



**50<sup>+</sup> Years**  
*Of experience*

# DRUM 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.





## Drum Dryers

An industrial drum dryer is a heavy-duty thermal processing machine designed to continuously remove moisture from bulk materials by exposing them to a controlled stream of hot air as they tumble through a slowly rotating cylindrical drum. The drum, typically made from carbon or stainless steel, is slightly inclined to allow gravity-assisted material flow from the feed end to the discharge end. Heat is supplied either directly – by combustion gases passing through the drum – or indirectly through steam-heated or gas-heated shell panels. The rotation speed, air temperature, and drum inclination are all adjustable parameters that allow operators to fine-tune drying performance for a wide range of products and moisture levels.

These machines are engineered for continuous, high-throughput operations in demanding industrial environments. They are used across sectors ranging from agriculture and mining to chemicals and food processing, where consistent, uniform drying is critical to product quality and downstream processing. Modern drum dryers incorporate advanced control systems, variable-frequency drives, and energy-recovery heat exchangers to maximize efficiency and minimize operating costs. Their robust construction enables reliable 24/7 operation with low maintenance requirements, making them one of the most cost-effective drying solutions for large-scale industrial applications.

### Key Features

- **Robust Rotating Drum Construction**  
Heavy-gauge steel drum with corrosion-resistant lining, available in lengths from 3 m to 30 m and diameters from 0.5 m to 5 m, engineered for continuous high-load operation.

- **Adjustable Inclination Angle**  
Drum tilt (typically 1.5°–5°) is configurable to control material residence time and ensure thorough, uniform drying for varying feed rates and moisture targets.
- **Direct or Indirect Heating Modes**  
Supports direct-fired (combustion gas contact) or indirect-fired (steam/thermal oil jacket) configurations, selectable based on product sensitivity and regulatory requirements.
- **Variable Speed Drive (VFD) Control**  
Frequency-controlled drum rotation (1–10 RPM) allows precise tuning of tumbling action and drying intensity, minimizing product degradation and over-drying.
- **High Thermal Efficiency**  
Optimized airflow path, insulated drum shell, and optional heat-recovery systems (exhaust gas recuperators) reduce fuel consumption by up to 30% compared to conventional designs.

### Advantages

- **High Throughput**  
Handles large volumes continuously – capacities from 1 TPH to 100+ TPH – ideal for industrial-scale production.
- **Energy Efficient**  
Heat recovery systems and optimized airflow reduce fuel and energy costs significantly over the machine lifetime.
- **Low Maintenance & High Durability**  
Minimal moving parts and rugged construction result in long service life with low downtime and reduced maintenance costs.
- **Environmental Compliance**  
Built-in emission control systems (cyclones, bag-houses) meet environmental regulations for particulate emissions.

## Types Of Drum Dryers

Single Drum Dryer

Double Drum Dryer

Contact Drum Dryer



### Single Drum Dryer

A Single Drum Dryer is an industrial drying machine designed to remove moisture from liquid or semi-liquid materials by spreading them as a thin film over a heated rotating drum. As the drum rotates, the material dries quickly due to direct contact with the heated surface, forming a solid layer. The dried product is then scraped off using a stationary knife, producing flakes or powder for further processing.



### Double Drum Dryer

A Double Drum Dryer is an industrial drying system that uses two closely spaced, counter-rotating heated drums to dry liquid or slurry materials into thin sheets. The material is fed into the gap between the drums, where it forms a thin film and dries rapidly through direct heat transfer. The dried product is then scraped off with stationary knives, producing uniform flakes or powder suitable for further processing.



### Contact Drum Dryer

A Contact Drum Dryer is a thermal drying system in which wet material is dried through direct contact with the heated surface of a rotating drum. The product forms a thin film on the drum surface, allowing efficient heat transfer and rapid moisture evaporation. Once dried, the material is removed by a scraper blade and collected as flakes or powder for further use.

