



KERONE
Kerone Engineering Solutions Limited



COCONUT COIR 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.





Coconut Coir Dryer

The Coconut Coir Dryer is a purpose-built industrial production line composed of a hot air stove, rotary dryer, feeder, conveyor, dust remover, packer, and other supporting equipment. After desalination and dehydration, cocopeat bran with a moisture content of 50–60% is delivered into the drum via conveyor, where it undergoes downstream drying. The coconut coir is continuously lifted and scattered in a spiral manner under the action of lifting boards, enabling efficient heat exchange between the coir and hot air through inner, middle, and outer drum layers.

Specially developed for coconut coir and fiber drying, the machine can be directly connected with coconut shell opening and sorting machines. The complete process — including separation, desalination, dehydration, and drying — can be finished within forty minutes through pipeline operation, making it labor-saving, energy-saving, and environmentally protective. High-temperature treatment during the process ensures the coconut coir and fiber quality is preserved to the maximum extent.

Key Features

- **Precise Temperature Control**
Temperature is precisely controlled to keep material temperature below 50°C, ensuring dried coconut coir completely retains its original color and fragrant smell.
- **Intelligent Automation**
The drying system is equipped with a PLC control system with a high degree of automation and simple one-key operation, with automatic control of operating parameters.

- **Multi-Fuel Hot Air Furnace**

A high-efficiency energy-saving hot air furnace is configured, capable of running on natural gas, diesel, coal, wood, straw, or rice husk, supplying 500–650°C oxygen-poor hot air that reduces to 50–65°C upon discharge.

- **Residue Cleaning System**

A unique residue cleaning system cleans the wrapped furfural residue in silk fiber during the drying process, ensuring the finished fiber is much purer.

- **Eco-Friendly Dust Management**

Wet exhaust gas containing dust passes through a professional dust collector before discharge, meeting environmental discharge standards.

Advantages

- **Low Energy Consumption**

Unique structure delivers high thermal efficiency while keeping operational energy costs minimal.

- **Single-Pass Moisture Reduction**

Reduces moisture content from ~50% down to less than 15% in a single drying pass.

- **Versatile Material Compatibility**

Also applicable for wood chips, wood shavings, sawdust, palm fiber, and other biomass materials.

- **Quality Preservation**

Coir retains its natural color, texture, and fragrance throughout the process.

- **Fast Processing**

Entire coir processing cycle completed within 40 minutes, maximizing throughput.

- **Safe & Clean Operation**

Precise temperature control and scientific sealing technology ensures a clean and environmentally friendly production process.

Applications

Industry	Description
Coconut Fiber Processing	Primary use – drying wet coconut fibers for manufacture of ropes, mats, brushes, and upholstery stuffing
Agriculture & Horticulture	Producing dried, pathogen-free coir used as growing medium, mulch, and sterile substrate for seedlings
Coco Peat / Brick Manufacturing	Drying cocopeat to <15% moisture for compressing into portable, eco-friendly coconut bricks for storage & transport
Automotive Industry	Dried coir used in seat cushions, interior padding, and sound insulation components
Biomass & Energy	Dried coir used as biomass fuel or feedstock for energy generation
Textile Industry	Supplying dried coconut fiber as raw material for natural fiber textiles and non-woven fabrics
Waste Recycling	Green recycling of shredded coconut shell by-products into usable commercial materials



Technical Specifications

Parameter	Specification Range	Description
Inlet Moisture Content	50–60%	Moisture level of raw cocopeat/fiber entering the dryer
Outlet Moisture Content	≤ 15%	Target moisture after single-pass drying
Inlet Hot Air Temperature	500–650°C	Temperature of oxygen-poor hot air supplied by the furnace
Outlet Air Temperature	50–65°C	Temperature of hot air after heat exchange and discharge
Drum Inclination	3–5°	Angle to ensure smooth material flow from inlet to outlet
Production Capacity	3 – 50,000 tons/day	Scalable line configurations based on customer requirements
Drum Type	Three-layer rotary drum	Inner, middle, outer layers for maximized heat transfer



THANK YOU

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