



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

# SLAG 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

## Slag Dryer

A Slag Dryer is a heavy-duty industrial rotary drying machine specifically designed to reduce the moisture content of slag – a byproduct generated during the smelting or refining of metals such as iron, steel, copper, and lead. The machine operates by feeding wet slag material into a rotating drum where it comes into direct or indirect contact with high-temperature hot gases or heat sources, effectively evaporating excess moisture and producing a dry, manageable output. The entire process is engineered to handle the abrasive and dense nature of slag while maintaining high thermal efficiency and continuous production capacity.

Built for rugged industrial environments, the slag dryer integrates components such as a feeding device, rotary drum, lifting plates, heat source system, discharge unit, and dust collection system. As the drum rotates at a controlled speed, internal lifting blades continuously tumble the slag material, maximizing its exposure to the drying airflow. The output moisture level can be precisely controlled based on the downstream processing requirements, making the slag dryer an essential machine in metallurgical, cement, and construction material industries where processed slag is reused as a valuable raw material or aggregate.

### Key Features

- **Rotary Drum Design**  
Large-diameter rotating drum ensures continuous and uniform drying with high throughput capacity.
- **Adjustable Inclination Angle**  
The drum inclination can be adjusted (typically 3°–5°) to control material residence time and drying efficiency.

- **High Thermal Efficiency**  
Optimized lifting plate arrangement ensures maximum contact between slag and hot air, reducing fuel consumption.
- **Heavy-Duty Construction**  
Built with wear-resistant steel and reinforced components to withstand the abrasive nature of slag materials.
- **Variable Speed Control**  
Drum rotation speed is adjustable via frequency converter for precise control over drying parameters.
- **Continuous Operation**  
Designed for 24/7 non-stop industrial operation with minimal maintenance downtime.

### Advantages

- **High Efficiency**  
Rapid moisture removal with low energy consumption per ton of processed slag
- **Large Capacity**  
Handles processing volumes from small batches up to hundreds of tons per hour
- **Low Operating Cost**  
Durable components reduce replacement frequency and maintenance expenses
- **Eco-Friendly**  
Built-in dust control systems minimize air pollution and meet emission standards
- **Stable Performance**  
Consistent output moisture levels regardless of input variation
- **Resource Recovery**  
Converts waste slag into reusable industrial raw material, promoting circular economy

## Applications

Industry	Description
Iron & Steel Manufacturing	Drying activated sludge and biosolids from sewage treatment plants before landfill, incineration, or fertilizer use
Cement Industry	Processing dried slag as a supplementary cementitious material (SCM) to replace clinker
Construction Materials	Producing dried slag for use in road base, bricks, tiles, and lightweight aggregate manufacturing
Chemical Industry	Drying industrial byproduct slag before chemical treatment or further refining
Power Generation	Handling coal ash and slag from thermal power plants for dry disposal or material reuse
Waste Recycling	Processing mixed metallurgical waste slag into saleable secondary raw materials



## Technical Specifications

Parameter	Specification Range	Description
Drum Diameter	1.0 m – 4.0 m	Determines the processing capacity and machine size
Drum Length	6 m – 40 m	Longer drums allow greater drying time and higher capacity
Processing Capacity	1 – 200+ TPH	Tons per hour output depending on model size
Inlet Moisture Content	15% – 40%	Acceptable wet slag moisture before drying
Outlet Moisture Content	0.5% – 5%	Target moisture level after drying process
Drying Temperature	300°C – 800°C	Hot gas temperature entering the drum
Drum Rotation Speed	3 – 8 RPM	Adjustable via frequency converter for optimal retention time
Thermal Efficiency	≥ 85%	High heat utilization minimizing fuel waste
Dust Emission Standard	≤ 50 mg/Nm <sup>3</sup>	Meets national and international environmental standards
Installed Power	7.5 kW – 250 kW	Main drive motor power depending on model



# THANK YOU

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