## Applications

Industry	Description
Agriculture & Food	Drying grains (corn, wheat, rice), sugar, starch, animal feed pellets, and food ingredients to safe moisture levels for storage and packaging.
Mining & Minerals	Drying iron ore, potash, phosphate rock, coal, sand, and aggregates to meet moisture specifications for transport, processing, or pelletization.
Biomass & Bioenergy	Reducing moisture content of wood chips, sawdust, bagasse, and agricultural residues to improve combustion efficiency and pellet quality for biofuel production.
Construction Materials	Drying sand, gravel, fly ash, and other raw materials used in cement, asphalt, and concrete production to achieve precise moisture targets.
Plastics & Polymers	Pre-drying plastic pellets, resins, and polymer granules to eliminate surface and absorbed moisture that could cause defects during molding or extrusion.



## Technical Specifications

Parameter	Specification Range	Description
Drum Diameter	0.5 m – 5.0 m	Determines volumetric capacity; larger diameters for higher throughput.
Drum Length	3 m – 30 m	Longer drums increase residence time and drying efficiency for difficult materials.
Processing Capacity	1 – 100+ TPH	Throughput of dry material per hour; depends on drum size and material properties.
Drum Rotation Speed	1 – 10 RPM	Controlled via VFD; lower speeds for fragile materials, higher for dense granules.
Inlet Air Temperature	150°C – 800°C	Depends on heating method and material heat sensitivity. Direct-fire can reach 800°C.
Outlet Air Temperature	60°C – 120°C	Controlled to maximize heat utilization while preventing condensation in exhaust duct.
Thermal Efficiency	55% – 85%	Ratio of useful drying heat to total heat input; improved by heat recovery systems.
Installed Motor Power	5 kW – 250 kW	Drive motor power; scaled to drum size and material bulk density.
Control System	PLC / SCADA / HMI	Fully automated with real-time monitoring, alarm management, and remote access.



# THANK YOU

## UNIT 1 (KESL)

4 & 5, Marudhar Industrial Estate, Gas Godown Lane, Goddev Fatak Road, Bhayander (E), Dist. Thane - 401105. (India)

Contact Us  
+91-22 48255071, 48255072

## UNIT 2 (MIDC)

Plot No. B-47, Addl. MIDC Anand Nagar, Ambernath (E), Dist. Thane - 421506 (India)

Contact Us  
+91(0251)2620542/43/44/45/46

## UNIT 3 (KRDC)

Plot No K2, Industrial Gala F4A, D- Wing, MGN Properties, Opposite Godrej Co., Addl MIDC Anand Nagar, Ambernath (E)- 421506 (India)

Contact Us  
+91-2512620543/44

## UNIT 4 (EUROPE)

(EMitech) Viale della Palma, 7, 70033 Corato BA, Italy (Europe)

Contact Us  
+91-2512620543/44

## UNIT 5 (THAILAND)

Thailand Representative: 163 Rajapark Building, 18th floor, Sukhumvit 21 Road (Asoke), Wattana, Bangkok - 10110, Thailand

Contact Us  
G.Vivekanand  
+6689 500 9821

## Uzbekistan / Kazakhstan (Office)

TIT Company LLC: 100060, 2, A. Kahhar, Tashkent, Uzbekistan

Contact Us  
Mr. Slava  
+998 903540963

## Israel (Office)

Ornatus Industrial Tech Ltd: Dam Hamacbim 36, 7178602 Modiin, Israel

Contact Us  
Omri Fabian  
+972 584844887

## Australia & New Zealand (Office)

Linetech Pty Ltd: Po Box 3046, Browns Plains, Qld 4118. Australia

Contact Us  
Eric Quevauvilliers  
+61 (0)418 871 005

## Bangladesh (Office)

House-10, Road-5 Priyanka City, Sector-12, Uttara, Dhaka-1230, Bangladesh

Contact Us  
Md. Emtiaz Morshed  
+8801747762200

## Chile & South America (LatAM)

La Concepcion 165 Oficina 303, Providencia, Santiago, CHILE

Contact Us  
+56 232 243 921



SCAN HERE

## ✉ Our Mails

info@kerone.com  
sales@kerone.com  
marketing@kerone.com

## 🌐 Website

www.kerone.com  
www.kerone.in  
www.keronedryers.com  
www.keronebiochar.com