



ELEPHANT GRASS DRYER

50⁺ 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.





Elephant Grass Dryer

The Elephant Grass Dryer is an important agricultural innovation that allows for the efficient drying of elephant grass, a fast-growing crop utilized in many ways — including as a biomass fuel. The modern dryer addresses the challenge of drying grass that has a high moisture content and is prone to rotting during storage. It uses modern technologies combining heat and airflow to remove moisture rapidly without sacrificing the nutritional value of the grass, maintaining storage stability and quality for bioenergy and fodder applications.

The machine operates on a rotary drum principle — crushed wet grass with moisture content of around 45–75% is fed via conveyor into a rotating drum, where hot air at temperatures of 150–350°C is drawn through the system by an induced draft fan. As material travels through the drum, moisture evaporates and the outlet temperature drops to 35–55°C before the dried material is discharged via screw conveyor. A multi-stage dust collector purifies exhaust before release, making the process both efficient and environmentally responsible.

Key Features

- **High Energy Efficiency**
Consumes 30–50% less energy compared to standard dryers, maximizing energy savings across large-scale operations.
- **Triple-Pass / Multi-Layer Drum Design**
Three-layer rotary drum configurations increase production capacity by 48–80% over single-cylinder dryers, with evaporation intensity reaching 120–180 kg/m³ per unit volume.

- **Assembled Modular Structure**
The internal assembled structure improves equipment accuracy and makes the machine easy to transport and install on-site.
- **Nutrient-Preserving Drying**
Dried pasture retains its nutrients with bright color and fragrant smell, making it suitable for animal feed applications.
- **Multi-Fuel Compatibility**
Supports multiple heating methods including gas, oil, electric, steam, biomass, and coal — providing operational flexibility across regions and fuel availability.
- **Compact Footprint**
Despite high output, the machine has a small floor space requirement, making it suitable for facilities with limited space.

Advantages

- **Rapid Moisture Reduction**
Quickly reduces forage moisture from 65–75% down to 14–18% in a single pass.
- **Versatile Material Handling**
Suitable for elephant grass, alfalfa, wheat stalks, barley, oat stalks, rice straw, sorghum, corn stalks, and more.
- **Automation Ready**
Many models include automatic controls and built-in safety features that protect the machine during operation.
- **Low Coal Consumption**
Standard coal consumption of only 6–8 kg per tonne, significantly reducing operational fuel costs.
- **Eco-Friendly Exhaust**
Multi-stage dust collection systems ensure clean air discharge, meeting environmental standards.

Applications

| Industry | Description |
|---------------------------|---|
| Livestock & Animal Feed | Dries elephant grass into preserved fodder for cattle, goats, sheep, and other livestock |
| Biomass Energy / Biofuel | Prepares dried grass for pelletizing into biomass fuel pellets for clean energy generation |
| Agricultural Processing | Used on integrated farms to reduce reliance on external feed sources and improve self-sufficiency |
| Biogas Plants | Pre-processes Napier/elephant grass to optimal moisture for anaerobic digestion and biogas output |
| Organic Fertilizer Plants | Dried biomass waste used as feedstock in organic fertilizer production lines |
| Pellet Manufacturing | Dried elephant grass is processed to 10–15% moisture content required for downstream pellet mill processing. |
| Research & Universities | Agricultural universities and research institutes use dryers to study nutritional value, optimize processing techniques, and assess economic feasibility of dried elephant grass. |



Technical Specifications

| Parameter | Specification Range | Description |
|---------------------------------------|-----------------------------|--|
| Input Moisture Content | 45% – 75% | Moisture level of raw wet elephant grass fed into the machine |
| Output Moisture Content | 14% – 18% | Final moisture level after drying; safe for storage and processing |
| Drying Temperature | 150°C – 350°C | Hot air temperature range inside the drum for efficient evaporation |
| Production Capacity | Customizable (t/h) | Adjustable based on drum size; typical input ~2.89 t/h for standard units |
| Coal Consumption | 6 – 8 kg/tonne | Standard fuel consumption per tonne of dried material |
| Evaporation Intensity | 120 – 180 kg/m ³ | Amount of moisture evaporated per unit volume of dryer (three-pass models) |
| Floor Area Required | 8×12 m – 10×20 m | Space needed depending on production capacity configuration |
| Capacity Increase (3-pass vs. 1-pass) | +48% – +80% | Production gain from triple-pass over single-cylinder design |



THANK YOU

UNIT 1 (KESL)

4 & 5, Marudhar Industrial Estate, Gas Godown Lane, Goddev Fatak Road, Bhayander (E), Dist. Thane - 401105. (India)

Contact Us
+91-22 48255071, 48255072

UNIT 2 (MIDC)

Plot No. B-47, Addl. MIDC Anand Nagar, Ambernath (E), Dist. Thane - 421506 (India)

Contact Us
+91(0251)2620542/43/44/45/46

UNIT 3 (KRDC)

Plot No K2, Industrial Gala F4A, D- Wing, MGN Properties, Opposite Godrej Co., Addl MIDC Anand Nagar, Ambernath (E)- 421506 (India)

Contact Us
+91-2512620543/44

UNIT 4 (EUROPE)

(EMitech) Viale della Palma, 7, 70033 Corato BA, Italy (Europe)

Contact Us
+91-2512620543/44

UNIT 5 (THAILAND)

Thailand Representative: 163 Rajapark Building, 18th floor, Sukhumvit 21 Road (Asoke), Wattana, Bangkok - 10110, Thailand

Contact Us
G.Vivekanand
+6689 500 9821

Uzbekistan / Kazakhstan (Office)

TIT Company LLC: 100060, 2, A. Kahhar, Tashkent, Uzbekistan

Contact Us
Mr. Slava
+998 903540963

Israel (Office)

Ornatus Industrial Tech Ltd: Dam Hamacbim 36, 7178602 Modiin, Israel

Contact Us
Omri Fabian
+972 584844887

Australia & New Zealand (Office)

Linetech Pty Ltd: Po Box 3046, Browns Plains, Qld 4118. Australia

Contact Us
Eric Quevauvilliers
+61 (0)418 871 005

Bangladesh (Office)

House-10, Road-5 Priyanka City, Sector-12, Uttara, Dhaka-1230, Bangladesh

Contact Us
Md. Emtiaz Morshed
+8801747762200

Chile & South America (LatAM)

La Concepcion 165 Oficina 303, Providencia, Santiago, CHILE

Contact Us
+56 232 243 921



SCAN HERE

Our Mails

info@kerone.com
sales@kerone.com
marketing@kerone.com

Website

www.kerone.com
www.kerone.in
www.keronedryers.com
www.keronebiochar.com