dryer is an advanced drying system that uses radio frequency electromagnetic energy to generate heat directly inside the material for rapid moisture removal. This volumetric heating method ensures uniform drying and reduces drying time compared to conventional heating systems. It is widely used for drying food products, textiles, wood, pharmaceuticals, and other moisture-sensitive materials.



Conventional Heating Dryer

A Conventional Heating Dryer is a traditional drying system that removes moisture from materials using externally generated heat and hot air circulation. The heat is transferred to the material through conduction, convection, or radiation to evaporate moisture gradually. It is widely used in industrial, agricultural, and food processing applications for reliable and cost-effective drying.



Infrared Dryer

An Infrared Dryer is an advanced drying system that uses infrared radiation to transfer heat directly to the surface of materials for rapid moisture evaporation. This method provides fast, energy-efficient drying with uniform heat distribution and minimal heat loss. It is widely used in industries such as food processing, textiles, coatings, and printing for quick and controlled drying.



Hot Air Dryer

A Hot Air Dryer is a drying system that removes moisture from materials by circulating heated air through a drying chamber. The hot air transfers heat to the product, causing moisture to evaporate efficiently. It is widely used in food processing, agriculture, pharmaceuticals, and industrial drying applications.



Box Dryer

A Box Dryer is a simple batch-type drying system designed to remove moisture from materials using controlled hot air circulation inside an enclosed box-shaped chamber. Products are placed on trays or racks where heated air flows evenly to ensure uniform drying. It is commonly used for small to medium-scale drying in food, agricultural, pharmaceutical, and laboratory applications.



Pneumatic/ Flash Dryer

A Pneumatic or Flash Dryer is a high-speed drying system designed to rapidly remove moisture from fine powders, granules, or pasty materials using a stream of hot air. The wet material is dispersed and conveyed through a drying duct where moisture evaporates instantly due to intense heat and airflow. This process enables very short drying times and is widely used in chemical, food, mineral, and starch industries.



Heat Pump Dryers

A Heat Pump Dryer is an energy-efficient drying system that removes moisture from materials using a closed-loop heat pump technology. It recycles heat from the exhaust air, reducing energy consumption while maintaining controlled drying temperatures. This system is widely used for drying food, agricultural products, pharmaceuticals, and other temperature-sensitive materials.



Drum Dryers

A Drum Dryer is a contact-type drying machine used to remove moisture from liquid, slurry, or paste materials by spreading them as a thin film over the surface of a heated rotating drum. The heat from the drum rapidly evaporates moisture from the material. The dried product is then scraped off with a blade, producing flakes or powder for further processing.



Imperial and Band Dryer

An Imperial and Band Dryer is a continuous drying system that removes moisture from materials using a moving conveyor band inside a hot air chamber. Heated air circulates across the product for uniform and efficient drying. It is widely used in food, chemical, pharmaceutical, and agricultural industries.



Coal/Briquette Dryer

A Coal/Briquette Dryer is an industrial drying system designed to remove excess moisture from coal, charcoal, and briquettes using controlled hot air or rotary drum technology. The drying process improves fuel quality, combustion efficiency, and storage stability. It is widely used in coal processing plants, briquette manufacturing units, and energy industries.



Fluidised Bed Dryers

A Fluidised Bed Dryer is an efficient drying system that suspends solid particles in a stream of hot air, creating a fluid-like state for uniform heat transfer. This allows rapid and even moisture removal from powders and granules. It is widely used in food, pharmaceutical, and chemical processing industries.



Tunnel Dryer

A Tunnel Dryer is a continuous drying system where materials move through a long tunnel chamber with controlled hot air circulation. The product passes through different temperature zones for uniform and efficient moisture removal. It is widely used in food, pharmaceuticals, ceramics, and industrial drying applications.



Tower Dryer

A Tower Dryer is a vertical drying system designed to remove moisture from bulk materials by passing heated air through multiple levels inside a tall tower structure. The material moves downward by gravity while hot air flows through it for uniform drying. It is widely used in grain, seeds, and agricultural product processing.



Agitated Thin Film Dryer

An Agitated Thin Film Dryer is a high-efficiency drying system designed to process viscous liquids, slurries, and heat-sensitive materials. It uses rotating blades to spread the material into a thin film on a heated surface for rapid moisture evaporation. This ensures uniform drying, short residence time, and high product quality.



Rotary Dryers

A Rotary Dryer is a continuous drying system that removes moisture from bulk materials using a rotating cylindrical drum and hot air flow. The tumbling action of the drum ensures uniform heat transfer and efficient drying. It is widely used in mineral processing, agriculture, chemicals, and construction industries.



Tray Dryer

A Tray Dryer is a batch-type drying system where materials are placed on trays inside a heated chamber for moisture removal. Hot air circulates evenly across the trays to ensure uniform drying. It is widely used in food, pharmaceutical, and chemical industries.



Microwave Spices Dryer

A Microwave Spices Dryer is an advanced drying system that uses microwave energy to remove moisture from spices quickly and uniformly. The internal heating process helps retain natural color, aroma, and flavor while reducing drying time. It is widely used in spice processing and food industries.



Fish Dryer

A Fish Dryer is a specialized drying system designed to remove moisture from fish using controlled hot air circulation. The drying process helps preserve the fish, extend shelf life, and maintain product quality. It is widely used in seafood processing and fish preservation industries.



