

Air Turquoise SA Rte du Pré-au-Comte 8 | CH-1844 Villeneuve tel. +41 21 965 65 65 | mobile +41 79 202 52 30 info@para-test.com

## Flight test report: EN



Manufacturer **Axis Paragliding** Certification number PG\_0330.2010 Address Nove Sady 39 Date of flight test 10.04.2010

602 00 Brno Czech Republic

Representative Frantisek Pavlousek Place of test Villeneuve

Glider model Vega 3 L Classification С

Trimmer no

> Test pilot Thurnheer Claude Zoller Alain

Harness Gin Gliders - Gingo M Gin Gliders - Gingo 2 L

Total weight in flight (kg)	95		125	
1. Inflation/Take-off	Α			
Rising behaviour	Smooth, easy and constant rising	Α	Smooth, easy and constant rising	Α
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	Α			
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	A			
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 / greater than 60 cm	Α	not available	0
Max. weight in flight greater than 100 kg				
Symmetric control pressure / travel	not available	0	Increasing / greater than 65 cm	Α
5. Pitch stability exiting accelerated flight	Α			
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	Α			
Entry	Rocking back less than 45°	Α	Rocking back less than 45°	Α
Recovery	Spontaneous in less than 3 s	Α	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 less than 45°	Α
Recovery	Spontaneous in less than 3 s	Α	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
Neg stall achieved	Cascade occurs	No	Α	No	Α
Recovery   Spontaneous in less than 3 s	11. Exiting deep stall (parachutal stall)	A			
Dive forward of 19 a01"	Deep stall achieved	Yes	Α	Yes	Α
Dive forward of 19 a01"	Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	Α
Changing course less than 45° A         A No           12. High angle of attack recovery         A         A         No         A         No         A           Recovery         Spontaneous in less than 3 s A         A         No         A         No         A           13. Recovery from a developed full stall         A         Diver forward of to 30° A         A         No         A         No         A         Collapse         A         Collapse         A         No collapse Course cours	Dive forward angle on exit		Α		Α
Cascade occurs         No         A         No         No         A           12. High angle of attack recovery         A         A           Recovery         Spontaneous in less than 3 s         A         Spontaneous in less than 3 s         A         No         No         A           13. Recovery from a developed full stall         A         No         A         No		Changing course less than 45°	Α	Changing course less than 45°	Α
12 High angle of attack recovery					
Recovery from a developed full stall   A   No   No   No   No   No   No   No					
Cascade occurs         No         A         No         A           13. Recovery from a developed full stall         A           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 collapse         A           Rocking back         Less than 45"         A         Less than 45"         A         Less than 45"         A           Line tension         Cerement of collapse         A         Less than 90" / Dive or roll angle of collapse         A         Less than 90" / Dive or roll angle of collapse         A         Less than 90" / Dive or roll angle of collapse or the opposite side occurs         No         A         No			Α	Spontaneous in less than 3 s	Α
13.   Recovery from a developed full stall   Dive forward 0° to 30°   A   Dive forward 0° to 30°   A   Dive forward 0° to 30°   A   Cascade occurs (other than collapses)   No   No   A   No   No   No   A   No   No	•	·		•	
Dive forward angle on exit			,,		,,
Collapse			Δ	Dive forward 0° to 30°	Δ
Rocking back	The state of the s				
Rocking back					
Line tension         Most lines tight         A         Most lines tight         A         Most lines tight         A           14. Asymmetric collapse         C					
14. Asymmetric collapse   C   With 50% collapse   C   Change of course until re-inflation / Maximum dive forward or roll angle of course until re-inflation / Maximum dive forward or roll angle of course occurs with the properties of the course occurs of the opposite side occurs of the opposite side occurs o					
With 50% callapse         Authon 50% callapse         Change of course until re-inflation / Maximum dive forward or langle of langle of course until re-inflation / Maximum dive forward or langle of course         Less than 90° / Dive or roll angle to 15°         A Less than 90° / Dive or roll angle of 15°         A Spontaneous re-inflation         A Spontaneous re-inflation         A Rollage of course         A No         A Rollage of course         A No         A Rollage of course or langle of course         A No         A No         A Rollage of Course or langle of course         A No         A Rollage of Course or Roll angle of Course or Inflation / Maximum dive forward or roll angle of Course until re-inflation / Maximum dive forward or roll angle of Course         A Spontaneous re-inflation         A Rola of Course or Roll angle of Course or Roll angle of Course         A No         A Rollage of Course or Roll angle of Course         A Roll A Rol		· ·	А	Most lines tight	А
Change of course until re-inflation / Maximum dive forward or roll angle of to 15° to 15°   Re-inflation behaviour   Spontaneous re-inflation   A Spontaneous re-inflation   A Collapse on the opposite side occurs   No		C			
