BRITISH MICROLIGHT AIRCRAFT ASSOCIATION (BMAA)

HOMEBUILT AIRCRAFT DATA SHEET (HADS)

NO: HM-20 ISSUE: 1

TYPE: **EV-97 Eurostar SL Microlight**

(1)	MANUFACTURER:	Individual aircraft are amateur constructed, BMAA is responsible for continued airworthiness Kits are manufactured by Evektor, spol. s r.o. Letecka 1008 686 04 Kunovice The Czech Republic.
(2)	UK IMPORTER:	UK Importer of Kits, V1 Flight Ltd, 1 The Green, Grove, Wantage, OX12 0AJ
(3)	CERTIFICATION:	BCAR Section S Issue 7 dated December 2018
(4)	DEFINITION OF BASIC STANDARD:	MAAN 2769 Evektor Kit EV97 – SL VER.UK

(5) COMPLIANCE WITH THE MICROLIGHT DEFINITION

(a)	MTOW	472.5 kg with ballistic recovery system
(b)	No. Seats	2
(c)	Maximum Wing Loading	48.0 kg/m²
(d)	Vso	not exceeding 35 knots CAS
(e)	Permitted range of pilot weights	55 – 172 kg total
(f)	Typical Empty Weight (ZFW)	285.5 kg
(g)	ZFW + 172 kg crew + 1 hr fuel (14 litres / 10 kg)	467.5 kg
(h)	ZFW + 86 kg pilot + full fuel (62 litres / 44.6 kg)	416 kg
(i)	Max ZFW at initial permit issue	290.5 kg

(6) POWER PLANTS

Designation	**EV-97 Eurostar SL Microlight 912(1)**	**EV-97 Eurostar SL Microlight 912(2)**
Engine Type	Rotax 912 UL	Rotax 912 UL
Reduction Gear	2.27:1	2.27:1
Exhaust System	Evektor	Evektor
Intake System	Rotax (K & N) Filter	Rotax (K & N) Filter
Propeller Type	Woodcomp Klassic 170/3/R	Kievprop 273/1700
Propeller Dia x Pitch	1700 mm dia 28º @ 350 mm radius	1702 mm dia 28º @ 350 mm radius
Maximum static rpm	4600	4600
Noise Type Cert No.	175M	175M
AAN approving configuration	MAAN 2769	TBD

(7) MANDATORY LIMITATIONS:

(a)	Max Take-Off Weight		472.5 kg
(b)	CG Limits	Aft limit FWD Limit	410 mm aft of datum 250 mm aft of datum
(c)	CG datum		Wing Leading Edge
(d)	Cockpit Loadings	 Min (occupant only) Max (occupants only)	Total 55 kg 172 kg
(e)	Never Exceed Speed		126 knots IAS
(f)	Manoeuvring Speed		88 knots IAS
(g)	Permitted Manoeuvres		Maximum bank angle 60º Non Aerobatic Normal acceleration limits, +4g / -2g
(h)	Fuel Contents (Max Usable)		62 litres

(I) Power Plant See Table

Engine	Rotax 912 UL
Max RPM	5800 for 5 minutes
Max Continuous RPM	4800 with Kievprop propeller 4800 with Woodcomp Klassic Propeller
MAX CHT	150ºC (120ºC if SB/EUR/006 has been implemented)
MAX Coolant	120ºC
MAX EGT	N/A
Fuel Spec	90 RON minimum unleaded to EN228 AVGAS UL 91 AVGAS 100LL (not recommended for long term use)
Engine Oil Spec	API Class SF or SG, motor cycle oil with gear additives
Gearbox oil spec	N/A
Fuel/Oil Mix	N/A
Coolant Temperature	N/A
Oil Pressure	1.5 to 7 bar
Oil Temperature	50ºC to 140ºC
Fuel Pressure	0.15 to 0.4 bar

(8) INSTRUMENTS REQUIRED:

ASI	Altimeter	RPM	CHT or Coolant	Compass	Oil Temp	Fuel Pressure	Oil pressure	Slip ball
0 to 160 knots	Required	0-7000 rpm	150ºC or 120ºC	Recommended	150ºC	0 – 1 bar	0 – 10 bar	Required

A stall warner is also fitted to the Port wing with an audible output which is activated at a minimum of 5 knots and a maximum of 10 knots above the stall (in landing and cruise configuration)

(9) CONTROL DEFLECTIONS:

Elevator UP:	25º ± 1º	Elevator trim tab UP:	5º ± 2º
Elevator DOWN:	20º ± 1º	Elevator trim tab DOWN	25º ± 5º
Ailerons UP:	20º ± 1º	Rudder LEFT:	30º ± 2º
Ailerons DOWN:	15º ± 1º	Rudder RIGHT:	30º ± 2º
1st Notch Flap Down	15º ± 2º		
2nd Notch Flap Down	30º ± 3º		
3rd Notch Flap Down	50º ± 3º		

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

10.1 Manuals approved for use with this aircraft.

Airplane Technical Description Operating, Maintenance and Repair Manual.
EV-97 Eurostar SL Evektor Document Number EV97SLNOEN 02/2008 or later.

