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AIR TURQUOISE SA certified by

Flight test report: EN



Manufacturer	Niviuk Gliders / Air Games S.L.	Certification number	PG_0366.2010
Address	C. Del Ter, 6 – Nave D 17165 La Cellera de Ter Girona Spain	Date of flight test	27. 07. 2010
Representative	None	Place of test	Villeneuve
Glider model	Peak 2-28	Classification	D
Trimmer	no		

Trimmer	no				
	Toot nilet	Thurnhoor Cloudo		Zoller Alain	
	-	Thurnheer Claude			
		Niviuk Gliders - Hamak M		Gin Gliders - Gingo 2 L	
	Total weight in flight (kg)	110		130	
1. Inflation/Take-off		Α			
Rising behaviour		Smooth, easy and constant rising	Α	Smooth, easy and constant rising	Α
Special take off technique	e required	No	Α	No	Α
2. Landing		A			
Special landing technique	•	No	Α	No	Α
3. Speed in straight flig		В			
Trim speed more than 30		Yes	Α	Yes	Α
Speed range using the co	ontrols larger than 10 km/h	Yes	Α	Yes	Α
Minimum speed		25 km/h to 30 km/h	В	25 km/h to 30 km/h	В
4. Control movement		С			
Max. weight in flight up to					
Symmetric control pressu	ure / travel	not available	0	not available	0
Max. weight in flight 80 kg	g to 100 kg				
Symmetric control pressu	ure / travel	not available	0	not available	0
Max. weight in flight grea	ter than 100 kg				
Symmetric control pressu	ure / travel	Increasing / 50 cm to 65 cm	С	Increasing / 50 cm to 65 cm	С
5. Pitch stability exiting	accelerated flight	Α			
Dive forward angle on ex	tit	Dive forward less than 30°	Α	Dive forward less than 30°	Α
Collapse occurs		No	Α	No	Α
6. Pitch stability operati flight	ing controls during accelerated	Α			
Collapse occurs		No	Α	No	Α
7. Roll stability and dan	nping	Α			
Oscillations		Reducing	Α	Reducing	Α
8. Stability in gentle spi	irals	A			
Tendency to return to stra	aight flight	Spontaneous exit	Α	Spontaneous exit	Α
9. Behaviour in a steepl	ly banked turn	В			
Sink rate after two turns		More than 14 m/s	В	More than 14 m/s	В
10. Symmetric front col	llapse	D			
Entry		Rocking back greater than 45°	С	Rocking back greater than 45°	С
Recovery		Recovery through pilot action in less than a further 3 s	D	Recovery through pilot action in less than a further 3 s	D
Dive forward angle on ex	tit / Change of course	Dive forward 0° to 30° / Keeping course	Α	Dive forward 30° to 60° / Keeping course	В
Cascade occurs		No	Α	No	Α
With accelerator					

Entry	Rocking back greater than 45°	С	Rocking back greater than 45°	С
Recovery	Recovery through pilot action in less than a further 3 s	D	Recovery through pilot action in less than a further 3 s	D
Dive forward angle on exit / Change of course	Dive forward 30° to 60° /	В	Dive forward 30° to 60° / Keeping	В
Cascade occurs	Keeping course No	Α	course No	Α
	A	A	NO	A
11. Exiting deep stall (parachutal stall)		۸	Voo	۸
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	Α	No	Α
12. High angle of attack recovery	A Spontaneous in loss than 2 a	۸	Spontonoous in loss than 2 s	۸
Recovery Cascade occurs	Spontaneous in less than 3 s No	A A	Spontaneous in less than 3 s No	A A
13. Recovery from a developed full stall	C	^	NO	^
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 30° to 60°	В
Collapse	No collapse			
		A	No collapse No	A
Cascade occurs (other than collapses)	No	A	Greater than 45°	A
Rocking back	Less than 45°	A		C
Line tension	Most lines tight	Α	Most lines tight	Α
14. Asymmetric collapse	С			
With 50% collapse	Loss than 00° / Dive or rell angle	٨	Loop than 00° / Divo or roll angle	٨
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle 15° to 45°	А	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° to 180° / Dive or roll angle 45° to 60°	С
Re-inflation behaviour	Inflates in less than 3 s from start of pilot action	С	Spontaneous re-inflation	Α
Total change of course	Less than 360°	Α	Less than 360°	Α
Collapse on the opposite side occurs	Yes, no turn reversal	С	Yes, no turn reversal	С
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° to 180° / Dive or roll angle 15° to 45°	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 45° to 60°	С	90° to 180° / Dive or roll angle 60° to 90°	С
Re-inflation behaviour	Inflates in less than 3 s from start of pilot action	С	Spontaneous re-inflation	Α
Total change of course	Less than 360°	Α	Less than 360°	Α
Collapse on the opposite side occurs	Yes, no turn reversal	С	Yes, no turn reversal	С
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
15. Directional control with a maintained asymmetric collapse	Α			
Able to keep course	Yes	Α	Yes	Α