Re-inflation behaviour	•				
Total change of course  Less than 360° A Less than 360° A No			Α		Α
Collapse on the opposite side occurs	Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α
Twist occurs         No         A         No         A           Cascade occurs         No         A         No         A           With 75% collapse         Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45°         90° to 180° / Dive or roll angle 15° to 45°         B         90° to 180° / Dive or roll angle to 45°         B           Re-inflation behaviour         Spontaneous re-inflation         A         Spontaneous re-inflation         A           Collapse on the opposite side occurs         No         A         No         A           Clascade occurs         No         A         No         A           With 50% collapse and accelerator         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 360°         A         Less than 360°         A         Less than 360°         A         Less than 360°         A         No         A         No         A         No         A         No	Total change of course	Less than 360°	Α	Less than 360°	Α
Cascade occurs     No     A     No     A       With 75% collapse     Change of course until re-inflation / Maximum dive forward or loil angle of langle     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     A     No     A       Twist occurs     No     A     No     A       Cascade occurs     No     A     No     A       With 50% collapse and accelerator     Less than 90° / Dive or roll angle 15° to 45°     A     Less than 90° / Dive or roll angle 15° to 45°     A       Change of course until re-inflation / Maximum dive forward or langle 15° to 45°     Less than 360°     A     Less than 90° / Dive or roll angle 15° to 45°     A       Re-inflation behaviour     Spontaneous re-inflation     A     No     A     No       Cascade occurs     No     A     No     A     No       With 75% collapse and accelerator     No     A     No     A     No       Change of course until re-inflation / Maximum dive forward or loil angle 15° to 45°     Point analy 15° to 45°     A     No <t< td=""><td>Collapse on the opposite side occurs</td><td>No</td><td>Α</td><td>No</td><td>Α</td></t<>	Collapse on the opposite side occurs	No	Α	No	Α
With 75% collapse         With 75% collapse         B         90° to 180° / Dive or roll angle 15° to 45° to 45° to 45° 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         A         No         A           Twist occurs         No         A         No         A           Cascade occurs         No         A         No         A           With 50% collapse and accelerator         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 360°         A         No         A         No         A         No         A         No         A         No         A         No         A	Twist occurs	No	Α	No	Α
Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45° to 45°.       B to 45° to 45° to 45°.       B to 45° to 45°.       B to 45°.       A to 4       Collapse on the opposite side occurs       No       A No       A No       A Do       A Do<	Cascade occurs	No	Α	No	Α
roll angle Re-inflation behaviour Spontaneous re-inflation A No	With 75% collapse				
Total change of course  Less than 360° A Less than 360° A No		90° to 180° / Dive or roll angle 15° to 45°	В		В
Collapse on the opposite side occurs  No No A No No A No No A No No A No Cascade occurs No No A	Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α
Collapse on the opposite side occurs  No No A No No A No No A No No A No A	Total change of course	Less than 360°	Α	Less than 360°	Α
Twist occurs No No A No A No A No A No A Mith 50% collapse and accelerator  Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45° A Less than 90° / Dive or roll angle 15° to 45° A Less than 90° / Dive or roll angle 15° to 45° A Less than 90° / Dive or roll angle 15° to 45° A Less than 90° / Dive or roll angle 15° to 45° A Less than 90° / Dive or roll angle 15° to 45° A Less than 90° / Dive or roll angle 15° to 45° A Less than 90° / Dive or roll angle 15° to 45° A Less than 360° A No A Twist occurs  No No A No No A No A No A No A With 75% collapse and accelerator  Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45° To 180° / Dive or roll angle 15° to 60° To 60° A Less than 360° A Less	-	No	Α	No	Α
Cascade occurs  With 50% collapse and accelerator  Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45°  Re-inflation behaviour  Total change of course  No  No  A  Less than 90° / Dive or roll angle 15° to 45°  Re-inflation behaviour  Spontaneous re-inflation  A  Less than 360°  A  Less than 360°  A  Less than 360°  A  Less than 360°  A  No  A  Twist occurs  No  No  No  A  No  Cascade occurs  No  No  A  With 75% collapse and accelerator  Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45°  Total change of course until re-inflation / Maximum dive forward or roll angle 15° to 45°  Spontaneous re-inflation  A  Spontaneous re-inflation  A  Spontaneous re-inflation  A  Collapse on the opposite side occurs  No  A  Collapse  No  A  Collapse  A  A  More than 50% of the symmetric  Collapse  A  A  More than 50% of the symmetric  A  A  More than 50% of the symmetric  A		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°       A Less than 90° / Dive or roll angle 15° to 45°       A Less than 90° / Dive or roll angle 15° to 45°       A Less than 90° / Dive or roll angle 15° to 45°       A Less than 90° / Dive or roll angle 15° to 45°       A Less than 360°       A No			Α		
Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45°  Re-inflation behaviour Spontaneous re-inflation A No A					
Re-inflation behaviour  Total change of course  Less than 360°  A Less than 360°  A Less than 360°  A Less than 360°  A Collapse on the opposite side occurs  No  No  A No  A No  Cascade occurs  No  No  A No  A No  Cascade occurs  No  Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45°  Re-inflation behaviour  Total change of course  Less than 360°  A No  Total change of course  Less than 360°  A Less than 360°  A Less than 360°  A Less than 360°  A No  A No  A No  A Yes, no turn reversal  C Cascade occurs  No  A No	Change of course until re-inflation / Maximum dive forward or		Α		Α
Total change of course  Collapse on the opposite side occurs  No  No  A  Less than 360°  A  Less than 360°  A  Collapse on the opposite side occurs  No  No  A  No  A  Twist occurs  No  No  A  No  A  With 75% collapse and accelerator  Change of course until re-inflation / Maximum dive forward or roll angle angle  Re-inflation behaviour  Spontaneous re-inflation  A  Total change of course  Less than 360°  A  Less than 360°  A  Spontaneous re-inflation  A  Collapse on the opposite side occurs  No  A  Collapse on the opposite side occurs  No  A  Cascade occurs  No  A  Total change of course  Collapse on the opposite side occurs  No  A  Total change of course  Collapse on the opposite side occurs  No  A  Total change of course  Collapse on the opposite side occurs  No  A  Total change of course  Collapse on the opposite side occurs  No  A  Total change of course  Collapse on the opposite side occurs  No  A  Total change of course  A  Collapse on the opposite side occurs  No  A  Total change of course  No  A  Yes, no turn reversal  C  Twist occurs  A  No  A  No  A  A  A  A  A  A  A  A  A  A  A  A  A			Α		Α
Collapse on the opposite side occurs  No  No  A  No  A  No  A  No  A  Cascade occurs  No  No  A  No  A  No  A  No  A  No  A  With 75% collapse and accelerator  Change of course until re-inflation / Maximum dive forward or roll angle  Re-inflation behaviour  Spontaneous re-inflation  A  Collapse on the opposite side occurs  No  No  A  Yes, no turn reversal  C  Total change occurs  No  A  Cascade occurs  No  A  No  A  No  A  No  A  A  No  A  No  A  No  A  A  No  A  No  A  No  A  No  A  No  A  No  A  A  No  A  A  No  No		•		·	
Twist occurs  No A No	-				
Cascade occurs  With 75% collapse and accelerator  Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45°  Re-inflation behaviour  Total change of course  Collapse on the opposite side occurs  No  No  A  Spontaneous re-inflation  A  Cascade occurs  No  A  Cascade occurs  No  A  Cascade occurs  A  Cascade occurs  A  15. Directional control with a maintained asymmetric collapse  A  A  A  A  A  A  A  A  A  A  A  A  A					
With 75% collapse and accelerator  Change of course until re-inflation / Maximum dive forward or roll angle angle  Re-inflation behaviour  Spontaneous re-inflation  A Spontaneous re-inflation  A Spontaneous re-inflation  A Collapse on the opposite side occurs  No  No  A Yes, no turn reversal  C Twist occurs  No  A No  A No  A Solution angle  A No  A No					
Change of course until re-inflation / Maximum dive forward or roll angle angle roll angle until re-inflation / Maximum dive forward or roll angle angl		140	^	NO	^
roll angle 15° to 45° to 60°  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 Yes, no turn reversal C Twist occurs No A No A No A Cascade occurs No A No A No A No A Cascade occurs No A No	•	00° to 100° / Divo or roll angle	Ь	00° to 190° / Dive or roll angle 45°	0
Total change of course  Less than 360°  A Less than 360°  A Yes, no turn reversal  C Twist occurs  No  A No			Ь		C
Collapse on the opposite side occurs  No A Yes, no turn reversal C Twist occurs No A No A No A Cascade occurs No A No A No A  15. Directional control with a maintained asymmetric collapse Able to keep course Able to keep course Yes A Yes A Yes A A Yes A A More than 50 % of the symmetric A More than 50 % of the symmetric A	Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α
Twist occurs  No A No	Total change of course	Less than 360°	Α	Less than 360°	Α
Cascade occurs  No A No	Collapse on the opposite side occurs	No	Α	Yes, no turn reversal	С
A Solventrol with a maintained asymmetric collapse  Able to keep course  Able to keep course  Able to keep course  Yes  A Yes  A Yes  A Yes  A More than 50 % of the symmetric  A More than 50 % of the symmetric  A	Twist occurs	No	Α	No	Α
collapse  Able to keep course  Yes  A Yes  A 180° turn away from the collapsed side possible in 10 s  Amount of control range between turn and stall or spin  More than 50 % of the  A More than 50 % of the symmetric  A	Cascade occurs	No	Α	No	Α
180° turn away from the collapsed side possible in 10 s  Yes  A Yes  A More than 50 % of the symmetric  A More than 50 % of the symmetric		Α			
Amount of control range between turn and stall or spin  More than 50 % of the  A More than 50 % of the symmetric A	Able to keep course	Yes	Α	Yes	Α
	180° turn away from the collapsed side possible in 10 s	Yes	Α	Yes	Α
symmetric control travel control travel	Amount of control range between turn and stall or spin		Α		Α
		symmetric control travel		control travel	

