

## Flight test report: EN



Manufacturer	<b>Ozone Gliders</b>	Certification number	PG_0264.2009
Address	2, Queens Drive LA46LN . UK	Date of flight test	25. 07. 2009
Representative	None	Place of test	Villeneuve
Glider model	<b>Element XS</b>	<b>Classification</b>	<b>B</b>
Trimmer	no		

<b>Test pilot</b>	Fukuoka Seiko	Thurnheer Claude
<b>Harness</b>	Sup' Air - Altiplume S	Sup' Air - Altiplume M
<b>Total weight in flight (kg)</b>	60	75

1. Inflation/Take-off	A			
Rising behaviour	Smooth, easy and constant rising	A	Smooth, easy and constant rising	A
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	A			
<i>Max. weight in flight up to 80 kg</i>				
Symmetric control pressure / travel	Increasing / greater than 55 cm	A	Increasing / greater than 55 cm	A
<i>Max. weight in flight 80 kg to 100 kg</i>				
Symmetric control pressure / travel	not available	0	not available	0
<i>Max. weight in flight greater than 100 kg</i>				
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 in a steeply banked turn	B			
Sink rate after two turns	Up to 12 m/s	A	More than 14 m/s	B
10. Symmetric front collapse	A			
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
<i>With accelerator</i>				
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° / Entering a turn of less than 90°	A	Dive forward 0° to 30° / Keeping course	A
Cascade occurs	No	A	No	A
<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>A</b>			
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
<b>14. Asymmetric collapse</b>	<b>A</b>			
<i>With 50% collapse</i>				
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 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	A	No	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
<i>With 75% collapse</i>				
Change of course until re-inflation / Maximum dive forward or roll angle	180° to 360° / Dive or roll angle 0° to 15°	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	A	No	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
<i>With 50% collapse and accelerator</i>				
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 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	A	No	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
<i>With 75% collapse and accelerator</i>				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / 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	A	No	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
<b>15. Directional control with a maintained asymmetric collapse</b>	<b>A</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>	<b>A</b>			
Spin occurs	No	A	No	A
<b>17. Low speed spin tendency</b>	<b>A</b>			
Spin occurs	No	A	No	A
<b>18. Recovery from a developed spin</b>	<b>A</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>	<b>A</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>	<b>A</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 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>	<b>A</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 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. Behaviour exiting a steep spiral</b>	<b>A</b>			
Tendency to return to straight flight	Spontaneous exit	A	Spontaneous exit	A
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	A	Less than 720°, spontaneous recovery	A
Sink rate when evaluating spiral stability [m/s]	13		17	
<b>23. 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>24. Any other flight procedure and/or configuration described in the user's manual</b>	<b>0</b>			
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
<b>25. Comments of test pilot</b>				
Comments	The glider can stay longer in deepstall against wind.			