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## 1.4 Descriptive data

### 1.4.1 Airplane description

WT9 Dynamic LSA Club T is low-wing monoplane with fixed landing gear. The airframe consists of a sandwich shells from advanced composite material. There are two places in the cockpit, side by side type. This aircraft is intended for sporting, recreation and tourist flying in accordance with VFR day.

As the power plant this aircraft uses the 4 cylinder, 4 stroke engines ROTAX 912 ULSFR serie.

Propeller: This plane is fitted with 3 bladed in-flight electrically adjustable propeller and the following type and model is approved: Woodcomp SR 2000 D.

### 1.4.2 Technical data

Wing span.....	9,00 m
Wing area.....	10,3 m <sup>2</sup>
Wing aspect ratio.....	7,82
Length.....	6,4 m
Height.....	2,0 m
Aerodynamic mean chord ( MAC ).....	1,185 m

#### Control surfaces

Aileron span.....	1,25 m
Aileron area.....	0,273 m <sup>2</sup>
Flap span.....	2,28 m
Flap area.....	0,75 m <sup>2</sup>
Horizontal tail span.....	2,40 m
Horizontal tail area.....	1,68 m <sup>2</sup>
Vertical tail span.....	1,022 m
Vertical tail area.....	1,02 m <sup>2</sup>

#### Landing gear

Wheel spacing.....	1,49 m
Wheel base.....	2,27 m
Main wheel diameter.....	0,35 m
Nose wheel diameter.....	0,32 m

#### Weights

Empty weight .....	see Chapter 6.3
Maximum take-off weight.....	550,0 kg
Useful load.....	243,8 kg
Fuel tanks capacity.....	100,0 litre

The ROTAX 912 ULSFR (73 kW- 100HP) with a maximum rpm limitation on take off of 5800 1/min. The Woodcomp SR 2000 D. Propeller diameter is 1,7 m.

## 2.7 Weight

Empty weight .....	see Chapter 6.3
Maximum take-off weight.....	550 kg
Maximum landing weight .....	550 kg
Useful load .....	243,8 kg
Maximum fuel weight .....	69,8 kg
Maximum occupant weight per seat.....	110,0 kg
Minimum weight solo pilot.....	65,0 kg
Maximum weight in Baggage Compartment.....	10 kg

### WARNING

Maximum take off weight 550 kg

## 2.8 Centre of gravity

Position of C.G.:

Empty airplane..... $12 \pm 2\%$  MAC

Position of C.G. in flight..... $20 \div 30\%$  MAC

Rear centre of gravity limit is valid for en-route weight at maximum crew weight.

Forward centre of gravity limit is valid for minimum pilot weight and maximum capacity of the fuel tanks. Example to check the centre of gravity position is in Sect. 6.

## 2.9 Approved manoeuvres

- **Steep turns with the angle of bank up to  $60^\circ$**  - appropriate entry speed is **145** km/h.
- **Lazy eighths** - appropriate entry speed is **145** km/h.
- **Combat turns** - appropriate entry speed is **200** km/h.

### WARNING

Aerobatic manoeuvres and intentional spins are prohibited!

**3.6.2. Precautionary landing**

In the event of the airplane failure, disorientation, shortage of fuel, dangerous deterioration of the meteorological conditions (visibility, thunderstorm) and approaching sunset, a precautionary landing should be conducted.

1. Select a suitable landing field, if possible into the wind.
2. Fly over selected field with wing flaps 15° and 120 km/h airspeed at a height 50 m AGL, noting the preferred area for touchdown for the next landing approach to inspect the terrain for obstructions and surface conditions.
3. Make landing circuit at a height 150 m AGL or at a safe altitude in accordance with the ceiling with flaps 15° and 120 km/h airspeed. Extend “down wind” position and make approach with sufficient power.
4. Don't lose sight of the selected field in low visibility.
5. Landing approach with flaps for landing and sufficient power.
6. Arrange approach so that the desired touch down spot will be immediately after passing the edge of the selected landing field.
7. After touch down apply heavy braking till stopped. ground loop if necessary.
8. When the airplane comes to a stop, shut down the engine, master switch off, Main fuel selectors close, secure the airplane and seek assistance.

**3.6.3 Landing with a flat tyre**

1. Landing approach - with flaps 38 ° and 110 km/h airspeed
2. Touch down - with the bank angle on the unflat tyre at minimum touch down speed,
3. Direction after landing - maintain ground roll direction.

**3.7 Recovery from unintentional spin**

For recovery from an unintentional spin the following procedure should be used:

1. Rescue system - activate

**WARNING**

Intentional spins are prohibited!

