

MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-85 ISSUE: 1

Type: **EuroFOX 2K (tail wheel gear) and EuroFOX 3K (tricycle gear)**

(1)	MANUFACTURER	Ascent Industries Ltd (trading as EuroFOX Aviation), The Hangar, Wanshurstgreen Farm, Battle Lane, Marden, Kent, TN12 9DF.	
(2)	UK IMPORTER	N/A	
(3)	CERTIFICATION	BCAR Section S Issue 6	
(4)	DEFINITION OF BASIC STANDARD	EuroFOX Aviation Build Standard 1 (BS-1)	
(5)	COMPLIANCE WITH THE MICROLIGHT DEFINITION		
(a)	MTOW	450kg/472.5kg ¹	
(b)	Number of seats	2	
(c)	Maximum Wing Loading	39.5 kg/m ² /41.4 kg/m ²	
(d)	Stall speed, V ₅₀	34 kt CAS	
(e)	Permitted range of occupant weights	0 - 100 kg (each) (min cockpit load 55 kg)	
(f)	Typical Empty Weight (ZFW)	266 – 292.5kg	
(g)	ZFW + 172kg crew + 1hr fuel (Rotax 912UL-01 8kg/hr, 912ULS-01 9kg/hr)	446 – 472.5kg	
(h)	ZFW + 86kg pilot + full fuel (86 litres/62kg)	414 – 440.5kg	
(i)	Max ZFW at initial permit issue	Rotax 912UL-01 Rotax 912ULS-01	270kg/292.5kg ¹ 269kg/291.5kg ¹

¹ With approved Airframe Mounted Total Recovery Parachute System (AMTPRS)

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(6) POWER PLANTS

Designation	Rotax 912UL-01	Rotax 912ULS-01
Engine Type	4 cylinder 4 stroke horizontally opposed	
Reduction Gear	2.27:1	2.43:1
Exhaust System	Stainless steel collector box with flexible joints	
Intake System	Airbox with selectable carburettor hot air supply	
Propeller Type	Duc Swirl 3 blade	Duc Swirl 3 blade
Propeller Dia x Pitch	166cm x 21° @ 20cm from tip	173cm x 23.5° @ 20cm from tip
Noise Type Cert No.	195M issue 3	195M issue 3
AAN approving configuration	29437	29437

(7) MANDATORY LIMITATIONS

- (a) Maximum Take-off Weight (MTOW) 450kg/472.5kg¹
- (b) CG Limits
 - Aft limit (912UL-01) 410mm AoD
(912ULS-01) 385mm AoD²
 - Forward limit 260mm AoD
- (c) CG Datum 50mm fwd of wing leading edge at root
- (d) Cockpit Loadings min cockpit load 55 kg
max occupant weight 100 kg (each)
- (e) Never exceed speed, V_{NE} 136 mph/118 kt IAS
- (f) Flap limiting speed, V_{FE} 76 mph/66 kt IAS
- (g) Manoeuvring speed, V_A 93 mph/81 kt IAS
- (h) Permitted manoeuvres Maximum bank angle 60°
Non Aerobatic
Normal acceleration limits, +4g / -2g

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² The Rotax 912ULS-01 aft limit is restricted due to not having flight tested further aft.

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- (i) Fuel Contents 86 litres 85 litres (Max Usable)
46 litres 45 litres (Max Usable)¹
- (j) Power plant

Engine	Rotax 912UL-01	Rotax 912ULS-01
Max RPM	5800 (5 min) 5500 (continuous)	5800 (5 min) 5500 (continuous)
Max Coolant Temp.	120°C	120°C
Max EGT	880°C	880°C
Fuel spec	90 RON minimum unleaded to EN 228 Normal, Super or Super Plus, AVGAS 100LL, UL91. (Unleaded preferred – see engine manual)	95 RON minimum unleaded to EN 228 Super or Super Plus, AVGAS 100LL, UL91. (Unleaded preferred – see engine manual)
Engine oil spec	RON 424, SAE 10 W-40 (See engine manual)	RON 424, SAE 10 W-40 (See engine manual)
Oil pressure	Normal 2-5 bar above 3500rpm Min 0.8 bar below 3500rpm Max 7 bar	Normal 2-5 bar above 3500rpm Min 0.8 bar below 3500rpm Max 7 bar
Oil temperature	50 - 140°C	50 - 130°C
Fuel pressure	0.15 - 0.4bar* *0.5bar with fuel pump S/N 11.0036 or later	0.15 - 0.4bar* *0.5bar with fuel pump S/N 11.0036 or later

