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AIR TURQUOISE SA certified by

## Flight test report: EN

no

Trimmer



Manufacturer	Axis Paragliding	Certification number	PG_0394.2010
Address	Nove Sady 39 602 00 Brno Czech Republic	Date of flight test	16. 12. 2010
Representative	Radek Simonik	Place of test	Villeneuve
Glider model	Venus 3 M	Classification	D

Test pilot Thurnheer Claude Zoller Alain
Harness Sup'Air - Revers M Sup'Air - Evo XC L

Total weight in flight (kg	85		110	
1. Inflation/Take-off	С			
Rising behaviour	Overshoots, shall be slowed down to avoid a front collapse	С	Overshoots, shall be slowed down to avoid a front collapse	С
Special take off technique required	No	Α	No	Α
2. Landing	Α			
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	С			
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	Increasing / 45 cm to 60 cm	С	not available	0
Max. weight in flight greater than 100 kg				
Symmetric control pressure / travel	not available	0	Increasing / 50 cm to 65 cm	С
5. Pitch stability exiting accelerated flight	A			
Dive forward angle on exit	Dive forward less than 30°	Α	Dive forward less than 30°	Α
Collapse occurs	No	Α	No	Α
6. Pitch stability operating controls during accelerated flight	Α			
Collapse occurs	No	Α	No	Α
7. Roll stability and damping	Α			
Oscillations	Reducing	Α	Reducing	Α
8. Stability in gentle spirals	Α			
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	More than 14 m/s	В	More than 14 m/s	В
10. Symmetric front collapse	D			
Entry	Rocking back less than 45°	Α	Rocking back greater than 45°	С
Recovery	Spontaneous in 3 s to 5 s	В	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	Rocking back less than 45°	Α	Rocking back greater than 45°	С

Recovery	Spontaneous in 3 s to 5 s	В	Recovery through pilot action in less than a further 3 s	D
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
11. Exiting deep stall (parachutal stall)	A			
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	С			
Recovery	Spontaneous in 3 s to 5 s	С	Spontaneous in less than 3 s	Α
Cascade occurs	No	Α	No	Α
13. Recovery from a developed full stall	A			
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
Collapse	No collapse	Α	No collapse	Α
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	Α
14. Asymmetric collapse	С			
With 50% collapse				
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 45° to 60°	С	$90^{\circ}$ to $180^{\circ}$ / Dive or roll angle $60^{\circ}$ to $90^{\circ}$	С
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	Less than 90° / Dive or roll angle 15° to 45°	Α	$90^{\circ}$ to $180^{\circ}$ / Dive or roll angle $15^{\circ}$ to $45^{\circ}$	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 75% collapse and accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 60° to 90°	С	$90^{\circ}$ to $180^{\circ}$ / Dive or roll angle $60^{\circ}$ to $90^{\circ}$	С
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
15. Directional control with a maintained asymmetric collapse	<b>A</b>			
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 symmetric control travel	Α	More than 50 % of the symmetric control travel	Α