Amount of control range between turn and stall or spin	180° turn away from the collapsed side possible in 10 s	Yes	Α	Yes	Α
Spin occurs No A No No A No No A No No			Α		Α
17. Low speed spin tendency	16. Trim speed spin tendency	Α			
Spin occurs No A No No A No No No	Spin occurs	No	Α	No	Α
19. 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	17. Low speed spin tendency	A			
Spin rotation angle after release Stops spinning in less than 90" or A cascade occurs A load A load<	Spin occurs	No	Α	No	Α
Cascade occurs No No A No No No No No	18. Recovery from a developed spin	Α			
Change of course before release Changing course less than 45° A Changing course less than 45° A Remains stable with straight span A Recovery Spontaneous in less than 3 s A Spontaneous in less than 3 s A No No A No A No A No A No A No A No	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 60" to 90" C Cascade occurs No A No	Cascade occurs	No	Α	No	Α
Behaviour before release Remains stable with straight span span Recovery Spontaneous in less than 3 s A Spontaneous in less than 3 s A Dive forward 60° to 90° C Cascade occurs No A	19. B-line stall	С			
Recovery Spontaneous in less than 3 s A Spontaneous in less than 3 s A Dive forward 60° to 90° C C Cascade occurs No A No	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 Big ears B Entry procedure Dedicated controls A Dedicated controls A Stable flight A Stable flight A Stable flight A Spontaneous in less than 3 s A Dive forward 0° to 30°	Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	Α
20. Big ears Entry procedure Dedicated controls A Dedicated controls A Stable flight A Stable flight A Stable flight A Stable flight A Spontaneous in less than 3 s A Dive forward 0° to 30° A Dive flight A Stable flight A Recovery A Dive forward 0° to 30° A Dive forward 0	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 60° to 90°	С
Entry procedure Dedicated controls A Dedicated controls A Stable flight A Dive forward on to stable flight B STABLE flight B STABLE flight A	Cascade occurs	No	Α	No	Α
Behaviour during big ears Stable flight A Stable flight A Spontaneous in less than 3 s Dive forward angle on exit Dive forward 0° to 30° A Dive forward 0° to 30° A Dedicated controls Behaviour during big ears Belaviour during big ears Dive forward 0° to 30° Behaviour immediately after releasing the accelerator while maintaining big ears Dive forward angle on exit Behaviour immediately after releasing the accelerator while maintaining big ears Dive forward or to 30° Stable flight A Stable flight A Stable flight A Stable flight A Stable flight D Turn angle to recover normal flight Spontaneous exit Less than 720°, spontaneous recovery Sink rate when evaluating spiral stability [m/s] 18 20. Alternative means of directional control A Stable flight A Vith pilot action D Turn angle to recover normal flight Procedure works as described No A Yes A Yes A No A Yes A Stall or spin occurs No A	20. Big ears	В			
Recovery Spontaneous in less than 3 s A Dive forward 0° to 30° A Dedicated controls A Dive forward 0° to 30° Dedicated controls A Dive forward and search of the s	Entry procedure	Dedicated controls	Α	Dedicated controls	Α
Dive forward angle on exit Dive forward 0° to 30° A Dedicated controls A Stable flight A Stable flight A Stable flight A Recovery through pilot action in less than 3 s Dive forward angle on exit Dive forward 0° to 30° Dive forward angle on exit Dive forward 0° to 30° Dive forward o° to 30° A Dive forward 0° to 30° A	Behaviour during big ears	Stable flight	Α	Stable flight	Α
21. Big ears in accelerated flight Entry procedure Dedicated controls A Dedicated controls A Behaviour during big ears Stable flight A Stable flight A Stable flight A Recovery Spontaneous in less than 3 s Dive forward angle on exit Dive forward or to 30° Dive forward go to 30° A Dive forward or to 30° A Dive forward or to 30° A Behaviour immediately after releasing the accelerator while maintaining big ears 22. Behaviour exiting a steep spiral D Tendency to return to straight flight Spontaneous exit A Turn remains constant D Turn angle to recover normal flight Less than 720°, spontaneous recovery Sink rate when evaluating spiral stability [m/s] 18 26 23. Alternative means of directional control A 180° turn achievable in 20 s Stable flight 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 not available O cascade occurs O described first pilot	Recovery	Spontaneous