(8) INSTRUMENTS REQUIRED

ASI	Altimeter	Slip ball	RPM	Coolant Temp.	Oil Temp.	Oil Pressure	Fuel Contents
0- 150mph or 130kt minimum	Required	Required	0-6000 rpm minimum	Required	Required	Required	Required

A compass is recommended.

¹With modification 3a 'One EuroFOX 40 litre tank'

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(9) CONTROL DEFLECTIONS

Elevator	UP:	30° ±2°	Elevator trim tab	UP:	30° ±3°
Elevator	DOWN:	27° ±2°	Elevator trim tab	DOWN:	30° ±3°
Ailerons	UP:	18° ±2°	Rudder	LEFT:	27° ±3°
Ailerons	DOWN:	8.5° ±1°	Rudder	RIGHT:	27° ±3°
Flaperons	UP:	0° ±2°			
Flaperons	DOWN:	20° ±2°			

Ailerons neutral/flaperons up when flap trailing edge 46mm vertically below continuation of wing root under surface. Refer to EuroFOX neutral position of flapperon drawing for details.

(10) PILOT'S NOTES, MAINTENANCE MANUALS, REFERENCES

10.1 Manuals approved for use with this aircraft

- (a) EuroFOX Aviation Pilot Operating Handbook – EuroFOX Revision 5 dated 7 June or later approved revision
- (b) EuroFOX Aviation EuroFOX Microlight Maintenance Manual Issue 3 dated 11 May 2016 or later approved revision.
- (c) Engine, propeller and other fitted equipment manufacturer's Operating and Maintenance Manuals as appropriate to fitted powerplant and equipment, at their current issues.

10.2 The following placards are to be fitted:

- (a) Flight Limitations Placard (to be visible to the pilot)
See Annex D.
- (b) Engine Limitations Placard (to be located near to the engine instruments)
See Annex D.
- (c) Fuel Limitations Placard (to be located near to fuel tank sight gauges)
See Annex D.
- (d) Fuel/Cockpit Load Trade-off Placard (to be visible to the pilot)
See Annex D
- (e) ASI Markings
See Annex D.
- (f) Switches
See Annex D.

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Issue History

Issue

Reason and Signatory

1 03/08/2016 Initial issue.

A handwritten signature in blue ink, appearing to be 'A.L. Bines', written over a light blue grid background.

A.L. Bines

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- (11) MANDATORY MODIFICATIONS / SERVICE BULLETINS / AIRWORTHINESS DIRECTIVES ETC.

See Annex A.

- (12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

See Annex E.

Rate of Climb: Rotax 912UL-01 - 960 fpm at 72 mph/63 kt IAS
 Rotax 912ULS-01 - 1100 fpm at 79 mph/68 kt IAS