Spin occurs	16. Trim speed spin tendency	Α			
Spin occurs   No	Spin occurs	No	Α	No	Α
18. Recovery from a developed spin   Spin rotation angle after release   Stops spinning in less than 90°   A Stops spinning in less than 90°   A No   A Dedicated controls   A No   A No	17. Low speed spin tendency	Α			
Spin rotation angle after release Noo A Noo A Noo A No A No A No A No A	Spin occurs	No	Α	No	Α
Cascade occurs   No   No   No   No   No   No   No   N	18. Recovery from a developed spin	Α			
19. B-line stall   Change of course before release   Changing course less than 45°   A Changing the span in section of the 50°   A Dedicated control Changing the 45°   A Changing course less than 3 s A Changing the accelerator in the 50°   A Dedicated controls   A Changing big ears   A Chang	Spin rotation angle after release	Stops spinning in less than 90°	Α	Stops spinning in less than 90°	Α
Change of course before release  Remains stable with straight span  Recovery  Spontaneous in less than 3 s A Spontaneous in less than 3 s A Dive forward 0 or to 30 A Dive for	Cascade occurs	No	Α	No	Α
Remains stable with straight span Recovery Recov	19. B-line stall	Α			
Recovery Spontaneous in less than 3 s A Spontaneous in less than 3 s A Dive forward 0° to 30° A Dedicated controls A Stable flight A Dive forward 0° to 30° A Dive forward 0° to 30° A Dive forward 0° to 30° A Dedicated controls A Dedicated controls A Dedicated controls A Dedicated controls A Stable flight A Stable	Change of course before release	Changing course less than 45°	Α	Changing course less than 45°	Α
Dive forward angle on exit Cascade occurs No No A	Behaviour before release	•	Α	Remains stable with straight span	Α
Cascade occurs     No     A     No     A       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     Recovery through pilot action in less than 1 s further 3 s     B       Dive forward angle on exit     Dive forward 0° to 30°     A     Dive forward 0° to 30°     A       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     Recovery through pilot action in less than 3 s     A     Recovery through pilot action in less than 3 s     A     Recovery through pilot action in less than 4 s     A     Stable flight     A       Dive forward angle on exit     Dive forward 0° to 30°     A     Recovery through pilot action in less than 3 s     A     Recovery through pilot action in less than 4 s     A     Recovery through pilot action in less than 4 s     A     Recovery through pilot action in less than 4 s     A     Recovery through pilot action in less than 5 s     A     Recovery through pilot action in less than 3 s     A     Recovery through pilot action in less than 3 s     A     R	Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	Α
20. Big ears     B       Entry procedure     Dedicated controls     A Dedicated controls     A Behaviour during big ears       Recovery     Spontaneous in less than 3 s Dive forward 0° to 30°     A Behaviour during pilot action in less than a further 3 s Dive forward 0° to 30°     A Dedicated controls     A Dedicated controls of Dion of 30° and Particle fight     A Dedicated controls     A Dedi	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
Entry procedure  Dedicated controls A Dedicated controls A Stable flight A Stable flight A Stable flight A Recovery Spontaneous in less than 3 s Dive forward angle on exit Dive forward 0° to 30° A Dive forward 0° to 30° A Dive forward 0° to 30° A Dedicated controls B Dive forward angle on exit  Dive forward 0° to 30° A Dedicated controls A Stable flight A Stable flig	Cascade occurs	No	Α	No	Α
Behaviour during big ears  Recovery  Spontaneous in less than 3 s  A Recovery through pilot action in less than 3 s  Dive forward angle on exit  Dive forward 0° to 30°  A Dive forward 0° to 30°  A Dedicated controls  B B B B B B B B B B B B B B B B B B B	20. Big ears	В			
Recovery  Spontaneous in less than 3 s	Entry procedure	Dedicated controls	Α	Dedicated controls	Α
Dive forward angle on exit  Dive forward 0° to 30°  Dedicated controls  B  Entry procedure  Dedicated controls  Stable flight  A  Recovery  Spontaneous in less than 3 s  Dive forward 0° to 30°  A  Recovery through pilot action in less than 3 s  Dive forward angle on exit  Dive forward 0° to 30°  Dive forward 0° to 30°  Dive forward 0° to 30°  A  Recovery through pilot action in less than 3 s  Recovery through pilot action in less than 6 less than 6 unit 6 to 30°  A  Dive forward 0° to 30°  A  Recovery through pilot action in less than 6 less than 7 unit 6 less than 7 unit 6 to 30°  A  Recovery through pilot action in 8 less than 6 unit 6 to 30°  A  Recovery through pilot action in 8 less than 6 unit 6 to 30°  A  Recovery through pilot action in 8 less than 6 unit 6 to 30°  A  Recovery through pilot action in 8 less than 6 unit 6 to 30°  A  Recovery through pilot action in 6 unit 6 to 30°  A  Recovery through pilot action in 6 unit 6 to 30°  A  Recovery through pilot action in 6 unit 6 to 30°  A  Recovery through pilot action in 6 unit 6 unit 6 to 30°  A  Recovery through pilot action in 6 unit	Behaviour during big ears	Stable flight	Α	Stable flight	Α
21. Big ears in accelerated flight Entry procedure Dedicated controls A Dedicated controls A Stable flight A Stable flight A Stable flight A Recovery Spontaneous in less than 3 s Dive forward on the stable flight A Dive forward on to 30° Dive forward angle on exit Dive forward on to 30° Dive forward on the stable flight A Dive forward on to 30° A Stable flight A	Recovery	Spontaneous in less than 3 s	Α		В
Entry procedure  Dedicated controls A Dedicated controls A Stable flight A Stable flight A Recovery Spontaneous in less than 3 s A Recovery through pilot action in less than a further 3 s Dive forward angle on exit Behaviour immediately after releasing the accelerator while maintaining big ears  22. Behaviour exiting a steep spiral A Stable flight	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
Behaviour during big ears  Stable flight A Stable flight A Recovery Spontaneous in less than 3 s Dive forward angle on exit Dive forward 0° to 30° Dive forward	21. Big ears in accelerated flight	В			
