

CIVIL AVIATION AUTHORITY – SAFETY REGULATION GROUP



MICROLIGHT TYPE APPROVAL DATA SHEET (TADS)

NO: BM-75 ISSUE: 3

- TYPE: Dynamic WT9-UK
- (1) MANUFACTURER: Yeoman Light Aircraft Company Ltd, Manor Farm,  
Water Lane, Drayton St Leonard, Wallingford, OX10  
7BE
- (2) UK IMPORTER: N/A
- (3) CERTIFICATION: BCAR Section S Issue 3, CS-VLA Sub-parts C & D
- (4) DEFINITION OF BASIC STANDARD: YLAC Design Definition Report WT09-001-DDR-060
- (5) COMPLIANCE WITH THE MICROLIGHT DEFINITION

(a) MTOW	450 kg
(b) No. Seats	2
(c) Maximum wing loading	43.48 kg/m <sup>2</sup>
(d) V <sub>so</sub>	34 kt IAS
(e) Permitted range of pilot weights	55 – 178 kg total Max 120 kg per seat
(f) Typical Empty Weight (ZFW)	262 kg
(g) ZFW + 178 kg crew + 1hr fuel (14 litres / 10 kg)	450 kg
(h) ZFW + 86 kg pilot + full fuel (74 litres / 53 kg)	401 kg
(i) Max ZFW at initial permit issue	268 kg

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(6) POWER PLANT

Designation	Dynamic WT9-UK	Dynamic WT9-UK
Engine Type	Rotax 912 UL	Rotax 912 ULS
Reduction Gear	2.27:1	2.43:1
Exhaust System	Aerospool	Aerospool
Intake System	Twin Carburettor	Twin Carburettor
Propeller Type	DUC Swirl	DUC Swirl
Propeller Dia x Pitch	1730 mm x 19° @ 75% rad	1730 mm x 24.5° @ 75% rad
Noise Type Cert No.	189M	189M Issue 2
AAN approving configuration	29144	29207

(7) MANDATORY LIMITATIONS:

- |                                |   |
|--------------------------------|---|
| (A) Max Take Off Weight        | 450 kg  |
| (B) CG Limits                  | Aft Limit      856 mm aft of Datum<br>Fwd Limit      701 mm aft of Datum                                      |
| (C) CG Datum                   | Front surface of firewall   |
| (D) Cockpit Loadings           | Min    55 kg<br>Max    178 kg   |
| (E) Never Exceed Speed         | 144 kt IAS  |
| (F) Manoeuvring Speed          | 90 kt IAS   |
| (G) Permitted Manoeuvres       | Maximum bank angle 60°<br>Maximum pitch up/down 45°<br>Non Aerobatic<br>Normal acceleration limits, +4g / -2g |
| (H) Fuel Contents (Max Usable) | 74 litres (37 litres each wing tank)  |

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(I) Power Plant, See Table

Engine	Rotax 912 UL	Rotax 912 ULS
Max RPM	5800 for 5 mins	5800 for 5 mins
Max CHT	150°	135°
Max EGT	N/A	N/A
Fuel Spec	90 Ron minimum unleaded to EN228 (Avgas 100LL may be used but not recommended)	90 Ron minimum unleaded to EN228 (Avgas 100LL may be used but not recommended)
Engine Oil Spec	API Class SF or SG, motor cycle oil with gear additives	API Class SF or SG, motor cycle oil with gear additives
Gearbox Oil Spec	N/A	N/A
Fuel/Oil Mix	N/A	N/A
Coolant temperature	Max 120°	Max 135°
Oil Pressure	1.5 to 7 bar	2 to 7 bar
Oil Temperature	50°C to 140°C	50°C to 130°C
Fuel Pressure	0.15 to 0.4 bar	0.15 to 0.4 bar

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(8) INSTRUMENTS REQUIRED

ASI	Altimeter	RPM	CHT	Compass	Oil Temp	Oil Pressure	Fuel Pressure	VSI	Slip Ball
Required 0 to 160 kt	Required	Required 0-7000 RPM	Required	Optional	Required	Required	Optional	Optional	Optional

(9) Control Deflections

Elevator UP	28° +0/ -2°	Elevator Trim	N/A
Elevator DOWN	18° +0/ -2°	Elevator Trim	N/A
Aileron UP	25° +0/ -2°	Rudder LEFT	25° +0/ -2°
Aileron DOWN	15° +0/ -2°	Rudder RIGHT	25° +0/ -2°
Flaps TAKE-OFF	15° ±1°	Flaps Intermediate	24° ±1°
Flaps LANDING	38° ±1°		

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

10.1 Manuals approved for use with this aircraft:

Pilot's Operating Handbook	WT09-001-135-POH
Maintenance Manual	WT09-001-135-MMA

Note: each document is unique for each aircraft; 135 applies to Dynamic serial number DY135

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)

See annex D.