**1. Cockpit:**

Flight controls	- check for freedom of movement
Master switch	- switched off
Ignition switch	- both circuits switched off
Loose items	- secure or remove
Check instruments	- set "O"
Cockpit canopy glass	- clean, check cockpit canopy lock
Safety harness	- inspect
Handle control rescue system	- remove secure lock
Fuel	- check fuel quantity, check fuel selector
Propeller	- blade's leading edge soundness

**2. Wing**

Surface	- state of wing surface
Connection	- wing pins fully inserted and secured
Pitot static head	- pitot tube cover removed, check opening for blockage.
Leading edges	- without damage, clean
Ailerons	- check for freedom of movement and security
Flaps	- without play, check hinges for security

**3. Fuselage**

Surface	- without damage
Static pressure receivers	- check opening for blockage
Antennas	- fixed, without damage
Cockpit wing walks	- without damage

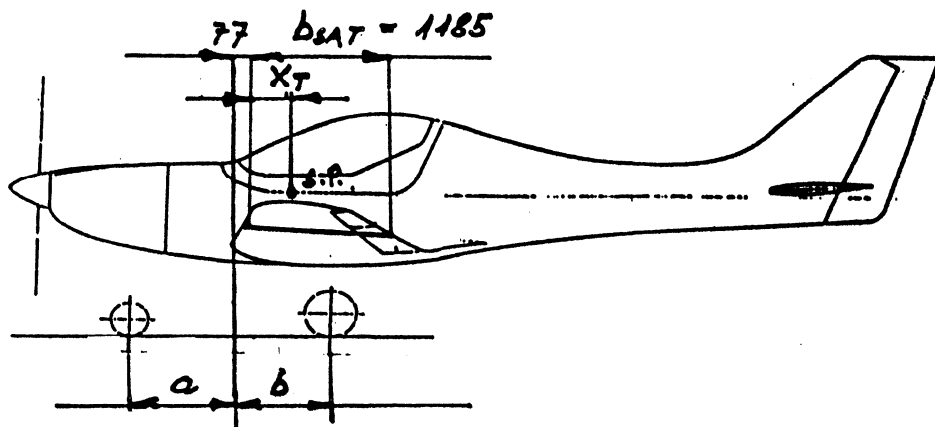
**4. Tail units**

Surface	- without damage
Control surfaces	- check for freedom of movement , without excess play
Auxiliary tail skid	- check for secure attachment

**5. Landing gear**

Main wheel tyres	- state, inflation ( 250 kPa )
Brakes	- visually check condition of pads, brake system for leaks
Legs	- state without damage, attachment
Nose wheel leg	- nose wheel tyre state, inflation ( 200 kPa ) attachment, suspension check, wheel free rotation

Type: WT – 9 DYNAMIC	Type landing-gear: FIXED	Registration: F - WRCN	S/N: DY - 390/2010 LSA	Date of production: 28.09.2010
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Type of Scale	3 x 500 NDS	Calibration valid till	01.06.2010
Weighing Point	Scale Reading(kg)	Distant from DP (mm)	Moment (kg mm)
Nose wheel		a =	
Right main wheel		b =	
Left main wheel		b =	
Total Weight		Total Moment =	
Fuel		240	

Weight =                      kg                      Moment =                      kg/mm  
Oil and coolant including

C.G. position from DP ( $X_T$ ) = (Moment / Weight) - 77

$$X_T \text{ (mm)} = \frac{\text{Moment}}{\text{Weight}} - 77 = \quad \text{mm} \quad X_{CT} \% \text{ MAC} = \frac{X_T}{1185} \times 100 = \quad \%$$

Permitted C.G. range of empty aeroplane  $X_{CT}$  is from 10 to 14 % MAC.

Calculated position of C.G. is within an permitted range.

Place, Date:

.....  
Supervisor / Signature

## 7.4 Instrument panel

The standard instrument panel arrangement is shown in the following figure ( fig.9 ). A different instrument panel arrangement may be used, if optional flight and navigation instruments are mounted in the airplane.



Fig. 9. Instrument panel

- |                                    |   |                           |
|------------------------------------|---|---------------------------|
| 1. Control lights:EMS, Charge, Net | 15. Master Switch, Ignition, Fuel pump switch and its control light | 28. Flaps lever           |
| 2. Airbox temperature              | 16. Throttle lever  | 29. Flarm indicator       |
| 3. EFIS D-100, EMS D-120           | 17. Tow release lever   | 30. Pedal adjustment      |
| 4. Switches: Avionic, Reserv       | 18. Oil cooler flap   | 31. PTT button            |
| 5. Magnetic compass                | 19. Carburetor preheating   | 32. Flybox propeller      |
| 6. Airspeed indicator              | 20. Cabin heating   | 33. Tachometer            |
| 7. Altimeter                       | 21. Fuel selector   | 34. Oil pressure          |
| 8. Radio                           | 22. Choke Lever   | 35. Oil temperature       |
| 9. Transponder                     | 23. Engine hours indicator  | 36. Circuit-breakers*     |
| 10. Switch Autopilot               | 24. Fuel reserve indicator left-right                               | 37. 12 V Stage Socket     |
| 11. Intercom                       | 25. GPS   | 38. Rescue system lever** |
| 12. Switches: Land, NAV, ACL       | 26. Trim lever  |                           |
| 13. Vario                          | 27. Wheel brakes  |                           |
| 14. Starter key                    |   |                           |

\* see next page

\*\* not displayed in Fig. 9