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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



## Flight test report: EN 926-2:2013 & LTF 91/09

Manufacturer AddressAirDesign GmbHCertification number PG_1534 2019AddressRipote grant all 4 Stock 6067 Absam AustriaFlight test18.06.2019Glider modelVivo MClassificationBGlider modelVivo MClassificationBSerial numberXB31M1PP191403PRepresentativeNoneTrimmernoPlace of testVilleneuveFolding lines usedno						
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8. Stability in gentle spirals    A      Tendency to return to straight flight    Spontaneous exit    A    Spontaneous exit    A      9. Behaviour exiting a fully developed spiral dive    A    Immediate reduction of rate of turn    A    Immediate reduction of rate of turn    A      Initial response of glider (first 180°)    Immediate reduction of rate of turn    A    Immediate reduction of rate of turn    A      Tendency to return to straight flight    Spontaneous exit (g force decreasing, rate of turn decreasing)    A    Spontaneous exit (g force decreasing, rate of turn decreasing)    A      Turn angle to recover normal flight    Less than 720°, spontaneous recovery    A    Less than 720°, spontaneous recovery    A      10. Symmetric front collapse    A    A    A    A    A	7. Roll stability and dam	ping	Α			
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9. Behaviour exiting a fully developed spiral dive    A      Initial response of glider (first 180°)    Immediate reduction of rate of turn    A      Tendency to return to straight flight    Spontaneous exit (g force decreasing, rate of turn decreasing)    A    Spontaneous exit (g force decreasing, rate of turn decreasing)    A      Turn angle to recover normal flight    Less than 720°, spontaneous recovery    A    Less than 720°, spontaneous exit (g force decreasing)    A      10. Symmetric front collapse    A    A    A    Less than 720°, spontaneous exit (g force decreasing)    A	8. Stability in gentle spi	rals	Α			
Initial response of glider (first 180°)Immediate reduction of rate of turnAImmediate reduction of rate of turnATendency to return to straight flightSpontaneous exit (g force decreasing, rate of turn decreasing)ASpontaneous exit (g force decreasing, rate of turn decreasing)ATurn angle to recover normal flightLess than 720°, spontaneous recoveryALess than 720°, spontaneous recoveryA10. Symmetric front collapse Approximately 30 % chordAA	Tendency to return to stra	aight flight	Spontaneous exit	А	Spontaneous exit	А
Tendency to return to straight flightSpontaneous exit (g force decreasing, rate of turn decreasing)ASpontaneous exit (g force decreasing, rate of turn decreasing)ATurn angle to recover normal flightLess than 720°, spontaneous recoveryALess than 720°, spontaneous recoveryALess than 720°, spontaneous recoveryA10. Symmetric front collapse Approximately 30 % chordAASpontaneous recoveryA	9. Behaviour exiting a fu	ully developed spiral dive	Α			
decreasing, rate of turn decreasing)  decreasing, rate of turn decreasing)    Turn angle to recover normal flight  Less than 720°, spontaneous recovery    10. Symmetric front collapse  A    Approximately 30 % chord  A	Initial response of glider (first 180°)		Immediate reduction of rate of turn	А	Immediate reduction of rate of turn	А
recovery  recovery    10. Symmetric front collapse  A    Approximately 30 % chord	Tendency to return to stra	aight flight		A		A
10. Symmetric front collapse  A    Approximately 30 % chord  A	Turn angle to recover normal flight			А		A
	10. Symmetric front col	apse				
EntryRocking back less than 45°ARocking back less than 45°A	Approximately 30 % cho	ord				
	Entry		Rocking back less than 45°	А	Rocking back less than 45°	А