Food Dryer

A Food Dryer is a drying system designed to remove moisture from food products using controlled heat and air circulation. The process helps preserve food, extend shelf life, and maintain quality. It is widely used for drying fruits, vegetables, spices, and other food products.



Spiral Conveyor Dryer

A Spiral Conveyor Dryer is a continuous drying system where products move along a spiral conveyor inside a heated chamber. Hot air circulates around the material to ensure uniform and efficient moisture removal. It is commonly used in food, chemical, and pharmaceutical processing industries.



Grain Dryer

A Grain Dryer is an agricultural drying system designed to reduce moisture content in grains using controlled hot air. The drying process helps prevent spoilage, mold growth, and quality loss during storage. It is widely used for drying crops such as rice, wheat, corn, and other cereals.



Freeze Dryer

A Freeze Dryer is an advanced drying system that removes moisture from materials through a process called freeze-drying or lyophilization. The product is first frozen and then dried under vacuum, allowing ice to convert directly into vapor without passing through the liquid stage. This method preserves the product's structure, nutrients, and quality, making it ideal for food, pharmaceuticals, and biotechnology applications.



IR Dryer

An IR Dryer (Infrared Dryer) is a drying system that uses infrared radiation to heat and remove moisture from materials quickly and efficiently. The heat is transferred directly to the product surface for fast evaporation. It is widely used in food processing, textiles, coatings, and industrial drying applications.



Coir Pith Dryer

A Coir Pith Dryer is an industrial drying system designed to reduce moisture in coir pith, a by-product of coconut husk processing. It uses hot air or rotary drum technology to ensure fast and uniform drying. The process improves product quality and makes the coir pith suitable for packaging, export, and agricultural applications.



Slag Dryer

A Slag Dryer is an industrial drying system designed to remove moisture from metallurgical or mineral slag using hot air and a rotating drum or similar mechanism. The drying process improves material handling, storage, and further processing efficiency. It is widely used in cement plants, steel industries, and mineral processing units.



Conveyorised Organic Waste Dryer

A Conveyorised Organic Waste Dryer is a continuous drying system designed to reduce moisture in organic waste using a moving conveyor inside a heated chamber. Hot air circulates around the material to ensure uniform and efficient drying. This process reduces waste volume and converts organic waste into useful by-products such as compost or fuel.



Pulp Packaging Dryer

A Pulp Packaging Dryer is a drying system used to remove moisture from molded pulp products such as trays, cartons, and protective packaging. It uses controlled hot air or thermal drying to ensure uniform moisture removal and product strength. This process improves product quality and prepares the packaging for finishing and use.



Umbrella IR Dryer

An Umbrella IR Dryer is a drying system that uses infrared heaters arranged in an umbrella-shaped structure to provide uniform heat distribution. It enables fast surface drying with efficient energy use. This dryer is commonly used for coatings, printing, textiles, and industrial finishing processes.



Spray Dryers

A Spray Dryer is an industrial drying system used to convert liquid solutions or slurries into dry powder by atomizing them into a stream of hot air. The fine droplets dry instantly as moisture evaporates rapidly. It is widely used in food, pharmaceutical, chemical, and dairy industries for powder production.



Coal Dryer

A Coal Dryer is an industrial drying system used to reduce moisture content in coal using hot air or rotary drum technology. The drying process improves fuel efficiency, combustion performance, and handling properties. It is widely used in coal processing plants, power plants, and mining industries.



Sludge Dryers

A Sludge Dryer is an industrial drying system designed to reduce moisture content in sludge from wastewater or industrial processes. It uses controlled heat and continuous mixing to ensure efficient and uniform drying. This process reduces sludge volume, making disposal, handling, or reuse more efficient.

Applications

Industry	Description
Food Processing	Drying grains, fruits, vegetables, spices, and dairy products to extend shelf life and prevent microbial growth
Pharmaceuticals	Precise low-temperature drying of tablets, powders, and biological compounds using freeze or vacuum dryers
Textiles & Laundry	High-capacity tumble drying of linens, garments, and uniforms in hospitals, hotels, and laundromats
Chemical Industry	Removing moisture from chemical powders, resins, and granules to meet purity and stability standards
Agriculture	Drying seeds, fertilizers, and crop materials to safe moisture levels for storage and transport
Paper & Pulp	Continuous drying of paper sheets and pulp materials using convection systems
Plastics	Drying hoppers tailored for the drying and dehumidification of plastic resins before molding



Technical Specifications

Parameter	Specification Range	Description
Drying Temperature	40°C – 300°C (104°F – 572°F)	Operating temperature range; varies by material sensitivity and dryer type
Capacity	10 kg – 5,000+ kg/hr	Processing throughput; batch or continuous configurations available
Power Source	Electric / Gas / Steam	Energy input type; gas offers higher efficiency for large-scale operations
Power	1.5 kW – 75 kW	Drives blowers, conveyors, and rotating drums depending on model size
Humidity Control	5% – 95% RH (adjustable)	Relative humidity regulation inside the chamber for precise moisture removal
Control System	PLC / HMI / Digital Panel	Automated process control with programmable cycles and safety interlocks
Heat Transfer Method	Convection / Conduction / Radiation	Method of applying heat to the product being dried
Operating Pressure	Atmospheric to Full Vacuum	Vacuum dryers operate at 40–60°C for heat-sensitive products
Energy Efficiency Rating	Up to 60% savings (Heat Pump)	Heat pump models dramatically cut energy costs vs. conventional dryers



THANK YOU

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