# FTR - Flight Test Report



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|---|---|---|---|
| **Manufacturer** | AIRDESIGN GmbH<br>Rhombergstraße 9<br>A-6967 Absam | **Type testing No.** | **EAPR-GS-0841/18** |
| | | **serial number** | **Proto** |
| **Model** | **Volt 3 L** | **Location** | **Schruns** |
| | | | **Rofan, Achensee** |

EAPR Messen | Prüfen | Bewerten

Rev. 2.3 - 26.11.2014
*EAPR GmbH - Marktstr. 11*
*D-87730 Bad Grönenbach - Germany*

| **Date of testing** 16.05.2018 | **Minimum take off weight 100 kg** | | **Maximum take off weight 125 kg** | |
|---|---|---|---|---|
| **Testpilot** | **Johannes Tschofen** |  | **Anselm Rauh** |  |
| **Harness** | **EAPR schweer** | | **EAPR** | |
| **Pilot's take off weight** | **100 kg** | | **124 kg** | |

| **Classification** | **C** |
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| **Test-criteria** | | **Minimum take off weight** | | **Evaluation** | **Maximum take off weight** | | **Evaluation** |
|---|---|---|---|---|---|---|---|
| **1. Inflation / take-off - 4.4.1** | | | | | | | |
| Rising behavior | | Easy rising,<br>some pilot correction is required | | B | Easy rising,<br>some pilot correction is required | | B |
| Special take off technique required | | No | | A | No | | A |
| **2. Landing - 4.4.2** | | | | | | | |
| Special landing technique required | | No | | A | No | | A |
| **3. Speeds in straight flight - 4.4.3** | | | | | | | |
| Trim speed more than 30km/h | | Yes | | A | Yes | | A |
| Speed range using the controls larger than 10km/h | | Yes | | A | Yes | | A |
| Minimum speed | | 25 km/h to 30 km/h | | B | 25 km/h to 30 km/h | | B |
| **4. Control movement - 4.4.4** | | | | | | | |
| Max. weight in flight up to 80kg | | | | - | | | - |
| Max. weight in flight 80 to 100kg | | | | - | | | - |
| Max. weight in flight greater than 100kg | | Increasing | 50cm - 65cm | C | Increasing | 50cm - 65cm | C |
| **5. Pitch stability exiting accelerated flight - 4.4.5** | | | | | | | |
| Dive forward angle on exit | | Dive forward less than 30° | | A | Dive forward less than 30° | | A |
| Collapse occurs | | No | | A | No | | A |
| **6. Pitch stability operating controls during accelerated flight - 4.4.6** | | | | | | | |
| Collapse occurs | | No | | A | No | | A |
| **7. Roll stability and damping - 4.4.7** | | | | | | | |
| Oscillations | | Reducing | | A | Reducing | | A |
| **8. Stability in gentle spirals - 4.4.8** | | | | | | | |
| Tendency to return to straight flight | | Spontaneous exit | | A | Spontaneous exit | | A |
| **9. Behaviour exiting a fully developed spiral dive - 4.4.9** | | | | | | | |
| Initial response of glider (first 180°) | | No immediate reaction | | B | No immediate reaction | | B |
| Tendency to return to straight flight | | Spontaneous exit | | A | Spontaneous exit | | A |
| Turn angle to recover normal flight | | 720° to 1080°, spontaneous recovery | | B | 1080° to 1440°, spontaneous recovery | | C |
| **10. Symmetric front collapse - 4.4.10** | | | | | | | |
| Folding lines used | | No | | | No | | |
| Entry | trim speed - 30% | Rocking back less than 45° | | A | Rocking back less than 45° | | A |
| Recovery | trim speed - 30% | Spontaneous in less than 3 sec | | A | Spontaneous in less than 3 sec | | A |
| Dive forward angle on exit | trim speed - 30% | 0° - 30° | Keeping course | A | 0° - 30° | Keeping course | A |
| Cascade occurs | trim speed - 30% | No | | A | No | | A |
| Entry | trim speed > 50% | Rocking back less than 45° | | A | Rocking back less than 45° | | A |
| Recovery | trim speed > 50% | Spontaneous in less than 3 sec | | A | Spontaneous in less than 3 sec | | A |
| Dive forward angle on exit | trim speed > 50% | 0° - 30° | Keeping course | A | 0° - 30° | Keeping course | A |
| Cascade occurs | trim speed > 50% | No | | A | No | | A |
| Entry | accelerated > 50% | Rocking back less than 45° | | A | Rocking back less than 45° | | A |
| Recovery | accelerated > 50% | Spontaneous in 3 to 5 sec | | B | Spontaneous in 3 to 5 sec | | B |
| Dive forward angle on exit | accelerated > 50% | 0° - 30° | Keeping course | A | 0° - 30° | Keeping course | A |
| Cascade occurs | accelerated > 50% | No | | A | No | | A |
| **11. Exiting deep stall (parachutal stall) - 4.4.11** | | | | | | | |
| Deep stall achieved | | Yes | | | Yes | | |
| Recovery | | Spontaneous in less than 3 sec | | A | Spontaneous in less than 3 sec | | A |
| Dive forward angle on exit | | 0° - 30° | | A | 0° - 30° | | A |
| Change of course | | Changing course less than 45° | | A | Changing course less than 45° | | A |
| Cascade occurs | | No | | A | No | | A |

