Working Group 600kg

Report

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Working Group 600kg

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Subjects for Discussion

There are mainly four topic areas we have to consider

- Definition of a Microlight
- Deck Take-Off/Landing
- Speed and Economy Taks
- Measurement

S10 - Suggested Changes

- Suggested Changes
  - 1.3.1 Definition of a Microlight or Paramotor (04-CZE)
  - 1.3.1 Definition of a Microlight or Paramotor (03-ROM)
  - 1.3.1 Definition of a Microlight or Paramotor (02-RUS)
  - 1.3.1 Definition of a Microlight or Paramotor (13-NOR)
  - 4.31.5 Short Take-Off and Landing within a deck (10-GER)
  - 5.2.1 Measurement (11-GER)

No. and country of the proposal see in parentheses.

Annex 4 - Suggested Changes

- Suggested Changes
  - 2.B1 – 2.B7 Removal of the tasks (01-GER)
  - 2.B1 ,2,4,7 Removal of the speed based tasks (12-CZE)
  - 2.C1 Spot Landing (05-GER)
  - 2.C2 Spot Landing – Timed (06-GER)
  - 2.C3 Powered Precision Landing (07-GER)
  - 2.C4 Powered Precision Landing – Timed (08-GER)
  - 2.C8 Deck Landing (09-GER)

No. and country of the proposal see in parentheses.

Definition of a Microlight

- Section 10, 1.3.1
- How should the definition of a microlight aircraft be in the sense of Section 10 in the future?
- See proposals No. 02 (RUS), No. 03 (ROM), No. 04 (CZE) and No. 13 (NOR).
- Existing definition:

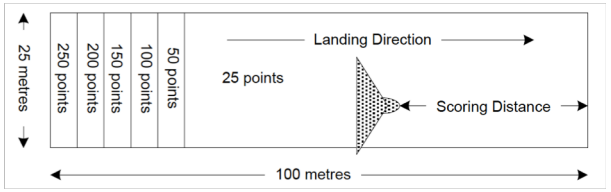
  - 300 kg for a landplane flown solo
  - 375 kg for a landplane specifically designed to be flown with two persons but flown solo in championships.
  - 330 kg for an amphibian or a pure seaplane flown solo;
  - 405 kg for an amphibian or a pure seaplane specifically designed to be flown with two persons but flown solo in championships.
  - 450 kg for a landplane flown with two persons
  - 495 kg for an amphibian or a pure seaplane flown with two persons
  - 560 kg for an autogyro flown with two perso

Speed and Economy Tasks

- The tasks affected are either economy or speed tasks or both, combined with some other challenges. Considering the upcoming new types of microlights with changed weight and performance together with the older ones in one class, such kind of tasks are no longer useful and fair. The result of such a competition task depends almost only on the performance of the aircraft, but not on the pilots skill (See proposals No. 12 (CZE) and No. 01 (GER).
- Annex 4 Tasks affected
    - 2.B1 SPEED TRIANGLE OUT-AND-RETURN
    - 2.B2 SPEED TRIANGLE & TURNPOINT HUNT
    - 2.B3 SPLIT SQUARE
    - 2.B4 FUEL & SPEED TRIANGLE
    - 2.B5 LIMITED FUEL TURNPOINT HUNT
    - 2.B6 DURATION
    - 2.B7 DURATION & SPEED

Deck Take-off/Landing

- Section 10, 4.31.5
- How long should the deck be for take-offs and landings?
- How long should the deck be for the task “Short take off and landing over obstacle”?
- Please see proposal No. 10 (GER)
- Annex 4 Tasks affected
  - 2.C1 SPOT LANDING
  - 2.C2 SPOT LANDING – TIMED
  - 2.C3 POWERED PRECISION LANDING
  - 2.C4 POWERED PRECISION LANDING – TIMED
  - 2.C8 DECK LANDING
- Please see proposals No. 06, 07, 08, 09 (GER)



Measurement

- Section 10, 5.2.1
- Is it necessary to scale microlight aircrafts during or before a competition any longer?
- If yes, shall the scale have an accuracy of not less than 0,2% when weighing up to 600 kg?
- Please see proposal No. 11 (GER).

Calculation of the deck length

Calculation Principle (GER)

Provided of an approximately linear characteristic of the ratio between speed and needed takeoff distance in the phase short before takeoff, the deck extension for short-takeoff and landing can be calculated with a linear formula.

- L(new) = 100m * 83km/h / 65km/h
- L(new) = 127,69m
- Rounded down = **125m**

Calculation of the deck length

Comment (CZE)

Michael I am not sure what makes you believe that the ratio between take-off speed and distance is linear?

Linear ratio is between the speed and TIME needed to reach that speed If we assume constant acceleration. To increase speed further by for example 5km/h takes the same time from 0 to 5km/h as from 65 to 70 km/h, but much more distance, because we are travelling at certain speed and will cover more distance in the same amount of time!

Even if we assume constant acceleration then the distance traveled grows exponentially with time (and also with speed, because speed in our simplified example is linear with time)

- More realistic calculation therefore is:
- L(new) 100m * (83 km/h / 65km/h) ^2 = **163,05m**

Discussion

- Definition of a Microlight
- Deck Take-Off/Landing
- Speed and Economy Taks
- Measurement
- Other Issues