



KERONE
Kerone Engineering Solutions Limited



50⁺ Years
Of experience

POULTRY MANURE
ROTARY 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.





Powered by AI/ML & IoT

Poultry Manure Rotary Dryer

A Poultry Manure Rotary Dryer is a heavy-duty industrial drying machine specifically engineered to reduce the moisture content of raw poultry waste – including chicken, duck, and turkey manure – from its initial wet state (typically 50–80% moisture) down to a commercially usable level of 10–15%. The machine operates on a rotating drum principle, where the wet material is fed into an inclined cylindrical drum that continuously rotates, exposing the manure to a controlled flow of hot air generated by a burner or heat exchanger. As the drum rotates, internal lifting flights tumble the material repeatedly through the hot airstream, ensuring uniform and efficient drying throughout the entire batch.

The machine is built from heavy-gauge carbon or stainless steel, designed to withstand the highly corrosive and abrasive nature of animal waste. It integrates seamlessly into fertilizer production lines, biogas plants, and organic waste processing facilities. Equipped with variable speed drives, adjustable drum inclination, and automated temperature control systems, the rotary dryer offers consistent performance at high throughputs. The dried output is odor-reduced, pathogen-minimized, lightweight, and ready for pelletizing, bagging, or direct field application – making it a cornerstone machine in the organic fertilizer and waste-to-resource industry.

Key Features

- **High-Efficiency Thermal System**
Direct or indirect heating with coal, gas, biomass, or diesel burners ensuring rapid moisture evaporation

- **Rotating Drum Design**
Inclined drum with internal lifting flights for continuous material tumbling and even heat distribution
- **Automated Temperature Control**
PLC-based monitoring with real-time adjustment of inlet/outlet temperatures for consistent drying quality
- **Variable Speed Drive**
Adjustable drum rotation speed (1–8 RPM) to match different material types and moisture levels
- **Scalable Drum Sizes**
Available in multiple diameters (Ø0.6m to Ø3.6m) and lengths to match production capacity requirements
- **Low Maintenance Design**
Riding ring and trunnion roller system for smooth rotation with minimal mechanical wear

Advantages

- **Rapid Drying**
Reduces moisture from ~70% to <15% in a single continuous pass
- **High Throughput**
Processes 1 to 30+ tons per hour depending on machine size
- **Odor Reduction**
Heat treatment significantly reduces foul odors from raw manure
- **Pathogen Kill**
High drying temperatures destroy harmful bacteria and pathogens (Salmonella, E. coli)
- **Energy Efficient**
Multi-pass drum design maximizes heat contact and minimizes fuel consumption
- **Versatile Fuel Source**
Compatible with coal, natural gas, LPG, biomass, or heavy oil burners

Applications

Industry	Description
Organic Fertilizer Manufacturing	Drying raw poultry manure for pelletizing into commercial organic fertilizer products
Poultry & Livestock Farms	On-farm waste management to convert daily manure output into storable, dry byproduct
Biogas / Bioenergy Plants	Post-digestion digestate drying to produce solid fuel or fertilizer from biogas residues
Agriculture & Horticulture	Producing bagged dry manure for retail sale to farmers and gardeners
Waste Treatment & Recycling	Municipal or commercial poultry processing plant waste volume reduction
Aquaculture Feed Industry	Drying manure for use as a nutrient-rich ingredient in fish/shrimp feed formulations
Soil Amendment Production	Creating soil conditioner products that improve soil structure and microbial activity



Technical Specifications

Parameter	Specification Range	Description
Drum Diameter	Ø0.6 m – Ø3.6 m	Determines processing volume; larger diameter = higher capacity
Drum Length	6 m – 30 m	Longer drum provides extended drying contact time
Capacity	1 – 30 t/h	Wet feed throughput per hour depending on drum size
Inlet Air Temperature	300°C – 800°C	Hot gas temperature entering the drum from the burner
Drum Rotation Speed	1 – 8 RPM	Adjustable via variable frequency drive
Drum Inclination	1° – 5°	Slight tilt controls material residence time in drum
Thermal Efficiency	70% – 85%	Heat utilization efficiency of the drying system
Evaporation Rate	50 – 400 kg water/h	Water removal capacity per hour
Control System	PLC + HMI Touchscreen	Automated monitoring of temperature, speed, and feed rate



THANK YOU

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