



## Flight test report: EN 926-2:2013

|  |   |                       |                         |
|--|---|-----------------------|-------------------------|
| Manufacturer                           | <b>Sky Paragliders a.s.</b>                                     | Certification number  | PG_1017.2016            |
| Address                                | Okružní 39<br>73911 Frýdlant nad<br>Ostravicí<br>Czech Republic | Date of flight test   | 14. 12. 2015            |
| Glider model                           | <b>Apollo L</b>   | <b>Classification</b> | <b>B</b>                |
| Serial number                          | 2058-11-1242  | Representative        | None                    |
| Trimmer                                | no  | Place of test         | Villeneuve              |
| <b>Test pilot</b>                      |   | Thurnheer Claude      | Zoller Alain            |
| <b>Harness</b>                         |   | Sup' Air - Access M   | Gin Gliders - Gingo 2 L |
| <b>Harness to risers distance (cm)</b> |   | 43                    | 43                      |
| <b>Distance between risers (cm)</b>    |   | 44                    | 46                      |
| <b>Total weight in flight (kg)</b>     |   | 85                    | 108                     |

|  |  |   |  |   |
|--|--|---|--|---|
| <b>1. Inflation/Take-off</b>   | <b>A</b>   |   |  |   |
| Rising behaviour   | Smooth, easy and constant rising                               | A | Smooth, easy and constant rising                               | A |
| Special take off technique required                                    | No   | A | No   | A |
| <b>2. Landing</b>  | <b>A</b>   |   |  |   |
| Special landing technique required                                     | No   | A | No   | A |
| <b>3. Speed in straight flight</b>                                     | <b>A</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  | Less than 25 km/h  | A | Less than 25 km/h  | A |
| <b>4. Control movement</b>   | <b>A</b>   |   |  |   |
| <b>Max. weight in flight up to 80 kg</b>                               |  |   |  |   |
| Symmetric control pressure / travel                                    | not available  | 0 | not available  | 0 |
| <b>Max. weight in flight 80 kg to 100 kg</b>                           |  |   |  |   |
| Symmetric control pressure / travel                                    | Increasing / greater than 60 cm                                | A | not available  | 0 |
| <b>Max. weight in flight greater than 100 kg</b>                       |  |   |  |   |
| Symmetric control pressure / travel                                    | not available  | 0 | Increasing / greater than 65 cm                                | A |
| <b>5. Pitch stability exiting accelerated flight</b>                   | <b>A</b>   |   |  |   |
| Dive forward angle on exit   | Dive forward less than 30°                                     | A | Dive forward less than 30°                                     | A |
| Collapse occurs  | No   | A | No   | A |
| <b>6. Pitch stability operating controls during accelerated flight</b> | <b>A</b>   |   |  |   |
| Collapse occurs  | No   | A | No   | A |
| <b>7. Roll stability and damping</b>                                   | <b>A</b>   |   |  |   |
| Oscillations   | Reducing   | A | Reducing   | A |
| <b>8. Stability in gentle spirals</b>                                  | <b>A</b>   |   |  |   |
| Tendency to return to straight flight                                  | Spontaneous exit   | A | Spontaneous exit   | A |
| <b>9. Behaviour exiting a fully developed spiral dive</b>              | <b>A</b>   |   |  |   |
| 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 |

**10. Symmetric front collapse****B****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 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 less than 3 s             | A |
| Dive forward angle on exit / Change of course | Dive forward 0° to 30° / Keeping course | A | Dive forward 30° to 60° / Keeping course | B |
| 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****A**

|                                       |                        |   |                        |   |
|---------------------------------------|------------------------|---|------------------------|---|
| 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 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 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 (or only a small number of collapsed cells with a spontaneous re-inflation) | A | No (or only a small number of collapsed cells with a spontaneous re-inflation) | 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 re-inflation) | A | No (or only a small number of collapsed cells with a spontaneous re-inflation) | A |
| Twist occurs   | No   | A | No   | A |
| Cascade occurs   | No   | A | No   | A |
| Folding lines used   | No   | A | No   | A |
| <b>Small asymmetric collapse with fully activated accelerator</b>        |  |   |  |   |
| 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 re-inflation) | A | No (or only a small number of collapsed cells with a spontaneous re-inflation) | A |
| Twist occurs   | No   | A | No   | A |
| Cascade occurs   | No   | A | No   | A |
| Folding lines used   | No   | A | No   | A |
| <b>Large asymmetric collapse with fully activated accelerator</b>        |  |   |  |   |
| 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 re-inflation) | A | No (or only a small number of collapsed cells with a spontaneous re-inflation) | A |
| Twist occurs   | No   | A | No   | A |
| Cascade occurs   | No   | A | No   | A |
| Folding lines used   | No   | A | No   | A |
| <b>15. Directional control with a maintained asymmetric collapse</b>     |  |   |  |   |
| 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 |
| <b>16. Trim speed spin tendency</b>                                      |  |   |  |   |
| Spin occurs  | No   | A | No   | A |
| <b>17. Low speed spin tendency</b>                                       |  |   |  |   |
| Spin occurs  | No   | A | No   | A |
| <b>18. Recovery from a developed spin</b>                                |  |   |  |   |
| 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 |
| <b>19. B-line stall</b>  |  |   |  |   |
| 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 |
| <b>20. Big ears</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 | Spontaneous in less than 3 s   | A |
| Dive forward angle on exit   | Dive forward 0° to 30°   | A | Dive forward 0° to 30°   | A |
| <b>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   | Spontaneous in 3 s to 5 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 maintaining big ears          | Stable flight            | A | Stable flight | A |
| <b>22. Alternative means of directional control</b>                                       | <b>A</b>                 |   |               |   |
| 180° turn achievable in 20 s  | Yes                      | A | Yes           | A |
| Stall or spin occurs  | No                       | A | No            | A |
| <b>23. Any other flight procedure and/or configuration described in the user's manual</b> | <b>A</b>                 |   |               |   |
| Procedure works as described  | Yes                      | A | not available | 0 |
| Procedure suitable for novice pilots  | Yes                      | A | not available | 0 |
| Cascade occurs  | No                       | A | not available | 0 |
| <b>24. Comments of test pilot</b>   | <input type="checkbox"/> |   |               |   |
| Comments  |                          |   |               |   |