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test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



## Flight test report: EN 926-2:2013+A1:2021\* and NfL 2-565-20

Manufacturer Address  Niviuk Gliders / Air G  C. Del Ter, 6 Nave D  17165 La Cellera de T			Certification num Flight test	ber	PG_2397.2024 13.03.2024	
Glider model Serial number Trimmer Folding lines used	Spain Ikuma 3 P 20 IKUMA320FT no no		Classification Representative Place of test		B None Villeneuve	
Test pilot		Light pilot under Air Turquoise supervision		Claude Thurnheer		
Harness to risers distance [cm] Distance between risers [cm]		Woody Valley srl Wani Light 2 S 41 40 55			Woody Valley srl Wani Light 2 M 43 43 75	
1. Inflation/Take-off Rising behaviour		<b>B</b> Easy rising, some pilo	t correction is required	В	Easy rising, some pilot correction is required	В
Special take off technique	required	No		Α	No	Α
Landing     Special landing technique required		<b>A</b> No		Α	No	Α
3. Speed in straight flight Trim speed more than 30		<b>B</b> Yes		Α	Yes	А
Speed range using the co	ntrols larger than 10 km/h	Yes	es A		Yes	Α
Minimum speed		Less than 25 km/h		Α	25 km/h to 30 km/h	В
4. Control movement  Max. weight in flight up to 80 kg  Symmetric control pressure / travel		A Increasing / greater th	an 55 cm	Α	Increasing / greater than 55 cm	А
Max. weight in flight 80 kg to 100 kg Symmetric control pressure / travel		not available		0	not available	0
Max. weight in flight greater than 100 kg Symmetric control pressure / travel		not available		0	not available	0
<b>5. Pitch stability exiting</b> Dive forward angle on exit		A Dive forward less than	1 30°	Α	Dive forward less than 30°	Α
Collapse occurs		No		Α	No	Α
6. Pitch stability operating controls during accelerated flight Collapse occurs		<b>A</b> No		A	No	А
7. Roll stability and dam Oscillations	ping	<b>A</b> Reducing		A	Reducing	А
8. Stability in gentle spirals  Tendency to return to straight flight		A Spontaneous exit		Α	Spontaneous exit	Α

9. Behaviour exiting a fully developed spiral dive	В			
Initial response of glider (first 180°)	No immediate reaction	В	No immediate reaction	В
Tendency to return to straight flight	Spontaneous exit (g force decreasing, rate of turn decreasing)	Α	Spontaneous exit (g force decreasing, rate of turn decreasing)	Α
Turn angle to recover normal flight	720° to 1 080°, spontaneous recovery	В	720° to 1 080°, spontaneous recovery	В
10. Symmetric front collapse Approximately 30 % chord	А			
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
Folding lines used	No	Α	No	Α
At least 50% chord	Rocking back less than 45°	Α	Rocking back less than 45°	Α
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 No	Α	No	A
Folding lines used	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
Cascade occurs	No	Α	No	Α
Folding lines used	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	A Spontaneous in less than 3 s	٨	Spontaneous in less than 3 s	A
Recovery	Spontaneous in less than 3 s	A	Spontaneous in less than 3 s	A
Cascade occurs		А	110	A
13. Recovery from a developed full stall  Dive forward angle on exit	<b>B</b> Dive forward 0° to 30°	Α	Dive forward 30° to 60°	В
Collapse	No collapse	Α	No collapse	Α
Cascade occurs (other than collapses)	No	Α	No	Α

De el de este de	Loca than 45°	٨	Less than 45°	۸
Rocking back	Less than 45°	А	Less than 45°	Α
Line tension	Most lines tight	Α	Most lines tight	Α
14. Asymmetric collapse	В			
Small asymmetric 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 0° to 15°	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 (or only a small number of collapsed cells with a spontaneous reinflation)	Α	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
Folding lines used	No	Α	No	Α
Large asymmetric collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 15° to 45°	В	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 (or only a small number of collapsed cells with a spontaneous reinflation)	Α	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
Folding lines used	No	Α	No	Α
Small asymmetric collapse with fully activated accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle 15° to 45°	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 (or only a small number of collapsed cells with a spontaneous reinflation)	Α	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
Folding lines used	No	Α	No	Α
Large asymmetric collapse with fully activated accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 15° to 45°	В	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 (or only a small number of collapsed cells with a spontaneous reinflation)	Α	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α

