



# ETP SLUDGE DRYER

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



# 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.





## ETP Sludge Dryer

An ETP (Effluent Treatment Plant) Sludge Dryer is a heavy-duty industrial machine specifically designed to reduce the moisture content of sludge generated from effluent treatment processes in industries. It works by applying controlled thermal energy to wet sludge, converting the moisture into vapor and significantly reducing the volume and weight of the sludge cake. These machines are engineered to handle high-moisture, viscous, and chemically complex sludge materials, making them an essential component in wastewater management and zero-liquid discharge (ZLD) systems.

The machine operates through various drying mechanisms – including rotary drum drying, paddle drying, belt drying, or spray drying – depending on the sludge characteristics and industry requirements. By transforming wet sludge (often containing 70–90% moisture) into a dry, granular, or powdered form, the ETP Sludge Dryer enables safe disposal, landfill reduction, or even resource recovery such as using dried sludge as fuel or fertilizer. It plays a critical role in environmental compliance, waste minimization, and cost-effective sludge management strategies.

### Key Features

- **High Moisture Reduction**  
Capable of reducing moisture content from 70–90% down to as low as 5–15%, drastically cutting sludge volume.
- **Multiple Drying Technologies**  
Available in rotary drum, paddle, belt, disc, and flash dryer configurations to suit different sludge types and capacities.

- **Energy-Efficient Operation**  
Designed with heat recovery systems and insulated chambers to minimize fuel/energy consumption during drying.
- **Continuous & Batch Processing**  
Supports both continuous feed and batch operation modes for flexible production scheduling.
- **Automated Control System**  
Equipped with PLC/SCADA-based automation for temperature, feed rate, and moisture monitoring with minimal manual intervention.
- **Low Maintenance Design**  
Fewer moving parts, easy-access panels, and self-cleaning mechanisms reduce downtime and maintenance costs.

### Advantages

- **Volume Reduction**  
Reduces sludge volume by up to 70–80%, lowering disposal costs significantly
- **Cost Savings**  
Minimizes transportation, landfill, and waste handling expenses
- **Environmental Compliance**  
Helps meet pollution control board (PCB) and environmental regulatory norms
- **Resource Recovery**  
Dried sludge can be reused as fuel (co-incineration), fertilizer, or construction material
- **Safe Handling & Storage**  
Dry sludge is easier and safer to store, pack, and transport
- **Scalable Capacity**  
Available in small to large-scale capacities to suit any plant size

## Applications

Industry	Description
Textile Industry	Drying sludge from dyeing & chemical effluent treatment plants
Pharmaceutical Industry	Processing high-chemical-content sludge from drug manufacturing effluents
Food & Beverage	Drying organic sludge from food processing wastewater treatment
Paper & Pulp Industry	Reducing moisture in fiber-rich sludge from paper mill ETPs
Municipal Sewage Treatment	Drying sewage sludge (biosolids) from STPs for safe disposal or reuse
Fertilizer Industry	Processing nutrient-rich sludge for potential compost or fertilizer use
Power Plants	Drying sludge from cooling tower blowdown and boiler effluents



## Technical Specifications

Parameter	Specification Range	Description
Inlet Moisture Content	60 – 90% (wet basis)	Moisture level of sludge fed into the dryer
Outlet Moisture Content	5 – 15% (wet basis)	Final moisture after drying process
Drying Temperature	80°C – 500°C	Operating temperature range depending on dryer type
Drying Temperature	120°C – 550°C	Operating temperature range based on drying technology used
Evaporation Capacity	50 – 5000 kg/hr	Amount of water evaporated per hour
Throughput / Feed Capacity	100 – 10,000 kg/hr	Total wet sludge processing capacity per hour
Heat Source	Steam / Thermic Fluid / Gas / Electric	Energy input used for drying
Volume Reduction Ratio	Up to 70 – 80%	Reduction in sludge volume after drying
Emission Control	Scrubber / Biofilter / Cyclone	Systems used to treat exhaust gases and odors
Dimensions (Approx.)	Customized as per capacity	Size varies based on throughput and dryer configuration



# THANK YOU

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