



50⁺ Years
Of experience

BOX DRYER



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.





Box Dryer

A box dryer machine is an industrial drying system that removes moisture from materials using controlled heat and airflow in an enclosed chamber. It consists of insulated compartments with heating elements, circulation fans, and trays where products are placed for drying. Hot air circulates through the chamber, evaporating moisture which exits through exhaust vents. These machines are widely used in food processing for drying fruits, vegetables, and spices, in pharmaceuticals for granules and powders, and across chemical industries.

Modern box dryers feature digital temperature controls, timers, and adjustable airflow for customized drying conditions. They offer uniform heat distribution, precise control, and batch processing capabilities. Available in sizes from small lab units to large industrial systems processing hundreds of kilograms per batch, they provide energy efficiency, contamination prevention, and consistent quality. The controlled environment enables year-round operation independent of weather, making them essential in manufacturing facilities where reliable, reproducible drying is critical.

Key Features

- **Temperature Control System**
Digital controllers maintain precise temperatures from 50°C to 300°C with programmable multi-stage drying profiles for optimal moisture removal without damaging products.
- **Uniform Air Circulation**
Powerful fans ensure even air distribution across all trays, eliminating hot spots and guaranteeing consistent drying throughout the chamber.

- **Insulated Construction**

Double-walled design with high-grade insulation minimizes heat loss, improves energy efficiency by up to 40%, and features corrosion-resistant stainless steel interiors.

- **Multi-Tray System**

Adjustable removable trays maximize loading capacity, typically accommodating 12-48 trays with customizable spacing based on product requirements.

- **Humidity Control**

Controlled exhaust dampers regulate moisture removal while fresh air intake maintains optimal drying conditions throughout the process.

Advantages

- **Precise Temperature Control**

Digital controllers maintain exact temperatures for different materials, ensuring optimal drying without damage to sensitive products.

- **Uniform Drying**

Even heat distribution and controlled airflow ensure all materials dry consistently, eliminating hot spots and under-dried areas.

- **Batch Processing Flexibility**

Handle multiple product types with adjustable settings, accommodating various moisture levels and drying requirements.

- **Quality Preservation**

Controlled conditions maintain color, flavor, nutritional value, and overall product integrity better than uncontrolled methods.

- **Low Maintenance**

Simple design with accessible components makes cleaning and maintenance straightforward and cost-effective.

Applications

Industry	Description
Food Processing	Drying fruits, vegetables, herbs, spices, and nuts while preserving nutrition and extending shelf life.
Pharmaceutical	Drying granules, powders, and herbal medicines under controlled conditions for quality compliance.
Agriculture	Post-harvest drying of grains, seeds, and pulses to prevent spoilage and ensure safe storage.
Tea & Coffee	Processing leaves and beans to optimal moisture levels for flavor and preservation.
Wood Processing	Seasoning timber to reduce moisture and prevent warping for furniture and construction.
Textile	Drying fabrics, yarn, and fibers after treatment without damaging delicate materials.



Technical Specifications

Parameter	Specification Range	Description
Capacity	10 kg - 500 kg per batch	Material loading capacity depending on model size
Temperature Range	50°C - 250°C	Adjustable heating range for different materials
Temperature Accuracy	±1°C - ±2°C	Precision of temperature control system
Heating Method	Electric / Gas / Steam	Available heating source options
Power Consumption	3 kW - 50 kW	Energy requirement based on dryer capacity
Drying Time	2 - 24 hours	Depends on material type and moisture content
Tray Capacity	12 - 96 trays	Number of drying trays per unit
Airflow Type	Horizontal / Vertical	Direction of air circulation pattern
Air Circulation	Natural / Forced convection	Method of air movement through chamber
Insulation Thickness	50 mm - 100 mm	Thermal insulation for heat retention
Voltage	220V / 380V / 415V	Power supply requirements
Safety Features	Over-temp cutoff, Alarms	Protection mechanisms included



THANK YOU

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