AIR TURQUOISE SA | PARA-TEST.COM
Route du Pré-au-Comte 8 ▲ CH-1844 Villeneuve ▲ +41 (0)21 965 65 65

Test laboratory for paragliders, paraglider harnesses
and paraglider reserve parachutes

paragliding by air turquoise

# Classification: B

| | |
|---|---|
| In accordance with standards EN 926-1:2015, EN 926-2:2013+A1:2021 and NfL 2-565-20 | PG_2188.2023 |
| Date of issue (DMY): | 12.07.2023 |
| Manufacturer: | Apco Aviation Ltd. |
| Model: | NESTRA S |
| Serial number: | Pr1014 |

## Configuration during flight tests

| **Paraglider** | | **Accessories** | |
|---|---|---|---|
| Maximum weight in flight (kg) | **80** | Range of speed system (cm) | **12.4** |
| Minimum weight in flight (kg) | **60** | Speed range using brakes (km/h) | **13** |
| Glider's weight (kg) | **4.5** | Total speed range with accessories (km/h) | **23** |
| Number of risers | **3+1** | Range of trimmers (cm) | **0** |
| Projected area (m2) | **19.64** | | |

| **Harness used for testing** (max weight) | | **Inspections** (whichever happens first) |
|---|---|---|
| Harness type | **ABS** | every year or after 150h flying time |
| Harness brand | **Niviuk Gliders** | Warning! Before use refer to user's manual |
| Harness model | **Konvers M** | Person or company having presented the glider for testing: **None** |
| Harness to risers distance (cm) | **44** | |
| Distance between risers (cm) | **44** | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **B** | **A** | **B** | **A** | **A** | **A** | **A** | **A** | **B** | **B** | **A** | **A** | **B** | **B** | **A** | **A** | **A** | **B** | **0** | **B** | **B** | **A** | **0** |

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# Flight test report: EN 926-2:2013+A1:2021* & NfL 2-565-20

| | | | |
|---|---|---|---|
| Manufacturer | **Apco Aviation Ltd.** | Certification number | PG_2188.2023 |
| Address | Chalamish 7, Caesarea Industrial Park<br>3088900 Caesarea<br>Israel | Flight test | 24.05.2023 |
| Glider model | **NESTRA S** | **Classification** | **B** |
| Serial number | Pr1014 | Representative | None |
| Trimmer | no | Place of test | Villeneuve |
| Folding lines used | no | | |

| | | |
|---|---|---|
| **Test pilot** | Philippe Dupont | Claude Thurnheer |
| **Harness** | Woody Valley - Wani Light 2 S | Niviuk Gliders - Konvers M |
| **Harness to risers distance (cm)** | 41 | 44 |
| **Distance between risers (cm)** | 40 | 44 |
| **Total weight in flight (kg)** | 60 | 80 |

| | | | | |
|---|---|---|---|---|
| **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** | **B** | | | |
| 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 | 25 km/h to 30 km/h | B | 25 km/h to 30 km/h | B |
| **4. Control movement** | **A** | | | |
| **Max. weight in flight up to 80 kg** | | | | |
| Symmetric control pressure / travel | Increasing / greater than 55 cm | A | Increasing / greater than 55 cm | A |
| **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 | not available | 0 | not available | 0 |
| **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** | **B** | | | |
| Initial response of glider (first 180°) | Immediate reduction of rate of turn | A | No immediate reaction | B |
| 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 | 720° to 1 080°, spontaneous recovery | B |
| **10. Symmetric front collapse** | **B** | | | |

*This standard is NOT covered by accreditation D-IS-19457-01

| | | | | |
|---|---|---|---|---|
| **Approximately 30 % chord** | | | | |
| Entry | Rocking back less than 45° | A | Rocking back less than 45° | A |
| Recovery | Spontaneous in 3 s to 5 s | B | 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 3 s to 5 s | B | 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 less than 45° | A | 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 0° to 30° | A |
| 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** | **B** | | | |
| **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 15° to 45° | B |
| 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 |
| **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 15° to 45° | B | 90° to 180° / Dive or roll angle 15° to 45° | B |
| 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 |
| **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** | **B** | | | |
| Spin rotation angle after release | Stops spinning in 90° to 180° | B | Stops spinning in 90° to 180° | B |
| Cascade occurs | No | A | No | A |
| **19. B-line stall** | **0** | | | |
| Change of course before release | not available | 0 | not available | 0 |
| Behaviour before release | not available | 0 | not available | 0 |
| Recovery | not available | 0 | not available | 0 |
| Dive forward angle on exit | not available | 0 | not available | 0 |
| Cascade occurs | not available | 0 | not available | 0 |
| **20. Big ears** | **B** | | | |
| 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 3 s to 5 s | B |
| Dive forward angle on exit | Dive forward 0° to 30° | A | Dive forward 0° to 30° | A |
| **21. Big ears in accelerated flight** | **B** | | | |
| Entry procedure | Dedicated controls | A | Dedicated controls | A |
| Behaviour during big ears | Stable flight | A | Stable flight | A |
| Recovery | Recovery through pilot action in less than a further 3 s | B | Recovery through pilot action in less than a further 3 s | B |
| Dive forward angle on exit | Dive forward 0° to 30° | A | Dive forward 0° to 30° | A |
| 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**