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| **12. High angle of attack recovery - 4.4.12** | | | | | | | | | |
| Recovery | | Spontaneous in less than 3 sec | | | A | Spontaneous in less than 3 sec | | | A |
| Cascade occurs | | No | | | A | No | | | A |
| **13. Recovery from a developed full stall - 4.4.13** | | | | | | | | | |
| Dive forward angle on exit | | 30° - 60° | | | B | 30° - 60° | | | B |
| Collapse | | No collapse | | | A | No collapse | | | A |
| Cascade occurs (other than collapse) | | No | | | A | No | | | A |
| Rocking backward | | Less than 45° | | | A | Less than 45° | | | A |
| Line tension | | Most lines tight | | | A | Most lines tight | | | A |
| **14. Asymmetric collapse (trim speed) - 4.4.14** | | | | | | | | | |
| Folding lines used | | No | | | | No | | | |
| Change of course until re-inflation | trim speed, max 50% collapse | < 90° | Dive or roll angle | 0° - 15° | A | < 90° | Dive or roll angle | 0° - 15° | A |
| Re-inflation behavior | trim speed, max 50% collapse | Spontaneous re-inflation | | | A | Spontaneous re-inflation | | | A |
| Total change of course | trim speed, max 50% collapse | Less than 360° | | | A | Less than 360° | | | A |
| Collapse on the opposite side occurs | trim speed, max 50% collapse | No | | | A | No | | | A |
| Twist occurs | trim speed, max 50% collapse | No | | | A | No | | | A |
| Cascade occurs | trim speed, max 50% collapse | No | | | A | No | | | A |
| Change of course until re-inflation | trim speed, max 75% collapse | < 90° | Dive or roll angle | 15° - 45° | A | < 90° | Dive or roll angle | 15° - 45° | A |
| Re-inflation behavior | trim speed, max 75% collapse | Spontaneous re-inflation | | | A | Spontaneous re-inflation | | | A |
| Total change of course | trim speed, max 75% collapse | Less than 360° | | | A | Less than 360° | | | A |
| Collapse on the opposite side occurs | trim speed, max 75% collapse | No | | | A | No | | | A |
| Twist occurs | trim speed, max 75% collapse | No | | | A | No | | | A |
| Cascade occurs | trim speed, max 75% collapse | No | | | A | No | | | A |
| Change of course until re-inflation | accelerated, max 50% collapse | < 90° | Dive or roll angle | 15° - 45° | A | < 90° | Dive or roll angle | 0° - 15° | A |
| Re-inflation behavior | accelerated, max 50% collapse | Spontaneous re-inflation | | | A | Spontaneous re-inflation | | | A |
| Total change of course | accelerated, max 50% collapse | Less than 360° | | | A | Less than 360° | | | A |
| Collapse on the opposite side occurs | accelerated, max 50% collapse | No | | | A | No | | | A |
| Twist occurs | accelerated, max 50% collapse | No | | | A | No | | | A |
| Cascade occurs | accelerated, max 50% collapse | No | | | A | No | | | A |
| Change of course until re-inflation | accelerated, max 75% collapse | 90° - 180° | Dive or roll angle | 15° - 45° | B | 90° - 180° | Dive or roll angle | 15° - 45° | B |
| Re-inflation behavior | accelerated, max 75% collapse | Spontaneous re-inflation | | | A | Spontaneous re-inflation | | | A |
| Total change of course | accelerated, max 75% collapse | Less than 360° | | | A | Less than 360° | | | A |