Recovery  Spontaneous in less than 3 s A Recovery through pilot action in less than a further 3 s Dive forward angle on exit Dive forward 0° to 30° A Dive forward 0° to 30° A Dive forward 0° to 30° A Behaviour immediately after releasing the accelerator while maintaining big ears  22. Behaviour exiting a steep spiral A Tendency to return to straight flight Spontaneous exit A Spontaneous exit A Spontaneous exit A Less than 720°, spontaneous exit A Less than 720°, spontaneous recovery Sink rate when evaluating spiral stability [m/s] 17 22  23. Alternative means of directional control A Stable flight  A Yes A Stall or spin occurs No A Yes A No A  24. Any other flight procedure and/or configuration described in the user's manual Procedure works as described Procedure suitable for novice pilots No tavailable O not available	Entry procedure	Dedicated controls	Α	Dedicated controls	Α
Dive forward angle on exit  Behaviour immediately after releasing the accelerator while maintaining big ears  22. Behaviour exiting a steep spiral  Tendency to return to straight flight  A Spontaneous exit  A Spontaneous exit  A Less than 720°, spontaneous recovery  Sink rate when evaluating spiral stability [m/s]  17  23. Alternative means of directional control  180° turn achievable in 20 s  Stable flight  A Spontaneous exit  A Less than 720°, spontaneous recovery  A Less than 720°, spontaneous recovery  Sink rate when evaluating spiral stability [m/s]  17  22  23. Alternative means of directional control  A Yes  A Yes  A Stall or spin occurs  No  A No  A No  A  24. Any other flight procedure and/or configuration described in the user's manual  Procedure works as described  Procedure suitable for novice pilots  not available  0 cascade occurs  not available  0 not available  0 not available  0  25. Comments of test pilot	Behaviour during big ears	Stable flight	Α	Stable flight	Α
Behaviour immediately after releasing the accelerator while maintaining big ears  22. Behaviour exiting a steep spiral  A  Tendency to return to straight flight  Spontaneous exit  A  Spontaneous exit  A  Less than 720°, spontaneous recovery  Sink rate when evaluating spiral stability [m/s]  17  22  23. Alternative means of directional control  A  Stable flight  A  Spontaneous exit  A  Less than 720°, spontaneous recovery  Sink rate when evaluating spiral stability [m/s]  17  22  23. Alternative means of directional control  A  Stall or spin occurs  No  A  Ves  A  No  A  24. Any other flight procedure and/or configuration described in the user's manual  Procedure works as described  not available  o  not available	Recovery	Spontaneous in less than 3 s	Α		В
maintaining big ears  22. Behaviour exiting a steep spiral  Tendency to return to straight flight  Spontaneous exit  A Spontaneous exit  A Less than 720°, spontaneous recovery  Sink rate when evaluating spiral stability [m/s]  17  22  23. Alternative means of directional control  AS Stall or spin occurs  No  A No  A No  A No  A No  A Stall or spin occurs  Procedure works as described  not available  not available  not available  O not available	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
Tendency to return to straight flight  Spontaneous exit  A Spontaneous exit  A Less than 720°, spontaneous recovery  Sink rate when evaluating spiral stability [m/s]  17  22  23. Alternative means of directional control  180° turn achievable in 20 s  Stall or spin occurs  No  A Yes  A Yes  A Stall or spin occurs  No  A No  24. Any other flight procedure and/or configuration described in the user's manual  Procedure works as described  not available  not available  o second occurs  o not available  o second occurs  o not available  o not available  o not available  o not available  o second occurs  o not available		Stable flight	Α	Stable flight	Α
Turn angle to recover normal flight  Less than 720°, spontaneous recovery  Sink rate when evaluating spiral stability [m/s]  17  22  23. Alternative means of directional control  A  Stall or spin occurs  No  No  A  No  A  24. Any other flight procedure and/or configuration described in the user's manual  Procedure works as described  not available  not available  not available  not available  not available  o not available	22. Behaviour exiting a steep spiral	Α			
recovery  Sink rate when evaluating spiral stability [m/s]  17  22  23. Alternative means of directional control  A  180° turn achievable in 20 s  Stall or spin occurs  No  No  A  24. Any other flight procedure and/or configuration described in the user's manual  Procedure works as described  not available  not available  0 not available  0 not available  0 cascade occurs  not available  0 not available  0 not available  0 not available  0  25. Comments of test pilot	Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	Α
23. Alternative means of directional control  180° turn achievable in 20 s  Yes  A Yes  A Yes  A Stall or spin occurs  No  A  24. Any other flight procedure and/or configuration described in the user's manual  Procedure works as described  not available  o not available	Turn angle to recover normal flight		Α		Α
180° turn achievable in 20 s Yes A Yes A Stall or spin occurs No A No A No A 24. Any other flight procedure and/or configuration described in the user's manual Procedure works as described not available O scacade occurs O not available O not available O not available O scacade occurs O not available O not available O not available O not available	Sink rate when evaluating spiral stability [m/s]	17		22	
Stall or spin occurs  No A No A No A 24. Any other flight procedure and/or configuration described in the user's manual  Procedure works as described  not available  o scaced occurs  o not available	23. Alternative means of directional control	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	180° turn achievable in 20 s	Yes	Α	Yes	Α
described in the user's manual  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	Stall or spin occurs	No	Α	No	Α
Procedure suitable for novice pilots not available 0 not available 0 Cascade occurs not available 0 not available 0 not available 0 25. Comments of test pilot		0			
Cascade occurs not available 0 not available 0  25. Comments of test pilot	Procedure works as described	not available	0	not available	0
25. Comments of test pilot	Procedure suitable for novice pilots	not available	0	not available	0
	Cascade occurs	not available	0	not available	0
Comments	25. Comments of test pilot				
	Comments				