in less than 3 s	Α	Spontaneous in 3 s to 5 s	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 D Tendency to return to straight flight Spontaneous exit A Turn remains constant D Turn angle to recover normal flight Less than 720°, spontaneous recovery Sink rate when evaluating spiral stability [m/s] 18 26 23. Alternative means of directional control A Stall or spin occurs No A Yes A Stall or spin occurs A No A No A Persocdure and/or configuration described in the user's manual Procedure works as described not available O not available O not available O not available O secondary through pilot action in less than 3 s A Recovery through pilot action in less than 6 to 30° A Dive forward 0° to 30° A Turn remains constant D Turn angle to recover normal flight Less than 720°, spontaneous recovery Sink rate when evaluating spiral stability [m/s] 18 26 23. Alternative means of directional control A Stall or spin occurs No A No A No A O Cascade occurs O not available	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 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	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 Behaviour immediately after releasing the accelerator while maintaining big ears 22. Behaviour exiting a steep spiral D Tendency to return to straight flight Spontaneous exit A Turn remains constant D Turn angle to recover normal flight Less than 720°, spontaneous recovery Sink rate when evaluating spiral stability [m/s] 18 26 23. Alternative means of directional control A 180° turn achievable in 20 s Yes A Yes A Stall or spin occurs 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 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 D Turn angle to recover normal flight Less than 720°, spontaneous recovery Sink rate when evaluating spiral stability [m/s] 18 26 23. Alternative means of directional control A 180° turn achievable in 20 s Stable flight A Turn remains constant D A 180° turn achievable in 20 s Yes A Yes A Stall or spin occurs 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 o not available	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 Tendency to return to straight flight Spontaneous exit A Turn remains constant D Turn angle to recover normal flight Less than 720°, spontaneous recovery Sink rate when evaluating spiral stability [m/s] 18 26 23. Alternative means of directional control A Yes A Yes A No 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 not available o not available	Recovery	Spontaneous in less than 3 s	Α		В
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Tendency to return to straight flight Turn angle to recover normal flight Less than 720°, spontaneous exit Less than 720°, spontaneous recovery Sink rate when evaluating spiral stability [m/s] 18 26 23. Alternative means of directional control A 180° turn achievable in 20 s Yes No 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 not available 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] 18 26 23. Alternative means of directional control A 180° turn achievable in 20 s 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 not available not available 0 not available 0 not available 0 cascade occurs 0 not available 0 not available 0 not available 0 not available 0 1 25. Comments of test pilot	22. Behaviour exiting a steep spiral	D			
Sink rate when evaluating spiral stability [m/s] 18 26 23. Alternative means of directional control A 180° turn achievable in 20 s 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 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	Tendency to return to straight flight	Spontaneous exit	Α	Turn remains constant	D
23. Alternative means of directional control 180° turn achievable in 20 s Yes A Yes A Yes A Stall or spin occurs 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 not available o cascade occurs not available o not available	Turn angle to recover normal flight	•	Α	With pilot action	D
180° turn achievable in 20 s Yes 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 not available o 25. Comments of test pilot	Sink rate when evaluating spiral stability [m/s]	18		26	
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 0 not available 0 not available 0 procedure suitable for novice pilots not available 0 not available 0 not available 0 scacade occurs not available 0 not available 0 scacade occurs 0 not available 0	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				