

Aeros-2/Cross Country ultralight

OWNER /SERVICE MANUAL



Wing: PROFI

Engine: HKS 700E

Manufactured by:

AEROS Ltd
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2.3.2 Fuel

Super grade gasoline, lead free, min RON 95 or aviation gasoline 100LL.

2.3.3 Lubricating Oil

The HKS 700E engine has dry sump forced lubrication.

In general use only brand-name 100% synthetic oil, API classification .SJ. Multigrade is recommended. Take the viscosity of the oil named with SAE at least 15W-30, if available 5W-30 is highly recommended. 0W-30 or 0W-40 is recommended in winter.

Oil Capacity: 4 Litres (this will vary based on the oil line layout and oil cooler size used), oil level is between 1/2 and 2/3 of the oil tank after 3 minutes idling, and consumption 0.1 Litres/Hr Max.

2.3.4 Cooling System

Free air -cooling.

2.4 Weight limits

	Metric	Imperial
Maximum take off weight	472.5 kg	1050 lbs
Empty weight (with Emergency Rescue System)	232.5 kg	517 lbs
Permitted range of pilot weights		
Front seat	55-100 kg	122-222 lbs
Rear seat	0-100 kg	0-222 lbs
Total maximum crew weight	200 kg	444 lbs

2.5 Operational Limits

2.5.1 Centre of Gravity limits

Centre of gravity limits are not critical on the trike of a flex wing ultralight. Having the trike unit attached to the wing with a universal bracket, variations of cockpit loading and fuel loading cannot influence the ultralight's balance. The Aeros-2/Cross Country is therefore not critical in regards to centre of gravity although the distribution of load in the trike has an affect on the in-flight attitude of the ultralight.

2.5.2 Maneuvering Limits

All aerobatic maneuvers including spinning are prohibited.

Aerobatic manoeuvres including stalls, stalled spiral descents and negative G manoeuvres are not permitted. It must be emphasized that a stall, spiral descent or negative G manoeuvre can never be conducted safely. These manoeuvres put the ultralight outside the pilots control and put both the ultralight and its occupants in extreme danger.

Do not pitch nose up or nose down more than 45 degrees from the horizontal. The front support tube of the trike and the pilot's chest limit the fore and aft movement of the control bar respectively.

2.5.3 Bank Angle

Do not exceed 60 degrees of bank angle. In roll there is no stop for the control movement. When performing the pre flight procedure check that the wing moves freely by lowering each wing to within 10 cm of the ground (on ground level).

2.5.4 Flight Load Factor Limits

Max positive maneuvering load factor: 4.0 G.

Negative load factors prohibited.

Load factors below 1.0 G to be avoided.

2.5.5 Kinds of Operation Limits

The ultralight is only to be flown under visual flight rules (VFR), and the minimum equipment required to operate under VFR conditions are an Air speed indicator, Altimeter and instruments required by the engine manufacturer.

Additional equipment may be required for some foreign operations.

2.5.6 Fuel Limitations

Tank capacity 54 liters (14.3 US Gal)

2.5.7 Maximum Passenger Seating Limits

One passenger maximum allowed.

2.5.8 Minimum Pilot Weight

The microlight ultralight must only be flown solo from the front seat. Minimum pilot weight flown solo shall not be below 55 kg. Maximum power at minimum take off weight can cause an abrupt climb rate that, if uncorrected, may cause climb angles of greater than maximum of 45 degrees.

Approximately 2/3 of maximum take off power is considered comfortable for a minimum take off weight. Take off distance will be extended at reduced power.

2.5.9 Other Limitations

Maximum Cross Wind - 6m/s

Maximum Wind Strength - 12m/s

Maximum Ambient Operating Temperature + 40 ...-10 deg C

No person who is untrained or unqualified in weight shift controlled flight or, who is unfamiliar with the wing and trike combination, should ever attempt to pilot the ultralight unless under professional instruction. The effect of light rain on the ultralight can increase the stall speed. It is extremely important to maintain speeds in excess of the take off and landing safety speeds when the wing is wet. If the ultralight has been left out in the rain or heavy dew it is necessary to wipe the wing down prior to take off. It is also recommended that the ultralight be flown solo first to ensure all excess moisture is removed. Continued operation in heavy rain is not recommended due to the abrasive effect of raindrops on the propeller.

CAUTION

MOISTURE ON THE WING CAN INCREASE STALL SPEED AND SHOULD BE REMOVED PRIOR TO TAKE OFF.

3. ULTRALIGHT & SYSTEMS DESCRIPTION

3.1 General

This section provides descriptions of the ultralight and its systems as well as methods of operation where appropriate.

Information on the ultralight flight controls is detailed in this section, but it is mandatory that you receive professional training prior to any solo flight.

3.2 Ground / Flight Control

Ground / flight Controls are as follows:

- Push left pedal = Taxi steering right
- Push left toe = Brakes on
- Ignition switch forward = Switch on
- Choke forward = Choke on

- Control bar move left = Right turn
- Control bar move right = Left turn
- Control bar push out = Pitch up
- Push right toe = Throttle open
- Hand throttle forward = Throttle open