16. Trim speed spin tendency	Α			
Spin occurs	No	Α	No	Α
17. Low speed spin tendency	Α			
Spin occurs	No	Α	No	Α
18. Recovery from a developed spin	Α			
Spin rotation angle after release	Stops spinning in less than 90°	Α	Stops spinning in less than 90°	Α
Cascade occurs	No	Α	No	Α
19. B-line stall	Α			
Change of course before release	Changing course less than 45°	Α	Changing course less than 45°	Α
Behaviour before release	Remains stable with straight span	Α	Remains stable with straight span	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
Cascade occurs	No	Α	No	Α
20. Big ears	В			
Entry procedure	Dedicated controls	Α	Dedicated controls	Α
Behaviour during big ears	Stable flight	Α	Stable flight	Α
Recovery	Recovery through pilot action in less than a further 3 s	В	Recovery through pilot action in less than a further 3 s	В
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
21. Big ears in accelerated flight	В			
Entry procedure	Dedicated controls	Α	Dedicated controls	Α
Behaviour during big ears	Stable flight	Α	Stable flight	Α
Recovery	Recovery through pilot action in less than a further 3 s	В	Recovery through pilot action in less than a further 3 s	В
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	Α	Stable flight	Α
22. Behaviour exiting a steep spiral	Α			
Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	Α
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	Α	Less than 720°, spontaneous recovery	Α
Sink rate when evaluating spiral stability [m/s]	17		22	
23. Alternative means of directional control	Α			
180° turn achievable in 20 s	Yes	Α	Yes	Α
Stall or spin occurs	No	Α	No	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				
Comments			can stay in neutral spiral if more than -14m/s	