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paragliding by air turquoise

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AIR TURQUOISE SA certified by ISO 9001 BUREAU VERITAS Certification

# Flight test report: EN 926-2:2013

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|---|---|---|---|
| Manufacturer | **Gradient s.r.o.** | Certification number | PG_0869.2014 |
| Address | Plzenska 221/130<br>150 00 Praha 5 - Motol<br>Czech Republic | Date of flight test | 30. 05. 2014 |
| Representative | Ondrej Dupal | Place of test | Villeneuve |
| Glider model | **Aspen5 28** | **Classification** | **C** |
| Trimmer | no | | |

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|---|---|---|---|---|
| **Test pilot** | Zoller Alain | | Berruex Gilles | |
| **Harness** | Flugsau - Lightsau | | Niviuk - Hamak L | |
| **Total weight in flight (kg)** | 98 | | 118 | |
| **1. Inflation/Take-off** | **B** | | | |
| Rising behaviour | Easy rising, some pilot correction is required | B | Easy rising, some pilot correction is required | B |
| Special take off technique required | No | A | No | A |
| **2. Landing** | **A** | | | |
| Special landing technique required | No | A | No | A |
| **3. Speed in straight flight** | **A** | | | |
| 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** | **C** | | | |
| ***Max. weight in flight up to 80 kg*** | | | | |
| Symmetric control pressure / travel | not available | 0 | not available | 0 |
| ***Max. weight in flight 80 kg to 100 kg*** | | | | |
| Symmetric control pressure / travel | Increasing / 45 cm to 60 cm | C | not available | 0 |
| ***Max. weight in flight greater than 100 kg*** | | | | |
| Symmetric control pressure / travel | not available | 0 | Increasing / 50 cm to 65 cm | C |
| **5. Pitch stability exiting accelerated flight** | **A** | | | |
| 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** | **A** | | | |
| Collapse occurs | No | A | No | A |
| **7. Roll stability and damping** | **A** | | | |
| Oscillations | Reducing | A | Reducing | A |
| **8. Stability in gentle spirals** | **A** | | | |
| Tendency to return to straight flight | Spontaneous exit | A | Spontaneous exit | A |
| **9. Behaviour exiting a fully developed spiral dive** | **A** | | | |
| Initial response of glider (first 180°) | Immediate reduction of rate of turn | A | Immediate reduction of rate of turn | A |
| Tendency to return to straight flight | Spontaneous exit (g force decreasing, rate of turn decreasing) | A | Spontaneous exit (g force decreasing, rate of turn decreasing) | A |
| Turn angle to recover normal flight | Less than 720°, spontaneous recovery | A | Less than 720°, spontaneous recovery | A |

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| **10. Symmetric front collapse** | **C** | | | |
| ***Approximately 30 % chord*** | | | | |
| 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 Change of course | Dive forward 0° to 30° Keeping course | A | Dive forward 0° to 30° Keeping course | A |
| Cascade occurs | No | A | No | A |
| Folding lines used | No | A | No | A |
| ***At least 50% chord*** | | | | |
| 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 / Change of course | Dive forward 0° to 30° / Keeping course | A | Dive forward 0° to 30° / Keeping course | A |
| Cascade occurs | No | A | No | A |
| Folding lines used | No | A | No | A |
| ***With accelerator*** | | | | |
| Entry | Rocking back greater than 45° | C | Rocking back less than 45° | A |
| Recovery | Spontaneous in 3 s to 5 s | B | Spontaneous in 3 s to 5 s | B |
| Dive forward angle on exit / Change of course | Dive forward 0° to 30° / Keeping course | A | Dive forward 0° to 30° / Keeping course | A |
| Cascade occurs | No | A | No | A |
| Folding lines used | No | A | No | A |
| **11. Exiting deep stall (parachutal stall)** | **A** | | | |
| 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** | **A** | | | |
| 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** | **B** | | | |
| Dive forward angle on exit | Dive forward 30° to 60° | B | Dive forward 30° to 60° | B |
| Collapse | No collapse | A | No collapse | A |
| Cascade occurs (other than collapses) | No | A | No | A |
| Rocking back | Less than 45° | A | Less than 45° | A |
| Line tension | Most lines tight | A | Most lines tight | A |
| **14. Asymmetric collapse** | **C** | | | |
| ***Small asymmetric collapse*** | | | | |
| Change of course until re-inflation / Maximum dive forward or roll angle | 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 (or only a small number of collapsed cells with a spontaneous reinflation) | A | No (or only a small number of collapsed cells with a spontaneous reinflation) | A |
| Twist occurs | No | A | No | A |
| Cascade occurs | No | A | No | A |
| Folding lines used | No | A | No | A |
| ***Large asymmetric collapse*** | | | | |
| Change of course until re-inflation / Maximum dive forward or roll angle | 90° to 180° / Dive or roll angle 15° to 45° | B | 90° to 180° / Dive or roll angle 45° to 60° | C |
| Re-inflation behaviour | Inflates in less than 3 s from start of pilot action | C | Spontaneous re-inflation | A |
| Total change of course | Less than 360° | A | Less than 360° | A |

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| Collapse on the opposite side occurs | No (or only a small number of collapsed cells with a spontaneous reinflation) | A | No (or only a small number of collapsed cells with a spontaneous reinflation) | A |
| Twist occurs | No | A | No | A |
| Cascade occurs | No | A | No | A |
| Folding lines used | No | A | No | A |
| ***Small asymmetric collapse with fully activated accelerator*** | | | | |
| Change of course until re-inflation / Maximum dive forward or roll angle | 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 (or only a small number of collapsed cells with a spontaneous reinflation) | A | No (or only a small number of collapsed cells with a spontaneous reinflation) | A |
| Twist occurs | No | A | No | A |
| Cascade occurs | No | A | No | A |
| Folding lines used | No | A | No | A |
| ***Large asymmetric collapse with fully activated accelerator*** | | | | |
| Change of course until re-inflation / Maximum dive forward or roll angle | 90° to 180° / Dive or roll angle 45° to 60° | C | 90° to 180° / Dive or roll angle 45° to 60° | C |
| Re-inflation behaviour | Spontaneous re-inflation | A | Inflates in less than 3 s from start of pilot action | C |
| Total change of course | Less than 360° | A | Less than 360° | A |
| Collapse on the opposite side occurs | No (or only a small number of collapsed cells with a spontaneous reinflation) | A | No (or only a small number of collapsed cells with a spontaneous reinflation) | A |
| Twist occurs | No | A | No | A |
| Cascade occurs | No | A | No | A |
| Folding lines used | No | A | No | A |
| **15. Directional control with a maintained asymmetric collapse** | **A** | | | |
| 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** | **A** | | | |
| Spin occurs | No | A | No | A |
| **17. Low speed spin tendency** | **A** | | | |
| Spin occurs | No | A | No | A |
| **18. Recovery from a developed spin** | **A** | | | |
| 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** | **A** | | | |
| 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 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** | **A** | | | |
| Entry procedure | Standard technique | A | Standard technique | 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** | **A** | | | |
| Entry procedure | Standard technique | A | Standard technique | 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 |

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| Behaviour immediately after releasing the accelerator while maintaining big ears | Stable flight | A | Stable flight | A |
| **22. Alternative means of directional control** | **A** | | | |
| 180° turn achievable in 20 s | 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** | **0** | | | |
| 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 |
| **24. Comments of test pilot** | | | | |
| Comments | | | | |