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AIR TURQUOISE SA certified by

Flight test report: EN

ISO 9001
BUREAU VERITAS
Certification

Manufacturer Windtech Paragliders Certification number PG_0569.2012
Address Francisco Rodríguez, 7 / PO Date of flight test 11. 05. 2012

Box 269 33280

33201 GIJON - Asturias

Spain

Representative None Place of test Villeneuve

Glider model Tuareg 39 Classification B

Trimmer yes: closed

Test pilotThurnheer ClaudeBerruex GillesHarnessSup air - Evasion BiAdvance - Bi Pro 2

| narness Total weight in flight (kg) | 125 | | 200 | |
|---|---|---|---|---|
| 1. Inflation/Take-off | A | | 200 | |
| Rising behaviour | Smooth, easy and constant rising | Α | Smooth, easy and constant rising | Α |
| Special take off technique required | No | Α | No | Α |
| 2. Landing | A | | | |
| Special landing technique required | No | Α | No | Α |
| 3. Speed in straight flight | A | | | |
| Trim speed more than 30 km/h | Yes | Α | Yes | Α |
| Speed range using the controls larger than 10 km/h | Yes | Α | Yes | Α |
| Minimum speed | Less than 25 km/h | Α | Less than 25 km/h | Α |
| 4. Control movement | A | | | |
| 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 | not available | 0 | not available | 0 |
| Max. weight in flight greater than 100 kg | | | | |
| Symmetric control pressure / travel | Increasing / greater than 65 cm | Α | Increasing / greater than 65 cm | Α |
| 5. Pitch stability exiting accelerated flight | 0 | | | |
| Dive forward angle on exit | not available | 0 | not available | 0 |
| Collapse occurs | not available | 0 | not available | 0 |
| 6. Pitch stability operating controls during accelerated flight | 0 | | | |
| Collapse occurs | not available | 0 | not available | 0 |
| 7. Roll stability and damping | A | | | |
| Oscillations | Reducing | Α | Reducing | Α |
| 8. Stability in gentle spirals | A | | | |
| Tendency to return to straight flight | Spontaneous exit | Α | Spontaneous exit | Α |
| 9. Behaviour in a steeply banked turn | В | | | |
| Sink rate after two turns | 12 m/s to 14 m/s | Α | More than 14 m/s | В |
| 10. Symmetric front collapse | Α | | | |
| Entry | Rocking back less than 45° | Α | Rocking back less than 45° | Α |
| Recovery | Spontaneous in less than 3 s | Α | Spontaneous in less than 3 s | Α |
| Dive forward angle on exit / Change of course | Dive forward 0° to 30° / Keeping course | Α | Dive forward 0° to 30° / Keeping course | Α |
| Cascade occurs | No | Α | No | Α |
| With accelerator | | | | |
| Entry | not available | 0 | not available | 0 |

