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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



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

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Manufacturer	AirDesign GmbH	Certification number	F	PG_1672.2020	
Address	Rhombergstraße 9,	Flight test	0	6.12.2019	
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	6067 Absam				
Olidan maadal	Austria	Olassification	_		
Glider model	Soar L	Classification	E		
Serial number	XB32L1PP193736P	Representative		lone	
Trimmer	no	Place of test	٧	/illeneuve	
Folding lines used	no				
Test pilot		Alexandre Jofresa	A	nselm Rauh	
Harness		Icaro - Energy 2 L	S	Supair - Evo XC 3 L	
Harness to risers distance (cm)		43	4	44	
Distance between risers (cm)		48	4	48	
Total weight in flight (kg)		100		125	
	(ng)		'		
1. Inflation/Take-off		A			
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 flight		A		V	
Trim speed more than 30		Yes	A	Yes	A
Speed range using the controls larger than 10 km/h		Yes Less than 25 km/h	A A	Yes Less than 25 km/h	A A
Minimum speed 4. Control movement		A	А	Less than 25 km/n	A
	to 80 kg	A			
Max. weight in flight up to 80 kg		not available	0	not available	0
Symmetric control pressure / travel Max. weight in flight 80 kg to 100 kg		not available	Ü	not available	J
Symmetric control pressure / travel		Increasing / greater than 60 cm	Α	not available	0
Max. weight in flight greater than 100 kg		mercucing / grouter train co cin			
Symmetric control pressure / travel		not available	0	Increasing / greater than 65 cm	Α
5. Pitch stability exiting accelerated flight		A		5 5	
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 operati	ng controls during accelerated	Α			
Collapse occurs		No	Α	No	Α
7. Roll stability and dam	nping	A			
Oscillations		Reducing	Α	Reducing	Α
8. Stability in gentle spi	rals	Α			
Tendency to return to stra	aight flight	Spontaneous exit	Α	Spontaneous exit	Α
9. Behaviour exiting a fu	ully developed spiral dive	В			
Initial response of glider (first 180°)	Immediate reduction of rate of turn	Α	No immediate reaction	В
Tendency to return to stra	aight 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 nor	mal flight	Less than 720°, spontaneous recovery	Α	Less than 720°, spontaneous recovery	Α
10. Symmetric front col	lapse	В			
Approximately 30 % cho	ord				
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		No	
At least 50% chord				
Entry	Rocking back less than 45°	Α	Rocking back less than 45°	Α
Recovery	Spontaneous in less than 3 s	Α	Spontaneous in 3 s to 5 s	В
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	Α	No	Α
Folding lines used	No		No	
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 3 s to 5 s	В
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		No	•
11. Exiting deep stall (parachutal stall)	A			
Deep stall achieved	Yes	Α	Yes	Δ
				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°	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	Α			
Recovery	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	В			
Dive forward angle on exit	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
Rocking back	Less than 45°	Α	Less than 45°	Α
Line tension	Most lines tight	Α	Most lines tight	Α
14. Asymmetric collapse	В		Ğ	
·				
Small asymmetric collapse				
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
•	0° to 15°	A A	15° to 45°	A A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour	0° to 15° Spontaneous re-inflation	Α	15° to 45° Spontaneous re-inflation	Α
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course	0° to 15° Spontaneous re-inflation Less than 360°	A A	15° to 45° Spontaneous re-inflation Less than 360°	A A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour	0° to 15° Spontaneous re-inflation	Α	15° to 45° Spontaneous re-inflation	Α
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous	A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous	A A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation)	A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation)	A A A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No	A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No	A A A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No	A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No	A A A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No	A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No	A A A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used Large asymmetric collapse Change of course until re-inflation / Maximum dive forward or	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No Less than 90° / Dive or roll angle	A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No 90° to 180° / Dive or roll angle	A A A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used Large asymmetric collapse Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No Less than 90° / Dive or roll angle 15° to 45°	A A A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No 90° to 180° / Dive or roll angle 15° to 45°	A A A A B
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used Large asymmetric collapse Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No Less than 90° / Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360°	A A A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No 90° to 180° / Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360°	A A A B A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used Large asymmetric collapse Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No Less than 90° / Dive or roll angle 15° to 45° Spontaneous re-inflation	A A A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No 90° to 180° / Dive or roll angle 15° to 45° Spontaneous re-inflation	A A A A B
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used Large asymmetric collapse Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No Less than 90° / Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous	A A A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No 90° to 180° / Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous	A A A B A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used Large asymmetric collapse Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No Less than 90° / Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation)	A A A A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No 90° to 180° / Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation)	A A A A B A A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used Large asymmetric collapse Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No Less than 90° / Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No	A A A A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No 90° to 180° / Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No	A A A A A A A A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used Large asymmetric collapse Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Twist occurs Cascade occurs	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No Less than 90° / Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No	A A A A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No 90° to 180° / Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No	A A A A A A A A
Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used Large asymmetric collapse Change of course until re-inflation / Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used	0° to 15° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No Less than 90° / Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No	A A A A A A	15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No No 90° to 180° / Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed cells with a spontaneous reinflation) No No	A A A A A A A A

Tatal above of assure	Less than 360°	^	Lacathan 200°	^
Total change of course Collapse on the opposite side occurs	No (or only a small number of	A A	Less than 360° No (or only a small number of	A A
Collapse on the opposite side occurs	collapsed cells with a spontaneous reinflation)	^	collapsed cells with a spontaneous reinflation)	۸
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
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	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		No	
15. Directional control with a maintained asymmetric	A			
collapse				
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			
Spin occurs	No	Α	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	A			
Change of course before release	Changing course less than 45°	Α .	Changing course less than 45°	A
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
Dive forward angle on exit	Dive forward 0° to 30°	A	Dive forward 0° to 30°	A
Cascade occurs	No	Α	No	Α
20. Big ears	B		5	
Entry procedure	Dedicated controls	A	Dedicated controls	A
Behaviour during big ears	Stable flight	A	Stable flight	A
Recovery	Spontaneous in less than 3 s	A	Spontaneous in 3 s to 5 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		^	Dadianted controls	^
Entry procedure	Dedicated controls	A	Dedicated controls	A
Behaviour during big ears Recovery	Stable flight Spontaneous in less than 3 s	A	Stable flight Recovery through pilot action in less than a further 3 s	A B
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	A	Stable flight	A
22. Alternative means of directional control	A			
180° turn achievable in 20 s	Yes	Α	Yes	Α
Stall or spin occurs	No	Α		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