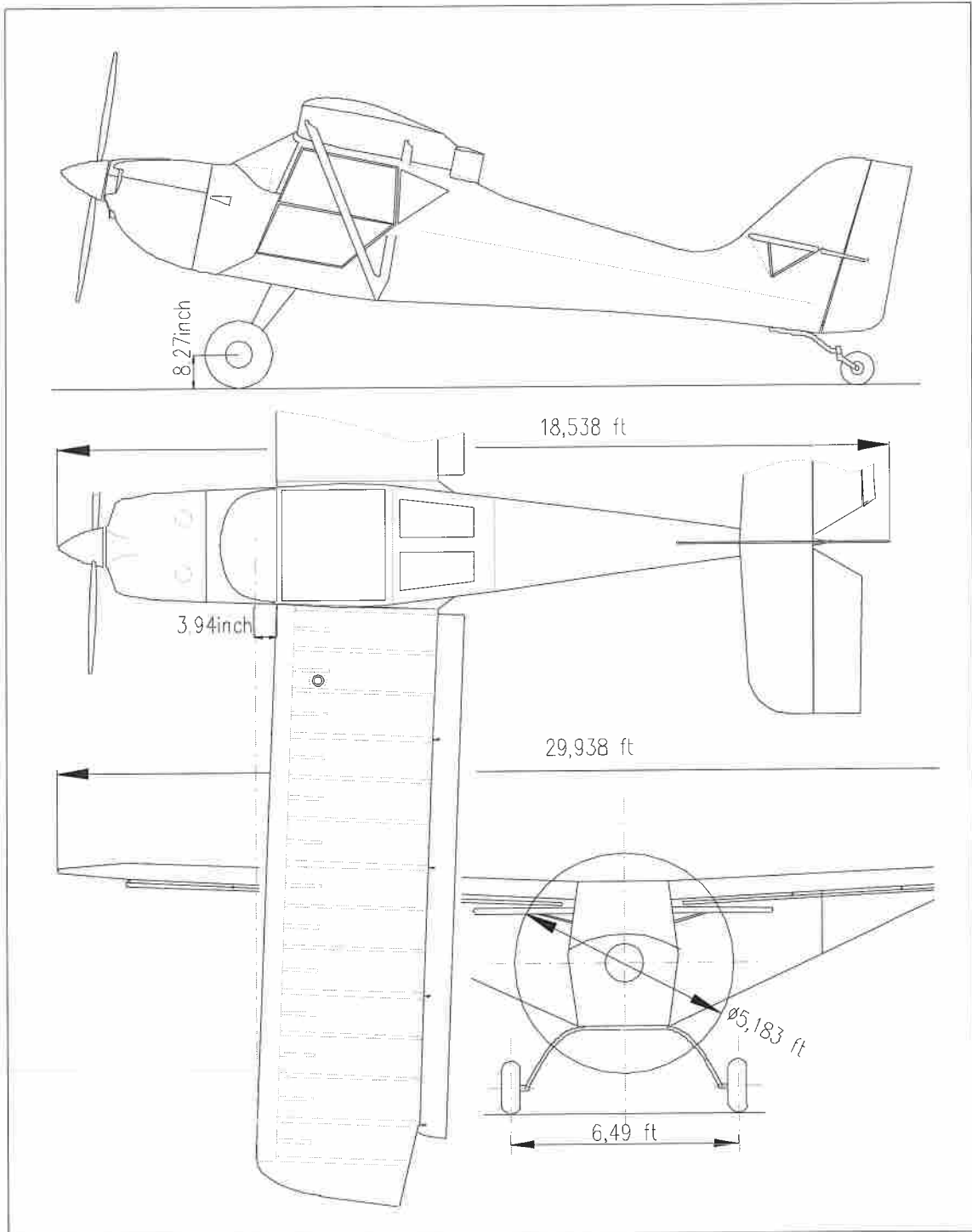
Stall or Minimum Flying Speed: 35 mph/30 kt IAS at MTOW/idle/landing
configuration.

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Illustration Of Aircraft – 3 View

Conventional (tail-wheel) configuration:

