



Łukasiewicz
Institute
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Innovative hybrid-powered UAV system for surveillance, cargo transportation, photogrammetry, long-range reconnaissance or diversion, among other purposes

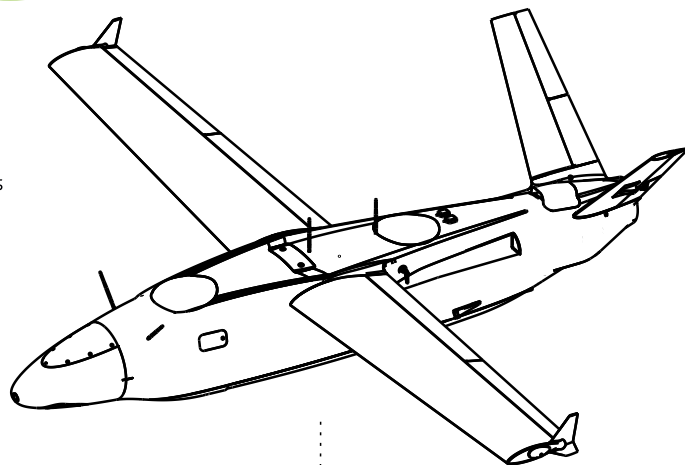
UNMANNED AERIAL VEHICLE HAASTA

CHARACTERISTICS

The design, developed in collaboration with Eurotech, draws upon insights gained from recent years of combat operations. It has been meticulously crafted to address the demands of the battlefield and is aligned with the guidelines outlined in STANAG 4703. The array of payloads it accommodates facilitates diverse flight configurations, all the while upholding robust operational prowess and the capacity to navigate through challenging weather conditions.

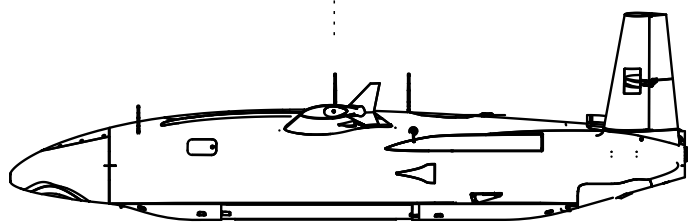
In military applications, the system is designed to penetrate air defenses, operate deep within enemy groupings and perform reconnaissance or air-diversion tasks. The system can also be used in a swarm to confuse anti-aircraft defenses.

Civilian applications – monitoring long stretches of linear infrastructure.



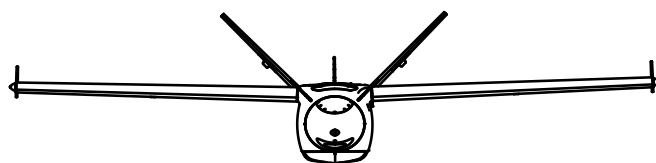
TECHNICAL INFORMATION

Parameter	Value
Wingspan	3,9 [m]
Length	2,9 [m]
Height	0,95 [m]
Speed	120 ÷ 280 km/h
Altitude	Up to 7 000 m MSL
Payload	Up to 35 kg [ok 40 dm ³]
Drive	20HP ICE-electric Hybrid
Flight time	Up to 10 hours
Operating Radius	○ 30 km – standard radio or 80 km – in Mesch system.
	○ 170 km – LoS link with directional antennas (image data).
	○ Satellite modem – range limited by the amount of fuel
Control system	Autonomous control and navigation system resistant to radio-electronic warfare systems



KEY FEATURES

- Load drop of 20 ÷ 30 kg (depending on configuration).
- Operation independent of airport infrastructure: launch from an air launcher, landing on a skid or gliding parachute.
- Platform difficult to destroy: small size, small RCS radar reflectivity footprint, low IR signature due to enclosed propulsion system and high piston engine efficiency.
- Ground Control Station (NSK/GCS) built on the car.
- Ability to quickly modify technology and adapt to mission needs.



In addition to the finished product, HAATA is also a technology demonstrator for modern solutions designed at Lukaszewicz - ILOT, including: acoustically optimized propellers, thermoplastic housings that reflect electromagnetic radiation, aerodynamic optimization].



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