





# AQST<sup>®</sup> USA

Member of AQST Global Space Network


## AQST<sup>®</sup> ALA-

*An Advanced Aviation Technology Solution  
for Precision Farming and Resource  
Management*




- **What is AQST ALA-?** An advanced integrated solution for industrial aerial spraying operations.
- **We are not a drone-** AQST ALA- is an electric Unmanned Aerial Vehicle. We offer real aircraft.
- **Re-used fuselage-** we re-use and retrofit gliders that are not able to be certified for pilot's operation.
- **AI (Autonomous robotic operation)-** Our exclusive artificial intelligence black box is a robotic pilot that can fly under zero visibility with an extreme high precision. It can fly during nights, fog or other climate circumstances that could make it impossible for a human to fly under those conditions.
- **All terrain operation-** No matter if the terrain is flat or mountainous, the aircraft can operate with high precision. (Some limitations about temperature, wind speed and direction and any other physical forces experienced during any flight can affect flight patterns and profile).
- **More time in the air without the cost of fuel-** because it is a glider with electric motors, the quantity of energy required to keep the aircraft in flight could be for long hours, but without the cost of combustion engines. Better performance and longer flight duration than drones.
- **Higher payload capacity-** AQST ALA- can operate with an effective payload capacity in the range between 160 kg and 220 kg. (depends on the liquid's density). Up to 10 times more capacity than a drone.
- **One of a kind-** We offer one of four aircraft in the world that can perform similar operations, but none of them at the costs, performance and technology used on AQST ALA-. We are integrating space grade technology, skills, knowledge, manufacturing process and materials to develop a very low solution without sacrificing quality and performance.



The AQST ALA- was designed and developed specifically for farming, plague control (in general) and vegetation management


# AQST ALA- Specs

AQST USA is offering space-age technology applied to key areas of the economy, industry and health of humanity. ALA- is our contribution to improve our daily lives on planet EARTH. AQST USA supports a stronger and faster financial growth for Las Americas region.

Parameter	Value
Total Launch Mass	~ 420 kg
Payload Mass	200+ kg
Overall Length	6.9 m / 12.7 m
Wingspan	15.0 m / 14.4 m
Height	1 m
Operating Speed	70-110 mph
Operating Wind Speed	8 m/s
Number of Motors	2 / 1 (or 2)
Power	2 x 16 kW / 1 x 32 kW
Landing Gear	Bicycle Scheme
Runway Length	< 100 m



### Technology remarks:

- AQST ALA- is an aircraft developed by AQST USA based on flight proven glider Pirate SZD-30 and motor glider Kaiser A-14.
- All components and technologies are qualified-tested, mature and proven for decades in aviation to mitigate risks, accelerate the manufacturing and offer better warranties.
- High level of production reliability and readiness, minimum development time and minimum cost during development and operation. All our solutions are customizable according to our clients' needs and preferences based on the type of job, operation and performance they require.

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# AQST ALA- main features

**Specifically designed for commercial and industrial farming, plague abatement and vegetation control:**


Unlike existing small drones, ALA- provides the coverage of performance requirements and needs by commercial and industrial farmers, but at a fraction of the cost of lowly reliable drones or expensive man-piloted aircraft.

- ALA- operates at 70-110 mph (ground speed-GS),
- Sprays at a rate of up to 1,000 hectares/day
- The estimated price per flight hour fluctuates between 200 USD and 150 USD. In general, this is about 25% of actual costs per flight hour.
- The cost of acquisition COA will be between 75-100 USD


## **Fully Autonomous:**

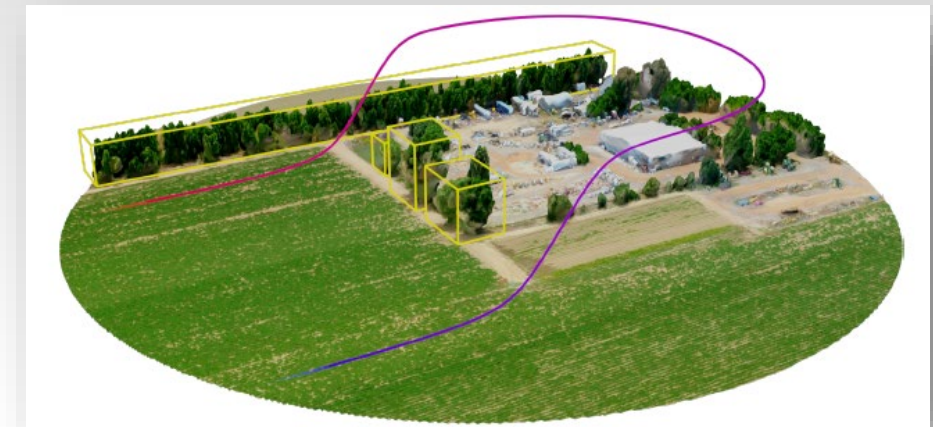
Every aspect of the mission, including path planning and compensation for variable wind conditions is handled autonomously, for any type of flight profile.

## **3D Aerial Mapping and Path Planning:**

ALA- utilizes Lidar-based mapping space technology to know where obstacles are and how to fly around them using the best performance option to minimize waste of material, time and money.

## **High Reliability:**

ALA- uses high-reliability subsystems, redundant sensors and actuators in a simple design providing the highest quality, performance and warranties without sacrificing costs.



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