| Collapse on the opposite side occurs | accelerated, max 75% collapse | No | | | A | No | | | A |
| Twist occurs | accelerated, max 75% collapse | No | | | A | No | | | A |
| Cascade occurs | accelerated, max 75% collapse | No | | | A | No | | | A |
| **15. Directional control with a maintained asymmetric collapse - 4.4.15** | | | | | | | | | |
| Able to keep course straight | | Yes | | | A | Yes | | | A |
| 180° turn away from the collapsed side possible in 10 sec | | Yes | | | A | Yes | | | A |
| Amount of control range between turn and stall or spin | | 25% to 50% of the symmetric control travel | | | C | More than 50% of the symmetric control travel | | | A |
| **16. Trim speed spin tendency - 4.4.16** | | | | | | | | | |
| Spin occurs | | No | | | A | No | | | A |
| **17. Low speed spin tendency - 4.4.17** | | | | | | | | | |
| Spin occurs | | No | | | A | No | | | A |
| **18. Recovery from a developed spin - 4.4.18** | | | | | | | | | |
| Spin rotation angle after release | | Stops spinning in 90° to 180° | | | C | Stops spinning in 90° to 180° | | | C |
| Cascade occurs | | No | | | A | No | | | A |
| **19. B-line-stall - 4.4.19** | | | | | | | | | |
| Change of course before release | | Changing course less than 45° | | | A | Changing course less than 45° | | | A |
| Behaviour before release | | Remains stable with straight span | | | A | Remains stable with straight span | | | A |
| Recovery | | Spontaneous in less than 3 sec | | | A | Spontaneous in less than 3 sec | | | A |
| Dive forward angle on exit | | 0° - 30° | | | A | 30° - 60° | | | A |
| Cascade occurs | | No | | | A | No | | | A |
| **20. Big ears - 4.4.20** | | | | | | | | | |
| Entry procedure | | Standard technique | | | A | Standard technique | | | A |
| Behaviour during big ears | | Stable flight | | | A | Stable flight | | | A |
| Recovery | | Spontaneous in less than 3 sec | | | A | Spontaneous in less than 3 sec | | | A |
| Dive forward angle on exit | | 0° - 30° | | | A | 0° bis 30° | | | A |
| **21. Big Ears in accelerated flight - 4.4.21** | | | | | | | | | |
| Entry procedure | | Special device required | | | A | Standard technique | | | A |
| Behaviour during big ears | | Stable flight | | | A | Stable flight | | | A |
| Recovery | | Spontaneous in less than 3 sec | | | A | Spontaneous in 3 to 5 sec | | | A |
| Dive forward angle on exit | | 0° - 30° | | | A | 0° bis 30° | | | A |
| Behaviour immediately after releasing the accelarator while maintaining big ears | | Stable flight | | | A | Stable flight | | | A |
| **23. Alternative means of directional control - 4.4.22** | | | | | | | | | |
| 180° turn achievable in 20 sec | | Yes | | | A | Yes | | | A |
| Stall or spin occurs | | No | | | A | No | | | A |
| **23. Any other flight procedure and/or configuration described in the user's manual - 4.4.23** | | | | | | | | | |
| Procedure works as descibed | | | | | NA | | | | NA |
| Procedure suitable for novice pilots | | | | | NA | | | | NA |
| Cascade occurs | | | | | NA | | | | NA |
| **24. Remarks of testpilot:** | | | | | | | | | |