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Sky Paragliders a.s.

test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes

Manufacturer



Certification number PG_2420.2024

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

Address	Okružní 39 73911 Frýdlant nad C Czech Republic	Ostravicí	Flight test		11.06.2024	
Glider model	Apollo 3 ML		Classification		В	
Serial number			Representative		None	
Trimmer	no		Place of test		Villeneuve	
			r lace or test		Villerieuve	
Folding lines used	no					
Test pilot		Claude Thurn	heer		Anselm Rauh	
Harness Harness to risers distance [cm] Distance between risers [cm]		Advance Thun AG Success 4 M 43 44			Woody Valley srl Wani Light 2 L 43 48	
Total weight in fligh		82			105	
Total Weight III high	ır [v9]	02			103	
1. Inflation/Take-off		В				
Rising behaviour		Easy rising, some pilot correction is required		В	Easy rising, some pilot correction is required	В
Special take off technique	required	No		Α	No	Α
2. Landing		Α				
Special landing technique required		No		Α	No	
		_				
3. Speed in straight fligh		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 km/h		Α	25 km/h to 30 km/h	В
4. Control movement		A				
Max. weight in flight up	to 80 kg					
Minimum speed 4. Control movement Max. weight in flight up to 80 kg Symmetric control pressure / travel		not available		0	not available	0
Max. weight in flight 80	kg to 100 kg					
Max. weight in flight 80 kg to 100 kg Symmetric control pressure / travel		Increasing / greater than 60 cm		Α	not available	0
Max. weight in flight gre	ator than 100 kg					
Symmetric control pressur		not available		0	Increasing / greater than 65 cm	Α
Symmetric control pressu	ie / liavei	not available		ŭ	moreasing / greater than 60 cm	
5. Pitch stability exiting	accelerated flight	Α				
Dive forward angle on exi	t	Dive forward less that	n 30°	Α	Dive forward less than 30°	Α
Collapse occurs		No		Α	No	Α
6. Pitch stability operation	ng controls during	A				
Collapse occurs		No		Α	No	Α
7. Roll stability and dam	ping	Α				
Oscillations		Reducing		Α	Reducing	Α
8. Stability in gentle spir		A				
Tendency to return to stra	ight flight	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	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	Α	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		Spontaneous in less than 3 s	Α
Dive forward angle on exit Change of course	Dive forward 30° to 60° / Keeping course		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	Dealling health and the AFO		Dealise had been the 450	
Entry	Rocking back less than 45°	A	Rocking back less than 45°	A
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	A	No	Α .
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 Yes	٨	Yes	Α
Deep stall achieved	Spontaneous in less than 3 s	A	Spontaneous in less than 3 s	A
Recovery			Dive forward 0° to 30°	
Dive forward angle on exit	Dive forward 0° to 30°			A
Change of course	Changing course less than 45°		Changing course less than 45°	A
Cascade occurs	No	Α	No	Α
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	A			
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
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			
Small 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
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	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
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	Α	No	Α
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	А
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 Spin occurs	A No	Α	No	Α
49. Deceyany from a developed onin	В			
18. Recovery from a developed spin Spin rotation angle after release	Stops spinning in 90° to 180°	В	Stops spinning in 90° to 180°	В
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°	Α
Behaviour before release	Remains stable with straight span	Α	Remains stable with straight span	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
Cascade occurs	No	Α	No	Α
20. Big ears	Α			
Entry procedure	Dedicated controls	Α	Dedicated controls	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	A			
Entry procedure	Dedicated controls	Α	Dedicated controls	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
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	Α	Stable flight	Α
22. Alternative means of directional control	A			
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