10.2 The following placards are to be fitted:-

(a) Flight Limitations Placard (to be visible to pilot)
See Annex D.

(b) Engine Limitations Placard (to be located near to engine instruments)
See Annex D.

(c) Fuel Limitations Placards
See Annex D.

(d) Switches
See Annex D.

(11) MANDATORY MODIFICATIONS / SERVICE BULLETINS / AIRWORTHINESS DIRECTIVES ETC:

See Annex A for required modifications.

(12) MINIMUM PERFORMANCE AT MAX TAKE-OFF WEIGHT

Rate of Climb:	750 fpm at 65 knots IAS.
Stall or Minimum Flying Speed:	29 knots IAS at MTOW / idle / full flap.

Issue History

Issue		Reason
1	11/10/2019	Initial Issue
		Approved for issue by the BMAA Chief Technical Officer

Illustration of Aircraft - 3 View

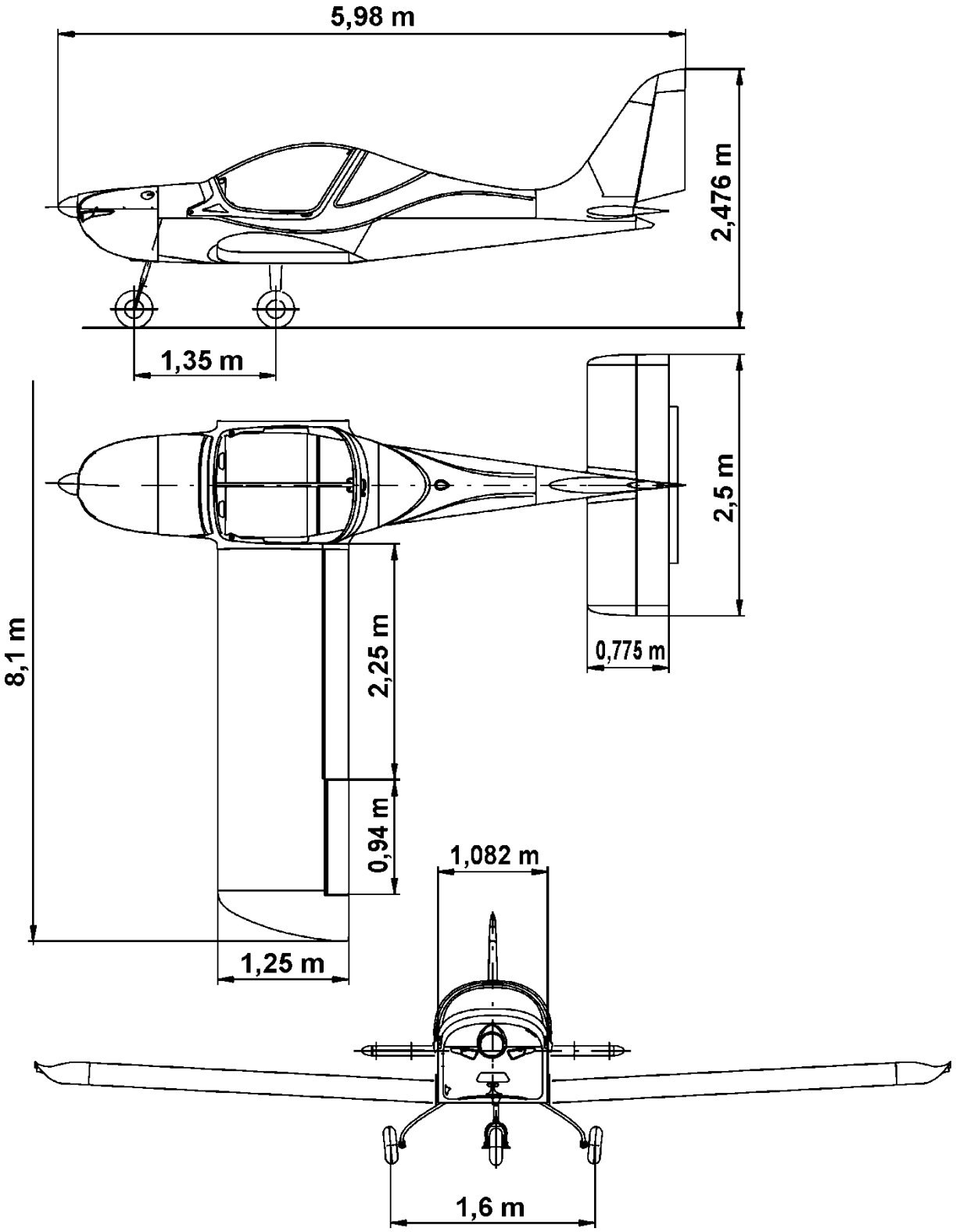

Illustration of Aircraft – Photograph

ANNEX A – MANDATORY PERMIT DIRECTIVES

MPD 2014-002	Wing/Fuselage Fairings – Inspection for Rivet Damage
MPD 2015-001	Wing Flaps – Correct Engagement of the Actuator Pins – Inspection
MPD 2016-007-E	Fuselage – Rear Fuselage Bulkhead – Inspection for Cracking
MPD 2018-006	Amendment of Inspection Requirements and Replacement of Critical Structural Items
MPD 2019-005	Placard Requirements for Aircraft fitted with a Ballistic Recovery System (BPRS)

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 listed here.

3. Wheel Spats

ANNEX C - WEIGHING INFORMATION

1.	CG Datum:	Wing Leading Edge
2.	Weighing attitude:	Pilot's Canopy Edge Horizontal
3.	Main wheel moment arm:	See Maintenance Manual for individual aircraft
4.	Nose wheel moment arm:	See Maintenance Manual for individual aircraft
5.	Fuel moment arm:	920 mm aft of datum
6.	Crew moment arm:	500 mm aft of datum
7.	Baggage moment arm	1270 mm aft of datum
8.	Crew weights:	Minimum 55 kg / maximum 172 kg
9.	Max baggage weight:	15 kg
10.	Aft CG Limit:	410 mm aft of datum
11.	Fwd CG Limit:	250 mm aft of datum

ANNEX D

EXAMPLE PLACARDS

