

Flight test report

Manufacturer Advance Thun AG
Address Seestrasse 14
 3602 Thun
 Switzerland
Representative Kari Eisenhut
Type of glider Alpha 4 28
Trimmer not available

Certification number PG 061.2007
Date of flight test 29/03/2007
Place of test Villeneuve



Classification B

Test Pilot Claude Thurnheer
Harness sup air light
Total weight in flight 78 kg
 Alain Zoller
 Advance - Progress L
 106 kg

| | Min weight | | Max weight | |
|---|--|---|---|---|
| 1. Inflation/Take-off | | | | |
| Rising behaviour | Smooth, easy and constant rising | A | Smooth, easy and constant rising | A |
| Special take off technique required | No | A | No | A |
| 2. Landing | | | | |
| Special landing technique required | No | A | No | A |
| 3. Speed in straight flight | | | | |
| Trim speed more than 30 km/h | Yes | A | Yes | A |
| Speed range using the controls larger than 10 km/h | Yes | A | Yes | A |
| Minimum speed | Less than 25 km/h | A | Less than 25 km/h | A |
| 4. Control movement | | | | |
| <i>Max. weight in flight up to 80 kg</i> Symmetric control pressure/travel | Increasing, Greater than 55 cm | A | not available | 0 |
| <i>Max. weight in flight 80 kg to 100 kg</i> Symmetric control pressure/travel | not available | 0 | not available | 0 |
| <i>Max. weight in flight greater than 100 kg</i> Symmetric control pressure/travel | not available | 0 | Increasing, Greater than 65 cm | A |
| 5. Pitch stability exiting accelerated flight | | | | |
| 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 | | | | |
| Collapse occurs | No | A | No | A |
| 7. Roll stability and damping | | | | |
| Oscillations | Reducing | A | Reducing | A |
| 8. Stability in gentle spirals | | | | |
| Tendency to return to straight flight | Spontaneous exit | A | Spontaneous exit | A |
| 9. Behaviour in a steeply banked turn | | | | |
| Sink rate after two turns | 12 m/s to 14 m/s | A | More than 14 m/s | B |
| 10. Symmetric front collapse | | | | |
| Entry | Rocking back less than 45° | A | Rocking back less than 45° | A |
| Recovery | Spontaneous in less than 3 s | A | Spontaneous in less than 3 s | A |
| Dive forward angle on exit | Dive forward 0° to 30°, Keeping course | A | Dive forward 0° to 30°, Keeping course | A |
| Cascade occurs | No | A | No | A |
| <i>With accelerator</i> | | | | |
| Entry | Rocking back less than 45° | A | Rocking back less than 45° | A |
| Recovery | Spontaneous in less than 3 s | A | Spontaneous in less than 3 s | A |
| Dive forward angle on exit | Dive forward 0° to 30°, Keeping course | A | Dive forward 0° to 30°, Keeping course | A |
| Cascade occurs | No | A | No | A |
| 11. Exiting deep stall (parachutal stall) | | | | |
| Deep stall achieved | Yes | A | Yes | A |
| Recovery | Spontaneous in less than 3 s | A | Spontaneous in less than 3 s | A |
| Dive forward angle on exit | Dive forward 0° to 30° | A | Dive forward 0° to 30° | A |
| Change of course | Changing course less than 45° | A | Changing course less than 45° | A |
| Cascade occurs | No | A | No | A |
| 12. High angle of attack recovery | | | | |
| Recovery | Spontaneous in less than 3 s | A | Spontaneous in less than 3 s | A |
| Cascade occurs | No | A | No | A |
| 13. Recovery from a developed full stall | | | | |
| Dive forward angle on exit | Dive forward 0° to 30° | A | Dive forward 0° to 30° | A |
| Collapse | No collapse | A | No collapse | A |
| Cascade occurs (other than collapse) | No | A | No | A |
| Rocking back | Less than 45° | A | Less than 45° | A |
| Line tension | Most line tight | A | Most line tight | A |
| 14. Asymmetric collapse | | | | |
| <i>With 50% collapse-Maximum dive forward or roll angle</i> | | | | |
| Change of course until re-inflation | Less than 90°, Dive or roll angle 0° to 15° | A | Less than 90°, Dive or roll angle 0° to 15° | A |
| Re-inflation behaviour | Spontaneous re-inflation | A | Spontaneous re-inflation | A |
| Total change of course | Less than 360° | A | Less than 360° | A |
| Collapse on the opposite side occurs | No | A | No | A |
| Twist occurs | No | A | No | A |
| Cascade occurs | No | A | No | A |
| <i>With 75% collapse-Maximum dive forward or roll angle</i> | | | | |
| Change of course until re-inflation | Less than 90°, Dive or roll angle 15° to 45° | A | Less than 90°, Dive or roll angle 0° to 15° | A |
| Re-inflation behaviour | Spontaneous re-inflation | A | Spontaneous re-inflation | A |
| Total change of course | Less than 360° | A | Less than 360° | A |
| Collapse on the opposite side occurs | No | A | No | A |
| Twist occurs | No | A | No | A |
| Cascade occurs | No | A | No | A |
| <i>With 50% collapse and accelerator-Maximum dive forward or roll angle</i> | | | | |
| Change of course until re-inflation | Less than 90°, Dive or roll angle 0° to 15° | A | Less than 90°, Dive or roll angle 0° to 15° | A |
| Re-inflation behaviour | Spontaneous re-inflation | A | Spontaneous re-inflation | A |
| Total change of course | Less than 360° | A | Less than 360° | A |
| Collapse on the opposite side occurs | No | A | No | A |

