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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 AirDesign GmbH Rhombergstraße 9, 4.Stock 6067 Absam		tock	Certification number Flight test	er	PG_2240.2023 30.08.2023	
	Austria					
Glider model	RONIN 12		Classification		С	
Serial number	XS21122PP232533P		Representative		None	
Trimmer	no		Place of test		Villeneuve	
Folding lines used	no					
Test pilot		Light pilot ur supervision	nder Air Turquoise		Claude Thurnheer	
Harness		Flugsau Gm	bH XX-Lite		Woody Valley srl Wani Light 2 N	Л
Harness to risers	distance	40	-		43	
(cm) Distance bet	ween risers	40			40	
(cm) Total weight		55			68	
(om) Fotal Worghi	g.i.c (Ng)	33				
1. Inflation/Take-off		В				
Rising behaviour		Easy rising, sor required	me pilot correction is	В	Easy rising, some pilot correction is required	В
Special take off techniq	ue required	No		Α	No	Α
	'					
2. Landing		A				
Special landing techniq	ue required	No		Α	No	Α
3. Speed in straight flight		В				
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 kr	n/h	Α	25 km/h to 30 km/h	В
4. Control movement		С				
Max. weight in flight up to 80 kg						
Symmetric control pressure / travel		Increasing / 40 cm to 55 cm C		Increasing / greater than 55 cm	Α	
Max. weight in flight 80 kg to 100 kg						
Symmetric control pressure / travel		not available		0	not available	0
Max. weight in flight g	reater than 100 kg					
Symmetric control pres	sure / travel	not available		0	not available	0
5. Pitch stability exiting	an accolorated flight	0				
Dive forward angle on 6		not available		0	not available	0
2.10 10.11a.u a.i.g.o o.i. 0				Ĭ		ŭ
Collapse occurs		not available		0	not available	0
6. Pitch stability opera accelerated flight	ating controls during	0				
Collapse occurs		not available		0	not available	0
7. Roll stability and damping		Α				
Oscillations		Reducing		Α	Reducing	Α
8. Stability in gentle s	pirals	A				
Tendency to return to s		Spontaneous e	xit	Α	Spontaneous exit	Α

9. Behaviour exiting a fully developed spiral dive	A			
Initial response of glider (first 180°)	Immediate reduction of rate of turn	A	Immediate reduction of rate of turn	Α
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	Less than 720°, spontaneous recovery	A	Less than 720°, spontaneous recovery	Α
10. Symmetric front collapse Approximately 30 % chord	В			
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	A	Dive forward 0° to 30° / Keeping course	Α
Cascade occurs	No	A	No	Α
Folding lines used	No	A	No	Α
At least 50% chord	Rocking back less than 45°	٨	Dealing head loss than 45°	٨
Entry	Spontaneous in less than 3 s		Rocking back less than 45° Spontaneous in 3 s to 5 s	A B
Recovery	Dive forward 0° to 30° / Keeping course		Dive forward 0° to 30° / Keeping course	A
Dive forward angle on exit / Change of course Cascade occurs	No		No	A
	No		No	A
Folding lines used With accelerator	NO	A	NO	A
		•		
Entry	not available	0	not available	0
Recovery	not available	0	not available	0
Dive forward angle on exit / Change of course	not available	0	not available	0
Cascade occurs	not available	0	not available	0
Folding lines used	Not available	0	Not available	0
11. Exiting deep stall (parachutal stall) Deep stall achieved	B Yes	Δ	Yes	Α
Recovery	Spontaneous in less than 3 s		Spontaneous in less than 3 s	A
Dive forward angle on exit	Dive forward 0° to 30°		Dive forward 30° to 60°	В
Change of course	Changing course less than 45°		Changing course less than 45°	A
Cascade occurs	No No		No.	A
				, ,
12. High angle of attack recovery Recovery	A Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	Α
Cascade occurs	No	Α	No	Α
13. Recovery from a developed full stall	С			
Dive forward angle on exit	Dive forward 60° to 90°	С	Dive forward 0° to 30°	Α
Collapse	No collapse	A	Symmetric collapse	С
Cascade occurs (other than collapses)	No	A	No	Α

Rocking back	Greater than 45°	С	Greater than 45°	С
Line tension	Most lines tight		Most lines tight	Α
14. Asymmetric collapse	Α			
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 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				
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
Small asymmetric collapse with fully activated accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	not available	0	not available	0
Re-inflation behaviour	not available	0	not available	0
Total change of course	not available	0	not available	0
Collapse on the opposite side occurs	not available	0	not available	0
Twist occurs	not available	0	not available	0
Cascade occurs	not available	0	not available	0
Folding lines used	Not available	0	Not available	0
Large asymmetric collapse with fully activated accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	not available	0	not available	0
Re-inflation behaviour	not available	0	not available	0
Total change of course	not available	0	not available	0
Collapse on the opposite side occurs	not available	0	not available	0
Twist occurs	not available	0	not available	0
Cascade occurs	not available	0	not available	0

Folding lines used	Not available	0	Not available	0
15. Directional control with a maintained asymmetric collapse	A			
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
16. Trim speed spin tendency	A			
Spin occurs	No	Α	No	Α
17. Low speed spin tendency	A	^	M-	
Spin occurs	No	А	No	Α
18. Recovery from a developed spin	A			
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	0			
Change of course before release	not available	0	not available	0
Behaviour before release	not available	0	not available	0
Recovery	not available	0	not available	0
Dive forward angle on exit	not available	0	not available	0
Cascade occurs	not available	0	not available	0
20. Big ears	A			
Entry procedure	Standard technique	Α	Standard technique	Α
Behaviour during big ears	Stable flight	Α	Stable flight	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
21. Big ears in accelerated flight	0			
Entry procedure	not available	0	not available	0
Behaviour during big ears	not available	0	not available	0
Recovery	not available	0	not available	0
Dive forward angle on exit	not available	0	not available	0
Behaviour immediately after releasing the accelerator while maintaining big ears	not available	0	not available	0
22. Alternative means of directional control	Α			
180° turn achievable in 20 s	Yes	Α	Yes	Α
Stall or spin occurs	No	Α	No	Α
23. 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

24. Comments of test pilot	