S.Directional control with amintained symmetric collepse   New York   A   Yes   A   New York	Folding lines used	No	Α	No	Α
Able to keep course  Yes  APOUNT for turn away from the collapsed side possible in 10 s  Yes  Amount of control range between turn and stall or spin  Nor than 50 % of the symmetric control travel  A  Ti. Timn speed spin tendency  A  Spin occurs  A  17. Low speed spin tendency  Spin occurs  A  18. Recovery from a developed spin  B  Cascade cocurs  A  19. Between turn and selection of the spinning in less than 50 % of the symmetric control travel  A  19. Recovery from a developed spin  B  Cascade occurs  A  19. Between turn and selection of the spinning in less than 50 % of the spinning in 90° to 180°  A  19. Between turn and selection and selection release  Cascade occurs  A  Changing course less than 45°  A  Ch		A			
Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs  No		Yes	Α	Yes	Α
16. Trim speed spin tendency Spin occurs No A No A No A No A  17. Low speed spin tendency Spin coccurs No A No A No A No A  18. Recovery from a developed spin B Spin rotation angle after release Cascade occurs No A No A No A No A Sept spinning in 90° to 180° B  19. B-line stall Change of course before release Changing course less than 45° A Changin	180° turn away from the collapsed side possible in 10 s	Yes	Α	Yes	Α
Spin occurs  No A No	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
A   Spin occurs   No	16. Trim speed spin tendency	Α			
Spin occurs  No A No A No A  18. Recovery from a developed spin Spin rotation angle after release Stops spinning in less than 90" A Stops spinning in 90" to 180" B  Cascade occurs No A No A No A  19. B-line stall Change of course before release Changing course less than 45" A No A N	Spin occurs	No	Α	No	Α
Spin rotation angle after release  Stops spinning in less than 50" A Stops spinning in 90" to 180" A  19. B-line stall  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 Spontaneous in less than 3 s A Dive forward angle on exit  Dive forward angle on exit  Dive forward angle on exit  Dive forward or to 30" A No A N			Α	No	Α
Cascade occurs  No A  A  Changine stall A  Change of course before release Changing course less than 45° A  Behaviour before release Remains stable with straight span A  Recovery Spontaneous in less than 3 s A  Dive forward one stall Cascade occurs No A  20. Big ears Entry procedure Dedicated controls Behaviour during big ears Stable flight Benaviour during big ears  Stable flight Benaviour during big ears Stable flight Benaviour during big ears Stable flight Benaviour during big ears Stable flight Benaviour during big ears Stable flight Benaviour during big ears Benaviour during big	18. Recovery from a developed spin	В			
A Change of course before release Change of course before release Remains stable with straight span Recovery Spontaneous in less than 45° A Remains stable with straight span A Recovery Spontaneous in less than 3 s A Dive forward angle on exit Dive forward or to 30° A Dedicated controls A Dedicated controls A Dive forward or to 30° A Dive forward or to 30° A Dedicated controls A Dedicated controls A Dive forward or to 30° A Dive forward or to	Spin rotation angle after release	Stops spinning in less than 90°	Α	Stops spinning in 90° to 180°	В
Change of course before release Remains stable with straight span Recovery Spontaneous in less than 3 s Recovery Spontaneous in less than 3 s Recovery Remains stable with straight span A Recovery Spontaneous in less than 3 s A Dive forward angle on exit Dive forward 0° to 30° A Dive forward of to 30° A Dedicated controls A Dedicated controls A Stable flight A Stable flight A Dive forward of to 30° A Dive forward of to	Cascade occurs	No	Α	No	Α
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 Spontaneous in less than 3 s A Dive forward 0° to 30° A Dive forward 0° to 30° A Dive forward 0° to 30° A No A No A No A No A No A Stable flight A Stable flight A Stable flight A Dive forward 0° to 30° A					
Recovery Spontaneous in less than 3 s A Spontaneous in less than 3 s A Dive forward 0" to 30" A No A Scade occurs No A No A No A Scade occurs B B Sentry procedure Dedicated controls A Dedicated controls A Dedicated controls A Dedicated controls A Stable flight A Stable flight A Stable flight A Stable flight A Dive forward 0" to 30" A Dive forwa	Change of course before release	Changing course less than 45°	Α	Changing course less than 45°	Α