(c) Fuel Limitations Placard

See annex D.

(d) Switches

See annex D.

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

See annex A for required modifications.

- (12) MINIMUM PERFORMANCE AT MAXIMUM TAKE OFF WEIGHT

Rate of Climb: 960 fpm at 60 kt IAS

Stall or Minimum Flying Speed: 35 kt IAS at MTOW / idle / full flap.

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Issue History

	<u>Issue No.</u>	<u>Reason &amp; Signatory</u>
1	21/02/2007	Initial Issue
2	15/10/2007	Rotax 912ULS, Modification 03, added.
3	08/07/2009	Optional mods no. 3 to 11 added Mandatory mods no. 1 to 5 added Flaps deflections added

A J MAXWELL

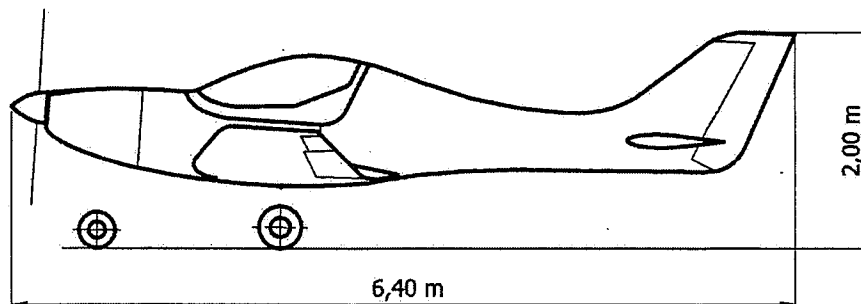
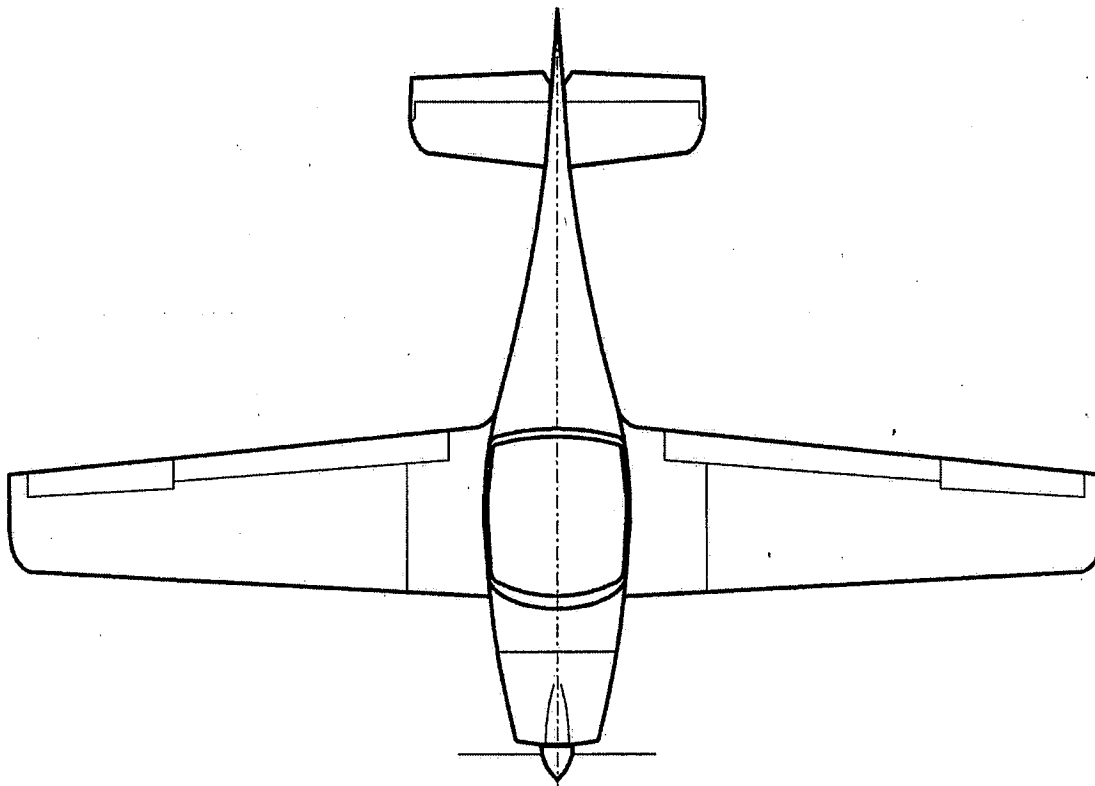
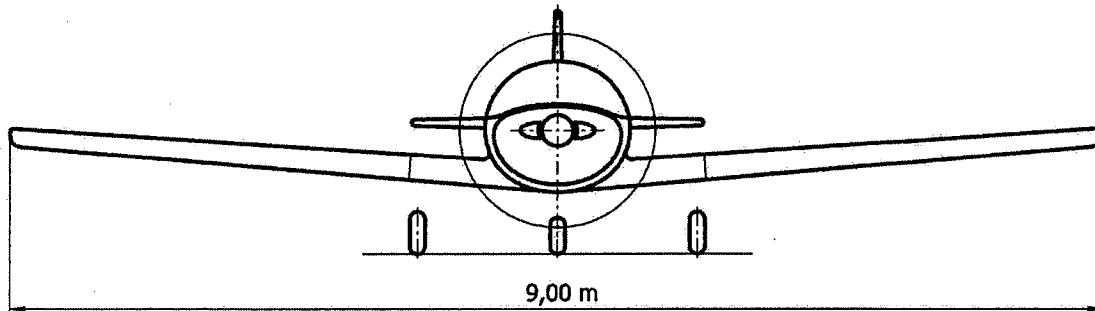