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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	A
Cascade occurs	No	А	No	А
Folding lines used	No		No	
At least 50% chord				
Entry	Rocking back less than 45°	А	Rocking back less than 45°	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Keeping course	Α	Dive forward 0° to 30° / Keeping course	A
Cascade occurs	No	А	No	А
Folding lines used	No		No	
With accelerator				
Entry	Rocking back less than 45°	А	Rocking back less than 45°	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Keeping course	A	Dive forward 0° to 30° / Keeping course	А
Cascade occurs	No	А	No	А
Folding lines used	No		No	
11. Exiting deep stall (parachutal stall)	А			
Deep stall achieved	Yes	А	Yes	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Change of course	Changing course less than 45°	А	Changing course less than 45°	А
Cascade occurs	No	А	No	А
12. High angle of attack recovery	A			
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Cascade occurs	No	А	No	А
13. Recovery from a developed full stall	A		-	
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Collapse	No collapse	А	No collapse	А
Cascade occurs (other than collapses)	No	А	No	А
Rocking back	Less than 45°	Α	Less than 45°	A
Line tension	Most lines tight	А	Most lines tight	А
14. Asymmetric collapse	B		5	
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°	А	Less than 90° / Dive or roll angle 0° to 15°	А
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No (or only a small number of	А	No (or only a small number of	А
	collapsed cells with a spontaneous reinflation)		collapsed cells with a spontaneous reinflation)	
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
Folding lines used	No		No	
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	Less than 90° / Dive or roll angle 15° to 45°	A
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No (or only a small number of collapsed cells with a spontaneous reinflation)	A	No (or only a small number of collapsed cells with a spontaneous reinflation)	A
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
Folding lines used	No		No	
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 0° to 15° $$	A	Less than 90° / Dive or roll angle 0° to $15^\circ$	А
Re-inflation behaviour	Spontaneous re-inflation	A	Spontaneous re-inflation	А

Total change of course	Less than 360°	A	Less than 360°	A
Collapse on the opposite side occurs	No (or only a small number of collapsed cells with a spontaneous reinflation)	A	No (or only a small number of collapsed cells with a spontaneous reinflation)	A
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
Folding lines used	No		No	
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	Less than 90° / Dive or roll angle $15^\circ$ to $45^\circ$	A
Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	А
Total change of course	Less than 360°	Α	Less than 360°	А
Collapse on the opposite side occurs	No (or only a small number of collapsed cells with a spontaneous reinflation)	A	No (or only a small number of collapsed cells with a spontaneous reinflation)	A
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
Folding lines used	No		No	
15. Directional control with a maintained asymmetric collapse	Α			
Able to keep course	Yes	А	Yes	А
180° turn away from the collapsed side possible in 10 s	Yes	Α	Yes	A
Amount of control range between turn and stall or spin	More than 50 % of the symmetric control travel	A	More than 50 % of the symmetric control travel	A
16. Trim speed spin tendency	Α			
Spin occurs	No	Α	No	А
17. Low speed spin tendency	Α			
Spin occurs	No	А	No	А
18. Recovery from a developed spin	Α			
Spin rotation angle after release	Stops spinning in less than $90^\circ$	Α	Stops spinning in less than 90°	А
Cascade occurs	No	Α	No	А
19. B-line stall	Α			
Change of course before release	Changing course less than 45°	А	Changing course less than 45°	А
Behaviour before release	Remains stable with straight span	А	Remains stable with straight span	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Cascade occurs	No	А	No	А
20. Big ears	В			
Entry procedure	Dedicated controls	Α	Dedicated controls	А
Behaviour during big ears	Stable flight	А	Stable flight	А
Recovery	Spontaneous in 3 s to 5 s	В	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	А
21. Big ears in accelerated flight	В			
Entry procedure	Dedicated controls	А	Dedicated controls	А
Behaviour during big ears	Stable flight	А	Stable flight	А
Recovery	Recovery through pilot action in less than a further 3 s	В	Spontaneous in less than 3 s	A
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	A	Stable flight	A
22. Alternative means of directional control	Α			
180° turn achievable in 20 s	Yes	А	Yes	А
Stall or spin occurs	No	А	No	А
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				