Dive forward angle on exit  Dive forward 0° to 30°  No  A  Dive forward 0° to 30°  No  A  No  A  No  A  No  A  No  A  A  Dive forward 0° to 30°  A  A  Dive forward 0° to 30°  A  A  Dive forward 0° to 30°  A  Dedicated controls  A  Dive forward angle on exit  Dive forward 0° to 30°  A  Dedicated controls  A  Dedicated c	Behaviour before release	Remains stable with straight span	Α	Remains stable with straight span	Α
Cascade occurs  No No A No A No A No A A No A A A A A	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 Dive forward unique on exit Dive forward angle on exit Dive forward 0° to 30° A Dedicated controls A Dive forward 0° to 30° A Dedicated controls A Dedicated controls A Dedicated controls A Stable flight A Dive forward 0° to 30° A Dive forward 0° t	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 Dive forward angle on exit  Dive forward 0° to 30° A Dive forward 0° to 30° A Dedicated controls A Dive forward 0° to 30° A Dedicated controls A Dive forward 0° to 30° A Dedicated controls A Dedicated controls A Stable flight A Dive forward 0° to 30° A Dive forward	Cascade occurs	No	Α	No	Α
Behaviour during big ears  Stable flight A Dive forward or to 30° A Dedicated controls A Dedicated controls A Dedicated controls A Stable flight A Stable flight A Stable flight A Stable flight A Dive forward or to 30° A Dive forward	20. Big ears	В			
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  21. Big ears in accelerated flight B Entry procedure Dedicated controls A Dedicated controls A  Behaviour during big ears Stable flight A  Recovery Recovery through pilot action in less than a further B Spontaneous in less than 3 s 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. Alternative means of directional control A  Stable flight A  Stable flight A  Stable flight A  Stable flight A  Procedure works as described not available 0	Entry procedure	Dedicated controls	Α	Dedicated controls	Α
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  A Stable flight  A Stable flight  A Stable flight  A Dive forward angle on exit  Dive forward 0° to 30°  A Dive forward angle on exit  Dive forward 0° to 30°  A Dive forward o° to 30°  A Dive forward 0° to 30°  A Dive fo	Behaviour during big ears	Stable flight	Α	Stable flight	Α
21. Big ears in accelerated flight Entry procedure Dedicated controls A Stable flight A Stable flight A Stable flight A Dive forward angle on exit Dive forward 0° to 30° A Stable flight A No	Recovery	Spontaneous in 3 s to 5 s	В	Spontaneous in less than 3 s	Α
Entry procedure  Dedicated controls A Dedicated controls A Stable flight A Dive forward angle on exit Dive forward 0° to 30° A Dive forward 0° to 30° A Stable flight A Stable	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
Behaviour during big ears  Stable flight  A Dive forward on the set than a further of the second of the sec	21. Big ears in accelerated flight	В			
Recovery Hrough pilot action in less than a further B Spontaneous in less than 3 s A Dive forward angle on exit Dive forward 0° to 30° A Dive forw	Entry procedure	Dedicated controls	Α	Dedicated controls	Α
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. Alternative means of directional control  180° turn achievable in 20 s  Yes  A Yes  A Stable flight  A Stable flight  A Stable flight  A Stable flight  A ONO  A Pres  A	Behaviour during big ears	Stable flight	Α	Stable flight	Α
Behaviour immediately after releasing the accelerator while maintaining big ears  22. Alternative means of directional control 180° turn achievable in 20 s  No A  Stall or spin occurs  No A  No A  No A  23. 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 not available  0	Recovery		В	Spontaneous in less than 3 s	Α
while maintaining big ears  22. Alternative means of directional control  A  180° turn achievable in 20 s  Yes  A  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  Procedure works as described  not available  o  not available	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
180° turn achievable in 20 s  Yes  A Yes  A Yes  A Stall or spin occurs  No  No  A No  A  23. 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 not available  0		Stable flight	Α	Stable flight	А
Stall or spin occurs  No A No A No A  23. 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 not available 0			٨	Vee	
23. 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	180° turn achievable in 20 s	res	Α	res	А
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  O not available 0	Stall or spin occurs	No	Α	No	Α
Procedure suitable for novice pilots not available 0 not available 0	23. Any other flight procedure and/or configuration described in the user's manual	0			
1 Toocaa, o Canada o Too No Pinoto	Procedure works as described	not available	0	not available	0
Cascade occurs 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