| | | | | |
|---|--|---|--|---|
| Twist occurs | No | A | No | A |
| Cascade occurs | No | A | No | A |
| <i>With 75% collapse and accelerator-Maximum dive forward or roll angle</i> | | | | |
| Change of course until re-inflation | Less than 90°, Dive or roll angle 15° to 45° | A | Less than 90°, Dive or roll angle 15° to 45° | A |
| Re-inflation behaviour | Spontaneous re-inflation | A | Spontaneous re-inflation | A |
| Total change of course | Less than 360° | A | Less than 360° | A |
| Collapse on the opposite side occurs | No | A | No | A |
| Twist occurs | No | A | No | A |
| Cascade occurs | No | A | No | A |
| 15. Directional control with a maintained asymmetric collapse | | | | |
| Able to keep course | Yes | A | Yes | A |
| 180° turn away from the collapsed side possible in 10 s | Yes | A | Yes | A |
| Amount of control range between turn and stall or spin | More than 50 % of the symmetric control travel | A | More than 50 % of the symmetric control travel | A |
| 16. Trim speed spin tendency | | | | |
| Spin occurs | No | A | No | A |
| 17. Low speed spin tendency | | | | |
| Spin occurs | No | A | No | A |
| 18. Recovery from a developed spin | | | | |
| Spin rotation angle after release | Stops spinning in less than 90° | A | Stops spinning in less than 90° | A |
| Cascade occurs | No | A | No | A |
| 19. B-line stall | | | | |
| Change of course before release | Change of course less than 45° | A | Change of 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 s | A | Spontaneous in less than 3 s | A |
| Dive forward angle on exit | Dive forward 0° to 30° | A | Dive forward 0° to 30° | A |
| Cascade occurs | No | A | No | A |
| 20. Big ears | | | | |
| Entry procedure | Dedicated controls | A | Dedicated controls | A |
| Behaviour during big ears | Stable flight | A | Stable flight | A |
| Recovery | Spontaneous in less than 3 s | A | Spontaneous in less than 3 s | A |
| Dive forward angle on exit | Dive forward 0° to 30° | A | Dive forward 0° to 30° | A |
| 21. Big ears in accelerated flight | | | | |
| Entry procedure | Dedicated controls | A | Dedicated controls | A |
| Behaviour during big ears | Stable flight | A | Stable flight | A |
| Recovery | Spontaneous in less than 3 s | A | Spontaneous in less than 3 s | A |
| Dive forward angle on exit | Dive forward 0° to 30° | A | Dive forward 0° to 30° | A |
| Behaviour immediately after releasing the accelerator while | Stable flight | A | Stable flight | A |
| 22. Behaviour exiting a steep spiral | | | | |
| Tendency to return to straight flight | Spontaneous exit | A | Spontaneous exit | A |
| Turn angle to recover normal flight | Less than 720°,spontaneous recovery | A | Less than 720°,spontaneous recovery | A |
| Sink rate when evaluating spiral stability [m/s] | 19 m/s | | 16 m/s | |
| 23. Alternative means of directional control | | | | |
| 180° turn achievable in 20 s | Yes | A | Yes | A |
| Stall or spin occurs | No | A | No | A |
| 24. Any other flight procedure and/or configuration described in the user's manual | | | | |
| Procedure works as described | not available | 0 | not available | 0 |
| Procedure suitable for novice pilots | not available | 0 | not available | 0 |
| Cascade occurs | not available | 0 | not available | 0 |
| Comments of test pilot | | | | |
| Comments | no | | no | |



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