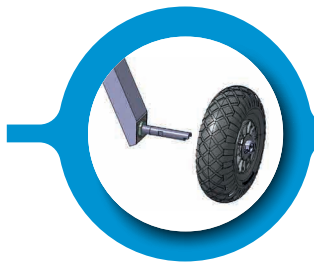


TUK-F

Tactical UAV Catapult System

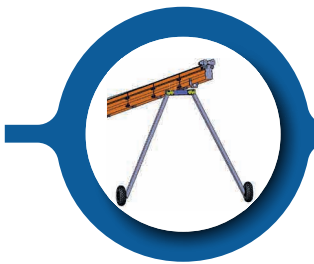
The TUK-F Launcher System is a pneumatic launch platform designed to safely and rapidly accelerate unmanned aerial vehicles (UAVs) or similar airborne platforms during takeoff. It is capable of launching vehicles with a takeoff weight between 20 kg and 100 kg, offering launch speeds between 10-35 m/s, adjustable based on platform weight. Its lightweight and modular structure allows for easy transport and quick deployment in the field. With an integrated power system and electronic main control unit, it enables rapid setup and efficient use under field conditions. Suitable for search and rescue, reconnaissance, firefighting and other unmanned air vehicles.





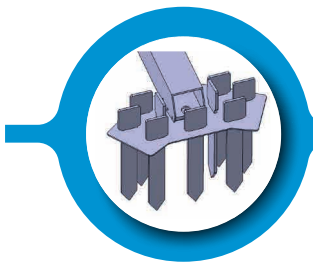
Wheeled Leg Assembly

Integrated wheels for easy transportation and positioning under field conditions.



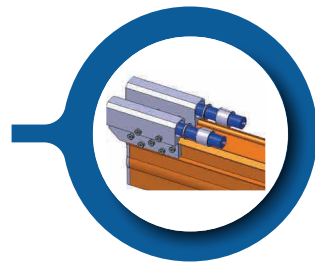
Foldable Tripod Legs

Designed for compact transport and rapid setup.



Ground Fixing System

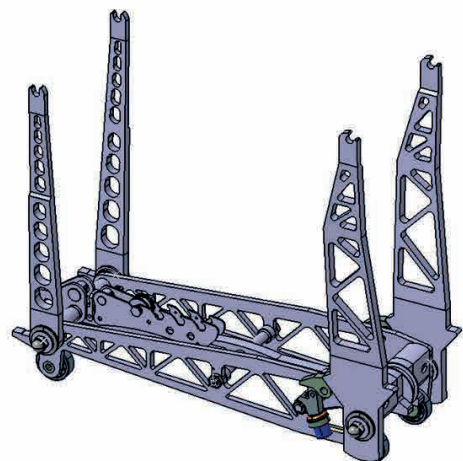
High-strength anchoring system for launch stability and interface precision.



Damper Unit

Absorbs recoil forces generated during high-pressure launches, ensuring the launcher interface is ready for the next operation.

UAV - Specially designed interface



Feature	Specification
Launch Speed Range	10–35 m/s (adjustable)
Platform Weight Range	20-100 kg
Operating Pressure	0–30 bar
Propulsion Type	Pneumatic (manual and automatic control)
Launch Angle	12°
Custom design	Custom interface and shuttle for platform
Setup Time	~15 minutes (with 2 field operators)
Safety Systems	Integrated sensors + Mechanical safeties
Setup Area	2m x 9,3m
Portability	Total 4 cases – 356.5 kg total weight
Battery Capacity	Capable of 6 consecutive launches
Speed Measurement	Real-time speed display in m/s



One Platform Multiple Scenarios

TUK is designed as a versatile infrastructure offering a common solution for diverse-weight platforms and multi-scenario missions. Its development was guided by real field needs such as portability, short setup time, and adjustable speed.



Ease of Use in Different Operations

Features such as portability, quick setup time, and adjustable launch speed have been developed in line with field-driven requirements.



Minimal Equipment Maximum Impact

TUK was conceived to replace bulky launch infrastructures with a lightweight yet effective alternative. Each unit is designed to be carried by two people and shipped in compact crates.



High-Pressure Dynamics

TUK ensures optimal launch pressure for UAVs with different weight categories.



The TUK project is not just a launch system — it is an innovative R&D platform pushing the limits of engineering.

Key engineering challenges addressed include;

- Safe and high-speed launches for platforms with varying weights
- Robust design against sudden pressure releases
- Selection of high-impact and abrasion-resistant braking materials
- Real-time data acquisition and analysis infrastructure
- Ensured stability under harsh field conditions

With its unique design and analytical infrastructure, TUK leads the way for future R&D-based launcher systems in the aviation industry.

System Components:

- Reconnaissance and security
- UAV testing and training
- Search and rescue operations
- Mobile launch from naval platforms

Application Areas:

- Suitable for UAV deployment scenarios including applications in search & rescue and firefighting platforms.



BIAS MÜHENDİSLİK

Haluk Türksoy Arka Sok. 12/2 Altunizade, Üsküdar 34662, İstanbul, Türkiye
info@bias.com.tr | www.bias.com.tr