| Recovery | not available | 0 | not available | 0 |
|--|--|---|---|-----|
| Dive forward angle on exit / Change of course | not available | 0 | not available | 0 |
| Cascade occurs | not available | 0 | not available | 0 |
| 11. Exiting deep stall (parachutal stall) | A | | not available | |
| Deep stall achieved | Yes | Α | Yes | Α |
| Recovery | Spontaneous in less than 3 s | Α | Spontaneous in less than 3 s | Α |
| Dive forward angle on exit | Dive forward 0° to 30° | Α | Dive forward 0° to 30° | Α |
| Change of course | Changing course less than 45° | Α | Changing course less than 45° | Α |
| Cascade occurs | No | Α | No | Α |
| 12. High angle of attack recovery | A | • | | , , |
| Recovery | Spontaneous in less than 3 s | Α | Spontaneous in less than 3 s | Α |
| Cascade occurs | No | Α | No | Α |
| 13. Recovery from a developed full stall | В | | | , , |
| Dive forward angle on exit | Dive forward 0° to 30° | Α | Dive forward 30° to 60° | В |
| Collapse | No collapse | Α | No collapse | A |
| Cascade occurs (other than collapses) | No | Α | No | Α |
| Rocking back | Less than 45° | Α | Less than 45° | Α |
| Line tension | Most lines tight | Α | Most lines tight | A |
| 14. Asymmetric collapse | B | | wost into agric | А |
| With 50% collapse | 5 | | | |
| Change of course until re-inflation / Maximum dive forward or roll angle | Less than 90° / Dive or roll angle 0° to 15° | Α | Less than 90° / Dive or roll angle 15° to 45° | Α |
| Re-inflation behaviour | Spontaneous re-inflation | Α | Spontaneous re-inflation | Α |
| Total change of course | Less than 360° | Α | Less than 360° | Α |
| Collapse on the opposite side occurs | No | Α | No | Α |
| Twist occurs | No | Α | No | Α |
| Cascade occurs | No | Α | No | Α |
| With 75% collapse | | | | |
| Change of course until re-inflation / Maximum dive forward or roll angle | 90° to 180° / Dive or roll angle 15° to 45° | В | 90° to 180° / Dive or roll angle 15° to 45° | В |
| Re-inflation behaviour | Spontaneous re-inflation | Α | Spontaneous re-inflation | Α |
| Total change of course | Less than 360° | Α | Less than 360° | Α |
| Collapse on the opposite side occurs | No | Α | No | Α |
| Twist occurs | No | Α | No | Α |
| Cascade occurs | No | Α | No | Α |
| With 50% collapse and accelerator | | | | |
| Change of course until re-inflation / Maximum dive forward or roll angle | not available | 0 | not available | 0 |
| Re-inflation behaviour | not available | 0 | not available | 0 |
| Total change of course | not available | 0 | not available | 0 |
| Collapse on the opposite side occurs | not available | 0 | not available | 0 |
| Twist occurs | not available | 0 | not available | 0 |
| Cascade occurs | not available | 0 | not available | 0 |
| With 75% collapse and accelerator | | | | |
| Change of course until re-inflation / Maximum dive forward or roll angle | not available | 0 | not available | 0 |
| Re-inflation behaviour | not available | 0 | not available | 0 |
| Total change of course | not available | 0 | not available | 0 |
| Collapse on the opposite side occurs | not available | 0 | not available | 0 |
| Twist occurs | not available | 0 | not available | 0 |
| Cascade occurs | not available | 0 | not available | 0 |
| 15. Directional control with a maintained asymmetric collapse | Α | | | |
| Able to keep course | Yes | Α | Yes | Α |
| 180° turn away from the collapsed side possible in 10 s | Yes | Α | Yes | Α |
| Amount of control range between turn and stall or spin | More than 50 % of the | Α | More than 50 % of the symmetric | Α |
| | symmetric control travel | | control travel | |

| 16. Trim speed spin tendency | Α | | | |
|--|--------------------------------------|---|--------------------------------------|---|
| Spin occurs | No | Α | No | Α |
| 17. Low speed spin tendency | A | | | |
| Spin occurs | No | Α | No | Α |
| 18. Recovery from a developed spin | Α | | | |
| Spin rotation angle after release | Stops spinning in less than 90° | Α | Stops spinning in less than 90° | Α |
| Cascade occurs | No | Α | No | Α |
| 19. B-line stall | A | | | |
| Change of course before release | Changing course less than 45° | Α | Changing course less than 45° | Α |
| Behaviour before release | Remains stable with straight span | Α | Remains stable with straight span | Α |
| Recovery | Spontaneous in less than 3 s | Α | Spontaneous in less than 3 s | Α |
| Dive forward angle on exit | Dive forward 0° to 30° | Α | Dive forward 30° to 60° | Α |
| Cascade occurs | No | Α | No | Α |
| 20. Big ears | Α | | | |
| Entry procedure | Dedicated controls | Α | Dedicated controls | Α |
| Behaviour during big ears | Stable flight | Α | Stable flight | Α |
| Recovery | Spontaneous in less than 3 s | Α | Spontaneous in less than 3 s | Α |
| Dive forward angle on exit | Dive forward 0° to 30° | Α | Dive forward 0° to 30° | Α |
| 21. Big ears in accelerated flight | 0 | | | |
| Entry procedure | not available | 0 | not available | 0 |
| Behaviour during big ears | not available | 0 | not available | 0 |
| Recovery | not available | 0 | not available | 0 |
| Dive forward angle on exit | not available | 0 | not available | 0 |
| Behaviour immediately after releasing the accelerator while maintaining big ears | not available | 0 | not available | 0 |
| 22. Behaviour exiting a steep spiral | Α | | | |
| Tendency to return to straight flight | Spontaneous exit | Α | Spontaneous exit | Α |
| Turn angle to recover normal flight | Less than 720°, spontaneous recovery | Α | Less than 720°, spontaneous recovery | Α |
| Sink rate when evaluating spiral stability [m/s] | 15 | | 24 | |
| 23. Alternative means of directional control | A | | | |
| 180° turn achievable in 20 s | Yes | Α | Yes | Α |
| Stall or spin occurs | No | Α | No | Α |
| 24. 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 |
| 25. Comments of test pilot | | | | |
| Comments | | | | |