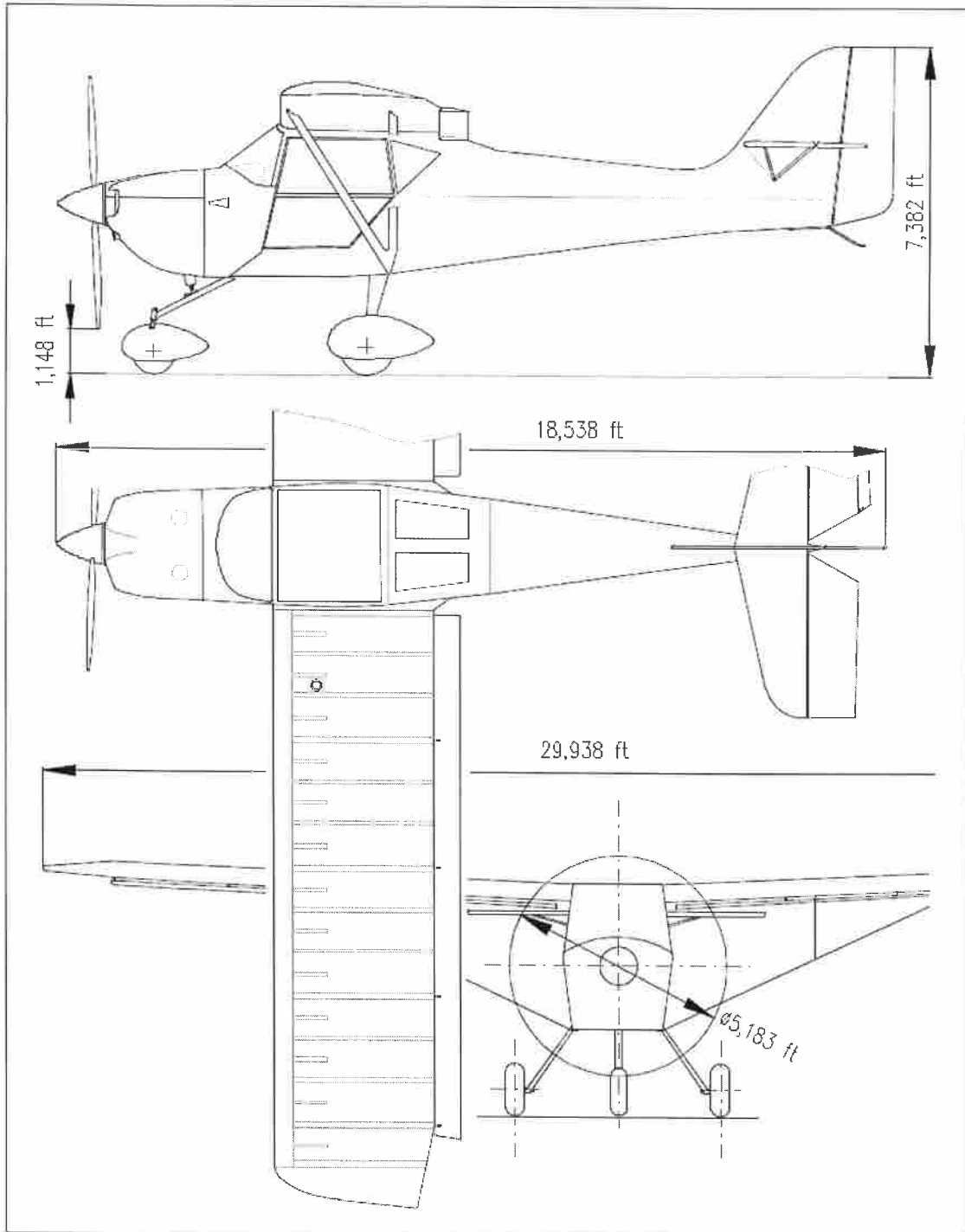


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Tricycle gear configuration. Note wing forward sweep not shown:



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ANNEX A - MANDATORY MODIFICATIONS / SERVICE BULLETINS / AIRWORTHINESS DIRECTIVES ETC.

Designation Classification Subject

ANNEX B - APPROVED OPTIONAL MODIFICATIONS

The installation of all optional modifications is to be inspected by an inspector from an Organisation approved by the CAA for the purpose and an entry made in the appropriate logbook(s). Note that other approved modifications may exist which are not mentioned here.

