KNAG

ENABLING THE FUTURE OF FLIGHT WITH LIGHTWEIGHT INNOVATION

EPP Solutions for UAV Drones

Lightweight and Durable

Built for Reliability

As India's first company to mould Expanded Polypropylene (EPP), K. K. Nag Private Limited is pioneering the use of advanced polymers in Unmanned Aerial Vehicle (UAV) technology. With over six decades of material engineering expertise, we partner with drone innovators to co-create components that are precise, durable and performance driven.

From concept to production, our design-led approach empowers next-generation aerial systems with smarter, more resilient materials.

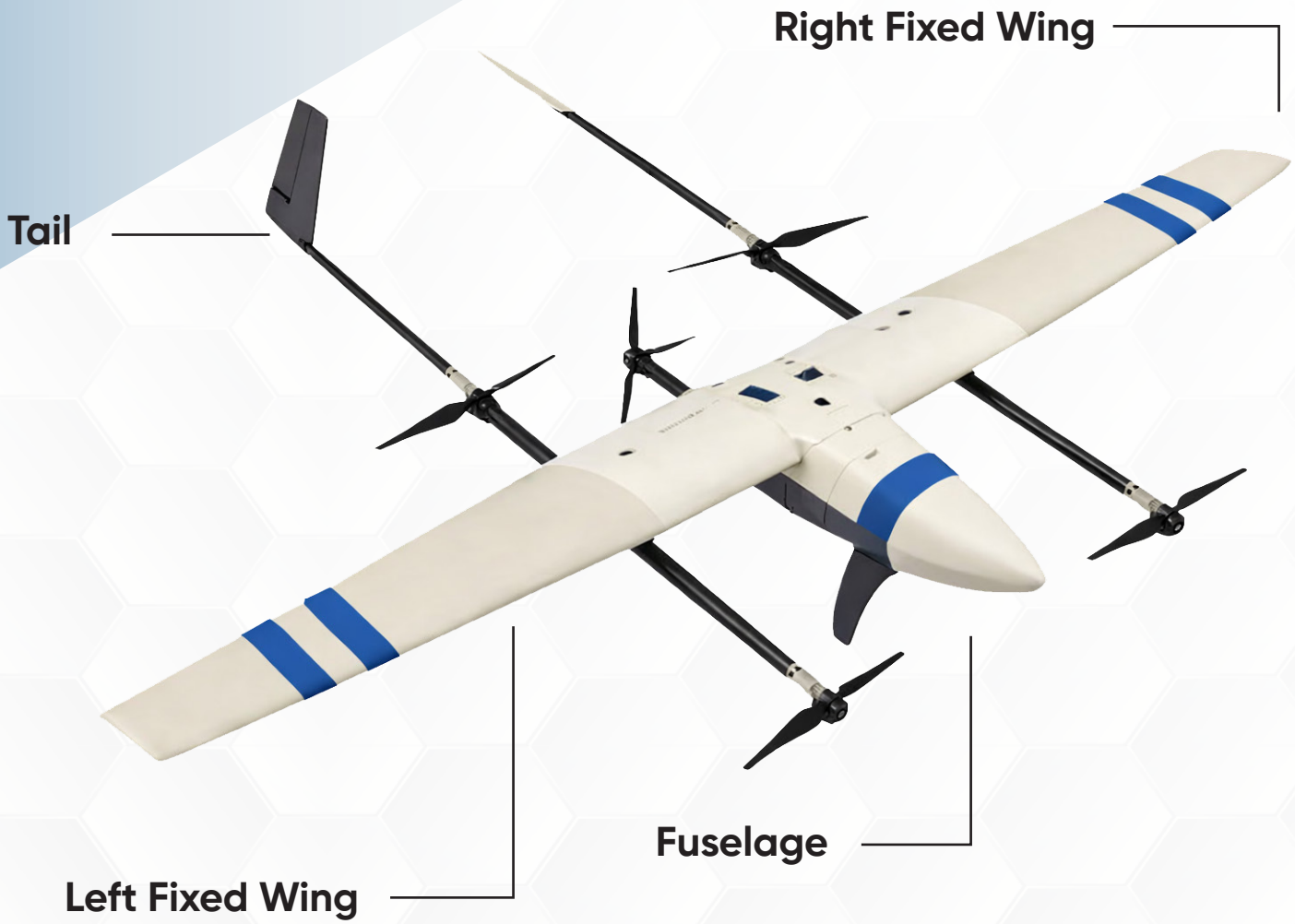
Certifications and Commitments

ISO 9001 CERTIFIED · ISO 14001 CERTIFIED · ISO 45001 CERTIFIED · IATF 16949 CERTIFIED · GREEN COMPANY RATING SYSTEM SILVER · TISAX ENX ASSOCIATION RESULT AVAILABLE

Elevating Innovation with EPP Drone Parts

The UAV industry is rapidly evolving, demanding smarter and lighter materials to meet performance, energy and safety goals. EPP is at the forefront of this transformation – offering lightweight strength for advanced aerial mobility.

Foamed polymers like EPP are prized for their ability to significantly reduce drone mass, extend flight time and enhance energy efficiency – key advantages in both commercial and industrial UAV applications.



Elevating Innovation with EPP Drone Parts

Fuselage (Main Body)

The EPP fuselage forms the UAV's structural core, offering a high strength-to-weight ratio for crash resistance and durability. Lightweight and shock-absorbing, it protects internal components such as sensors, batteries, and electronics.