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

AIRSPEEDS (IAS)	
V_{NE} (Never exceed speed)	126 knots IAS
V_A (Maximum manoeuvring speed)	88 knots IAS
V_{FE} (Flaps extended max. speed)	70 knots IAS
V_S (Stall speed, flaps extended)	29 knots IAS

Flight limited to daytime VFR non-icing conditions.
Aerobatics and intentional spinning are prohibited.
This microlight aeroplane has not been approved to an internationally recognised airworthiness standard.

4. Engine Limitations Placard (to be located near to engine instruments)

ENGINE LIMITATIONS	
Maximum take-off (max. 5 minutes)	5800 rpm
Max. continuous	4800 rpm
Idle	approx. 1400 rpm
Max. CHT	150ºC
Max. Coolant	120ºC
Max. oil temp.	140ºC
Min. oil temp.	50ºC
Min. oil pressure	1.5 bar
Max. oil pressure	7.0 bar
Minimum fuel pressure	0.15 bar
Maximum fuel pressure	0.4 bar

(c) Fuel Limitations Placard

To be located in the cockpit

FUEL and LOAD LIMITS Capacity 65 litres Unusable fuel 2.9 litres	
Maximum take-off weight	472.5 kg
Max. empty weight	290.5 kg
Actual empty weight	___kg*
Max. baggage weight	15 kg
Min. total occupant weight	55 kg
Max. total occupant weight	172 kg
Cockpit Load incl. Baggage (kg)	Max. Fuel Load (litres)**
180	10
170	24
160	38
150	52
140 or less	Full fuel (65)

* This must match the most recent W&CG report for the aircraft.

** Typical values shown for an empty weight of 285.5kg. Actual values to be entered following the most recent W&CG report for the aircraft.

To be located adjacent to the fuel filler

90 RON minimum MOGAS unleaded to EN 228 or AVGAS UL 91 or AVGAS 100LL Prolonged use of 100LL should be avoided.

(d) Switches

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

(e) Parachute Recovery System

The parachute recovery system, the release control and exterior of the aircraft (adjacent to the rocket/parachute exit point) must be placarded as per CAA MPD 2019-005.

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