<u>Modification No.</u>	<u>Description:</u>
2	EuroFOX Stratos Magnum AMTPRS installation
3a	One EuroFOX 40 litre tank
11	EuroFOX wing tip strobes
12	EuroFOX oil inspection hatch
13	EuroFOX electric back-up fuel pump
14	EuroFOX fuel-line fireproof sleeving (firewall forward)
15	EuroFOX nose-wheel shimmy damper
18	EuroFOX tundra tyres
18a	EuroFOX power socket
19	EarthX ETX18B LiFePO4 starting battery

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ANNEX C - WEIGHING INFORMATION

CG Datum:	50mm forward of wing leading edge at root
Weighing attitude:	Door sill horizontal (measured with spirit level)
Main wheel moment arm:	503mm aft of datum (tricycle gear) 21mm forward of datum (conventional gear)
Nose wheel moment arm:	919mm forward of datum
Tail wheel moment arm:	4289mm aft of datum
Fuel moment arm:	440mm aft of datum (80 litres nominal capacity, 57.6kg)
Collector tank moment arm:	870mm aft of datum (6 litres nominal capacity, 4.3kg)
Crew moment arm:	440mm aft of datum
Baggage moment arm:	1200mm aft of datum
Crew weights:	0 - 100 kg (each) (min cockpit load 55 kg)
Max baggage weight:	18kg (8kg with AMTPRS)
Aft CG Limit:	410mm aft of datum (912UL-01) 385mm aft of datum (912ULS-01)
Forward CG Limit:	260mm aft of datum

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ANNEX D - EXAMPLE PLACARDS

(a) Flight Limitations Placard (to be visible to pilot)

Max Take-off weight	450 kg/472.5 kg*
Empty weight	As weighed
Max baggage weight	18 kg/8 kg*
Min occupant weight	55 kg
Max occupant weight	200 kg
Never exceed speed (MIAS)	V _{NE} 136 mph IAS/118 kt IAS*
Max Manoeuvring speed (MIAS)	V _A 93 mph IAS/81 kt IAS*
Max Flap extended speed (MIAS)	V _{FE} 76 mph IAS/66 kt IAS*
Stalling speed (MIAS)	V _{SO} 35 mph IAS/30 kt IAS*
Loading limits	+4G / -2G

* Delete as appropriate (limiting speed units must match ASI units)

(b) Engine Limitations Placard (to be located near to the engine instruments)

Max take-off engine speed (max 5 mins)	5800 rpm
Max continuous engine speed	5500 rpm
Max Coolant Temperature	120°C
Min oil temperature	50°C
Max oil temperature	130°C/140°C*
Min oil pressure	0.8 bar
Max oil pressure	7 bar
Fuel pressure	0.15 – 0.5 bar

* Delete as appropriate
Instruments are individually colour marked accordingly

(c) Fuel Limitations Placard (to be located near to fuel tank sight gauges)

FUEL TANK CAPACITY: 80/40 litres*
MOGAS 95 RON minimum unleaded to EN228, UL 91
or AVGAS 100 LL

* Delete as appropriate

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(d) Fuel Limitations Placard (to be located near to fuel tank sight gauges)

Example, depending upon aircraft equipment and fuel tank configuration.

FUEL	
Capacity 86 litres 4-stroke, add no oil	
Cockpit Weight (kg)	Max Fuel Load (litres)
180	4
170	18
160	31
150	45
140	59
130	73
121 or below	86 (full)
MOGAS 95 RON minimum unleaded to EN228, UL 91 or AVGAS 100 LL	

(e) ASI Markings

The ASI must be marked with the main IAS limiting speeds as follows

:

- V_{SO} to V_{FE} - white arc
- V_{FE} to V_A - green arc
- V_A to V_{NE} - yellow arc
- $> V_{NE}$ - red arc

(f) Switches

All switches are to be marked with function and sense (up=on, down=off).

All fuses and circuit breakers are to be marked with function and rating.

(g) Miscellaneous

**AEROBATICS and INTENTIONAL SPINS
ARE PROHIBITED**

**This aircraft has not been certified
to an international requirement**

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**No Smoking
Approved for flight in VFR conditions**

Fireproof metal plate showing the aircraft registration to be mounted in a prominent position.

If fitted with a parachute recovery system, the release control and exterior of the aircraft (adjacent to the rocket/parachute exit point) must be placarded as per the aircraft manual.

The additional limitations, warnings, and secondary controls and switches are to be placarded as per the aircraft manual or normal practice otherwise.