Drone Wings

EPP wings provide enhanced aerodynamic performance and resilience. Their flexibility and feather-light construction allow for longer flight duration, improved lift and resistance to in-flight vibrations. Ideal for both fixed-wing drones and hybrid UAV designs.

Drone Tail (Stabiliser and Fin)

The EPP tail assembly, including the vertical fin and horizontal stabilisers, ensures balance and stable flight control. Its impact-resistant, self-recovering design maintains shape and directional stability even in challenging conditions.

Nose Cone/Front Dome

Engineered for performance and protection, the EPP nose cone reduces aerodynamic drag while shielding sensitive front-end sensors and cameras. Its impact-absorbing design limits damage during frontal collisions and hard landings, supporting operational reliability.

Why EPP is Ideal for Drone Design

Ultra-Lightweight Structure
Reduces overall drone weight, improving flight efficiency and battery performance.

Impact and Vibration Protection
Absorbs crash shocks and reduces in-flight vibrations, safeguarding critical components and payloads.

Excellent Flexibility and Elasticity
EPP bends under stress and recovers its shape, enhancing durability in dynamic flight conditions.

All-Weather Durability
Zero water absorption with UV and weather resistance for reliable outdoor and marine operations.

Aerodynamic Design Flexibility
Easily moulded into complex shapes for aerodynamic efficiency and compact assembly.

Eco-Friendly and Recyclable
100% recyclable material supports sustainable drone production practices.

Engineered Protection for UAV Packaging

From demanding terrains to critical aerial operations, drones face rough handling, environmental stress and sensitive payload requirements. Our EPP-based packaging delivers more than protection offering reliability, precision and durability.

At K. K. Nag Private Limited, we engineer precision-fit EPP packaging that provides:

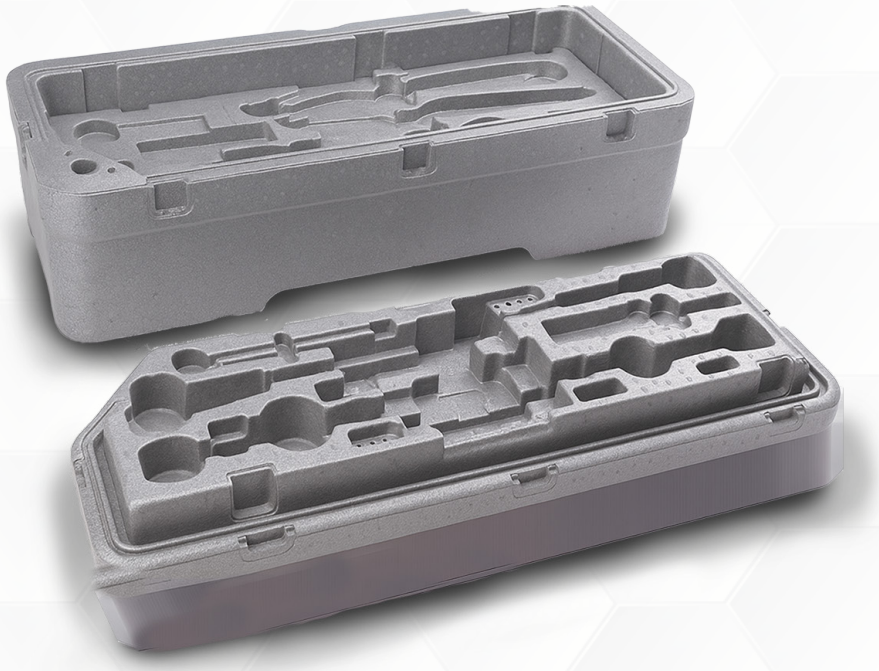
Enhanced protection for sensitive components

Precision-moulded for all drone models

Built to perform in extreme environments

Lightweight design for cost-efficient logistics

Reusable and environmentally responsible



Built for Performance. Designed for the Planet.

Sustainability is more than a product feature; it's a company-wide philosophy. Every design, process and innovation is guided by our commitment to reduce waste, extend product life and promote circularity across industries.

Our Approach to Sustainable Solutions

Resilient by Design

Our products are engineered for long-term use and durability, reducing the need for frequent replacements, conserving resources and lowering environmental impact.

Lightweight for a Lighter Footprint

By developing ultra-lightweight yet strong components, we help reduce transportation fuel consumption, contributing to lower carbon emissions across supply chains.

Lifecycle Efficiency

From multi-use industrial trays to energy-efficient protective packaging, our solutions are designed to deliver maximum utility over their lifespan while minimising resource consumption.

Why Choose K. K. Nag for Your EPP Solutions

In-House Design and Engineering Expertise

Custom solutions tailored to your space, safety and weight requirements using advanced modelling as well as simulation software.

Moulding Capabilities

Designed with integrated channels and impact buffers, our EPP solutions meet the highest standards across all industry applications.

Rapid Tool Development

Complete control over tool design and manufacturing – ensuring precision, speed and confidentiality.

Seamless Transition from Pilot to Production

End-to-end support from initial concept and prototyping to full-scale manufacturing all under one roof.

Why It Matters

- Accelerated Time-to-Market
- Lower Development Costs
- Improved Product Performance
- Aligned Technical Collaboration
- First Time Right Manufacturing
- Scalable Local Production

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