

## Flight test report: EN 926-2:2013 & LTF 91/09

Manufacturer	<b>Sky Paragliders a.s.</b>	Certification number	PG_1234.2017
Address	Okružní 39 73911 Frýdlant nad Ostravicí Czech Republic	Date of flight test	29. 08. 2017

Glider model	<b>Apollo Bi 41</b>	<b>Classification</b>	<b>C</b>
Serial number	2254-11-0866	Representative	None
Trimmer	yes: opened	Place of test	Villeneuve
Folding lines used	no		

<b>Test pilot</b>	Thurnheer Claude	Zoller Alain
<b>Harness</b>	Supair - walibi lite	Advance - Bi pro 2
<b>Harness to risers distance (cm)</b>	43	44.5
<b>Distance between risers (cm)</b>	55	55
<b>Total weight in flight (kg)</b>	125	220

<b>1. Inflation/Take-off</b>	<b>C</b>			
Rising behaviour	Smooth, easy and constant rising	A	Overshoots, shall be slowed down to avoid a front collapse	C
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>B</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
<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	not available	0	not available	0
<b>Max. weight in flight greater than 100 kg</b>				
Symmetric control pressure / travel	Increasing / greater than 65 cm	A	Increasing / greater than 65 cm	A
<b>5. Pitch stability exiting accelerated flight</b>	<b>0</b>			
Dive forward angle on exit	not available	0	not available	0
Collapse occurs	not available	0	not available	0
<b>6. Pitch stability operating controls during accelerated flight</b>	<b>0</b>			
Collapse occurs	not available	0	not available	0
<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
<b>10. Symmetric front collapse</b>		<b>B</b>		
<b>Approximately 30 % chord</b>				
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		No	
<b>At least 50% chord</b>				
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 30° to 60° / Keeping course	B
Cascade occurs	No	A	No	A
Folding lines used	No		No	
<b>With accelerator</b>				
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
Folding lines used	Not available		Not available	
<b>11. Exiting deep stall (parachutal stall)</b>		<b>A</b>		
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
<b>12. High angle of attack recovery</b>		<b>A</b>		
Recovery	Spontaneous in less than 3 s	A	Spontaneous in less than 3 s	A
Cascade occurs	No	A	No	A
<b>13. Recovery from a developed full stall</b>		<b>B</b>		
Dive forward angle on exit	Dive forward 0° to 30°	A	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
<b>14. Asymmetric collapse</b>		<b>C</b>		
<b>Small asymmetric collapse</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	Yes, no turn reversal	C
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
Folding lines used	No		No	
<b>Large asymmetric collapse</b>				
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	Spontaneous re-inflation	A
Total change of course	Less than 360°	A	Less than 360°	A
Collapse on the opposite side occurs	Yes, no turn reversal	C	Yes, no turn reversal	C
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
Folding lines used	No		No	
<b>Small asymmetric collapse with fully activated accelerator</b>				
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
Folding lines used	Not available		Not available	
<b>Large asymmetric collapse with fully activated accelerator</b>				
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
Folding lines used	Not available		Not available	
<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	Spontaneous in 3 s to 5 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	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. 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**

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Comments