



KERONE
Kerone Engineering Solutions Limited



MICROWAVE HEATING DRYER

50⁺ Years
Of experience



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

Microwave Heating Dryer

The Microwave Heating Dryer is an advanced industrial drying solution that uses microwave energy to rapidly remove moisture from various materials. Unlike conventional methods, it penetrates materials volumetrically, ensuring uniform drying in significantly less time while maintaining product quality. This versatile system is ideal for processing food products, pharmaceuticals, chemicals, textiles, and agricultural materials, featuring precise temperature control, automated operation, and energy-efficient performance.

Key benefits include up to 70% faster drying times and 50% lower energy costs compared to traditional dryers. The stainless steel construction ensures durability and food-grade compliance, while the compact design suits facilities with limited space. Equipped with safety interlocks, digital controls, and customizable power settings, it handles different materials and moisture levels efficiently. Available in various capacities from laboratory to industrial scale, this dryer delivers reliable, eco-friendly performance for modern manufacturing operations.

Key Features

- **Rapid Drying Technology**
Up to 70% faster processing than conventional dryers with reduced cycle times
- **Energy Efficient**
Reduces operational costs by 50% with lower power consumption and minimal heat loss
- **Uniform Heating**
Volumetric penetration ensures even moisture removal throughout the entire product

- **Versatile Application**
Suitable for food, pharmaceutical, chemical, textile, and agricultural industries
- **Digital Controls**
Automated operation with PLC-based programmable settings for batch consistency
- **Precise Temperature Control**
Real-time monitoring with adjustable ranges from 40°C to 120°C
- **Customizable Power**
Adjustable microwave power settings for different materials and moisture levels
- **Safety Features**
Built-in interlocks, leakage protection, and emergency stop systems for secure operation
- **Scalable Capacity**
Available from laboratory (5-10 kg/hr) to full industrial-scale production (500+ kg/hr)

Advantages

- **Ultra-Fast Drying**
Reduces processing time by 70%, completing cycles in minutes versus hours
- **Significant Cost Reduction**
Cuts energy consumption by 50% with lower operational expenses
- **Temperature Control**
Prevents overheating and burning of heat-sensitive materials
- **Low Maintenance Costs**
Durable construction with fewer moving parts reduces repairs and downtime
- **Eco-Friendly Performance**
Zero emissions, reduced carbon footprint, and sustainable operation
- **Simple User Operation**
Intuitive controls require minimal training for operators

Applications

Industry	Description
Food Processing	Drying fruits, vegetables, meat, seafood, herbs, spices, pasta, and snacks while preserving nutritional value and taste
Pharmaceuticals	Drying medicines, tablets, powders, granules, and herbal extracts with precise temperature control for active ingredients
Chemical Industry	Drying pigments, dyes, catalysts, fine chemicals, and powder materials with uniform moisture removal
Agricultural Products	Processing grains, seeds, nuts, tea leaves, and animal feed with reduced spoilage and extended shelf life
Textile Industry	Drying fabrics, yarns, fibers, and textile materials quickly without damage or shrinkage
Ceramic & Building Materials	Drying clay, ceramics, plaster, and construction materials with controlled heating
Wood Processing	Drying timber, veneers, and wood products evenly to prevent warping and cracking



Technical Specifications

Parameter	Specification Range	Description
Microwave Frequency	2450 MHz ± 50 MHz	Standard industrial frequency
Power Output	6 kW - 200 kW	Adjustable for capacity needs
Processing Capacity	5 - 1000 kg/hr	Lab to industrial scale
Temperature Range	40°C - 150°C	Precise temperature control
Drying Efficiency	85% - 95%	High moisture removal rate
Belt Speed	0.5 - 5 m/min	Variable speed control
Chamber Size	1000-6000 mm (L) x 600-1200 mm	Customizable dimensions
Power Supply	380V/415V, 3-phase, 50/60Hz	Standard industrial power
Energy Consumption	0.4 - 0.8 kWh/kg water	Energy efficient operation
Control System	PLC with touchscreen HMI	Automated programmable control
Microwave Leakage	< 5 mW/cm ²	International safety compliant
Noise Level	< 75 dB	Low noise operation



THANK YOU

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