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Illustration of Aircraft – 3 View



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Illustration of Aircraft – Photograph





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ANNEX A – MANDATORY MODIFICATIONS

1. SB WT09-004-001      Parts Corosion
2. SB WT09-002-002      Aileron Hinge Roll Pins
3. SB WT09-002-003      EASA AD - Filser Transponder
4. SB WT09-002-004      Throttle lever nut locking
5. SB WT09-002-005      Securing of Wing Clevis pins by Fokker Pins

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.

1. Filser ATR 500 Transceiver
2. Filser TRT 800 Transponder
3. Conair Soft Start Pack
4. Filser ATR833 Transceiver
5. Stroboscope
6. GPS Garmin 296/496 – surface mount bracket or AirGizmo flush bracket
7. Instrument's Optional Upgrade
8. Landing Light
9. Engine Hours Meter
10. Transponder Becker BXP6401
11. Transponder Filser 800H OLED

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ANNEX C - WEIGHING INFORMATION

1.	CG Datum:	Firewall front surface.
2.	Weighing Attitude:	Firewall vertical & cockpit sill horizontal
3.	Mainwheel moment arm:	1094 mm Aft of Datum
4.	Nosewheel moment arm:	304 mm Fwd of Datum
5.	Fuel moment arm:	630 mm Aft of Datum
6.	Baggage moment arm:	1,750 mm Aft of Datum
7.	Crew moment arm:	700 mm Aft of Datum
8.	Crew weight:	Minimum 55 kg / Maximum 178 kg
9.	Aft CG Limit:	856 mm Aft of Datum (32% MAC)
10.	Fwd CG Limit:	701 mm Aft of Datum (19% MAC)

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ANNEX D - EXAMPLE PLACARDS

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

<u>INDICATED AIRSPEEDS</u>		
V <sub>NE</sub>	Never Exceed Speed	144 kt
V <sub>NO</sub>	Max. Structural Cruising Speed	108 kt
V <sub>A</sub>	Manoeuvring speed	90 kt
V <sub>FE</sub>	Max. Flaps Extended Speed	76 kt
V <sub>SO</sub>	Stall Speed, Flaps Extended	35 kt

**NO SMOKING**

Flight limited to daytime VFR non-icing conditions. Aerobatics and intentional spinning are prohibited.

Occupant Warning  
This aircraft has not been approved to an International Requirement

<u>FUEL &amp; LOAD LIMITS</u>	
Fuel capacity - each tank	37l / 8.1 imp gal
Fuel capacity - total	74l / 16.3 imp gal
Actual empty weight	_____ kg / _____ lb
Max baggage weight	10 kg / 22 lb
Minimum cockpit loading	55 kg / 8st 9lb
<u>Cockpit load (inc baggage)</u>	<u>Max fuel (litres)</u>
_____ kg (maximum)	_____
170 kg	_____
160 kg	_____
150 kg	_____
140 kg	_____
130 kg or less	Full fuel

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(b) Engine Limitations Placards (to be located near to engine instruments)

For the 80hp:

ENGINE LIMITATIONS	
Max take off rpm (max 5 mins)	5800
Max continuous rpm	5200
Idle rpm	1200 - 1400
Max CHT	150°
Max oil temperature	140°
Min oil temperature	50°
Min oil pressure	1.5 bar
Max oil pressure	7.0 bar

For the 100hp:

ENGINE LIMITATIONS	
Max take off rpm (max 5 mins)	5800
Max continuous rpm	5000
Idle rpm	1200 - 1400
Max CHT	150°
Min oil temperature	50°
Max oil temperature	140°
Min oil pressure	2.0 bar
Max oil pressure	7.0 bar

(c) Fuel Limitations Placard (to be located in cockpit) To be located adjacent to fuel filler

37l / 8.1 imp gal

90 Ron Minimum Mogas unleaded to  
EN 228 or Avgas 100LL  
-----  
Prolonged use of 100LL to be avoided

(d) Switches

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