



Flight test report: EN 926-2:2013+A1:2021*

Manufacturer	Mac Para Technology	Certification number	PG_2290.2023
Address	Televizní 2615 756 61 Roznov pod Radhostem Czech Republic	Flight test	08.11.2023
Glider model	VERVE 23	Classification	C
Serial number	4123-2519	Representative	None
Trimmer	no	Place of test	Villeneuve
Folding lines used	yes		

Test pilot Claude Thurnheer Alexandre Jofresa

Harness	Niviuk Makan M	Niviuk Makan M
Harness to risers distance [cm]	41	41
Distance between risers [cm]	44	44
Total weight in flight [kg]	84	97

1. Inflation/Take-off	C		
Rising behaviour	Overshoots, shall be slowed down to avoid a front collapse	C	Overshoots, shall be slowed down to avoid a front collapse C
Special take off technique required	No	A	No A
2. Landing	A		
Special landing technique required	No	A	No A
3. Speed in straight flight	B		
Trim speed more than 30 km/h	Yes	A	Yes A
Speed range using the controls larger than 10 km/h	Yes	A	Yes A
Minimum speed	25 km/h to 30 km/h	B	Less than 25 km/h A
4. Control movement	C		
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			
Symmetric control pressure / travel	Increasing / 45 cm to 60 cm	C	Increasing / 45 cm to 60 cm C
Max. weight in flight greater than 100 kg			
Symmetric control pressure / travel	not available	0	not available 0
5. Pitch stability exiting accelerated flight	A		
Dive forward angle on exit	Dive forward less than 30°	A	Dive forward less than 30° A
Collapse occurs	No	A	No A
6. Pitch stability operating controls during accelerated flight	A		
Collapse occurs	No	A	No A
7. Roll stability and damping	A		
Oscillations	Reducing	A	Reducing A
8. Stability in gentle spirals	A		
Tendency to return to straight flight	Spontaneous exit	A	Spontaneous exit A

*This standard is NOT covered by accreditation D-IS-19457-01

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	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		C		
Approximately 30 % chord				
Entry	Rocking back less than 45°	A	Rocking back less than 45°	A
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	A	No	A
Folding lines used	Yes	C	Yes	C
At least 50% chord				
Entry	Rocking back less than 45°	A	Rocking back less than 45°	A
Recovery	Spontaneous in less than 3 s	A	Spontaneous in 3 s to 5 s	B
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	A	No	A
Folding lines used	Yes	C	Yes	C
With accelerator				
Entry	Rocking back less than 45°	A	Rocking back less than 45°	A
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	A	No	A
Folding lines used	Yes	C	Yes	C
11. Exiting deep stall (parachutal stall)		A		
Deep stall achieved	Yes	A	Yes	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
Change of course	Changing course less than 45°	A	Changing course less than 45°	A
Cascade occurs	No	A	No	A
12. High angle of attack recovery		C		
Recovery	Spontaneous in less than 3 s	A	Spontaneous in 3 s to 5 s	C
Cascade occurs	No	A	No	A
13. Recovery from a developed full stall		A		
Dive forward angle on exit	Dive forward 0° to 30°	A	Dive forward 0° to 30°	A
Collapse	No collapse	A	No collapse	A
Cascade occurs (other than collapses)	No	A	No	A

Rocking back	Less than 45°	A	Less than 45°	A
Line tension	Most lines tight	A	Most lines tight	A

14. Asymmetric collapse

C

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°	A	Less than 90° / Dive or roll angle 15° to 45°	A
Re-inflation behaviour	Spontaneous re-inflation	A	Spontaneous re-inflation	A
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 re-inflation)	A	No (or only a small number of collapsed cells with a spontaneous re-inflation)	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
Folding lines used	Yes	C	Yes	C

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°	B	90° to 180° / Dive or roll angle 15° to 45°	B
Re-inflation behaviour	Spontaneous re-inflation	A	Spontaneous re-inflation	A
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 re-inflation)	A	No (or only a small number of collapsed cells with a spontaneous re-inflation)	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
Folding lines used	Yes	C	Yes	C

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°	A	Less than 90° / Dive or roll angle 15° to 45°	A
Re-inflation behaviour	Spontaneous re-inflation	A	Spontaneous re-inflation	A
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 re-inflation)	A	No (or only a small number of collapsed cells with a spontaneous re-inflation)	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
Folding lines used	Yes	C	Yes	C

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 45° to 60°	C	90° to 180° / Dive or roll angle 45° to 60°	C
Re-inflation behaviour	Spontaneous re-inflation	A	Spontaneous re-inflation	A
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 re-inflation)	A	No (or only a small number of collapsed cells with a spontaneous re-inflation)	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A

Folding lines used	Yes	C Yes	C
15. Directional control with a maintained asymmetric collapse	A		
Able to keep course	Yes	A Yes	A
180° turn away from the collapsed side possible in 10 s	Yes	A 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	A		
Spin occurs	No	A No	A
17. Low speed spin tendency	A		
Spin occurs	No	A No	A
18. Recovery from a developed spin	B		
Spin rotation angle after release	Stops spinning in 90° to 180°	B Stops spinning in 90° to 180°	B
Cascade occurs	No	A No	A
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	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 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	A		
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 less than 3 s	A
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	Stable flight	A Stable flight	A
22. Alternative means of directional control	A		
180° turn achievable in 20 s	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	A		
Procedure works as described	Yes	A Yes	A
Procedure suitable for novice pilots	Yes	A Yes	A
Cascade occurs	No	A No	A

