



Flight test report



Manufacturer	Airwave, Villinger GmbH	Certification number	PG_0138.2008
Address	Gewerbepark 6 6142 Mieders Austria	Date of flight test	25. 04. 2008
Representative	Alloix Pierre-Yves	Place of test	Villeneuve
Glider model	Magic 5 M	Classification	D
Trimmer	no		

Test pilot Thurnheer Claude Zoller Alain
Harness Advance - Progress light Airwave - GT II M

Total weight in flight (kg) 80 105

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	25 km/h to 30 km/h	B
4. Control movement	C			
<i>Max. weight in flight up to 80 kg</i>				
Symmetric control pressure / travel	Increasing / 40 cm to 55 cm	C	not available	0
<i>Max. weight in flight 80 kg to 100 kg</i>				
Symmetric control pressure / travel	not available	0	not available	0
<i>Max. weight in flight greater than 100 kg</i>				
Symmetric control pressure / travel	not available	0	Increasing / 50 cm to 65 cm	C
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
9. Behaviour in a steeply banked turn	B			
Sink rate after two turns	More than 14 m/s	B	More than 14 m/s	B
10. Symmetric front collapse	C			
Entry	Rocking back less than 45°	A	Rocking back greater than 45°	C
Recovery	Spontaneous in 3 s to 5 s	B	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° / Entering a turn of less than 90°	A
Cascade occurs	No	A	No	A
<i>With accelerator</i>				
Entry	Rocking back greater than 45°	C	Rocking back greater than 45°	C
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 30° to 60° / Entering a turn of less than 90°	B
Cascade occurs	No	A	No	A
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	A			
Recovery	Spontaneous in less than 3 s	A	Spontaneous in less than 3 s	A
Cascade occurs	No	A	No	A
13. Recovery from a developed full stall	C			
Dive forward angle on exit	Dive forward 0° to 30°	A	Dive forward 30° to 60°	B
Collapse	No collapse	A	No collapse	A
Cascade occurs (other than collapses)	No	A	No	A
Rocking back	Less than 45°	A	Greater than 45°	C
Line tension	Most lines tight	A	Most lines tight	A
14. Asymmetric collapse	C			
<i>With 50% collapse</i>				
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	A	No	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
<i>With 75% collapse</i>				
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	A	No	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
<i>With 50% collapse and accelerator</i>				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle 15° to 45°	A	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	A	No	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
<i>With 75% collapse and accelerator</i>				
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	A	No	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
15. Directional control with a maintained asymmetric collapse	C			
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	25 % to 50 % of the symmetric control travel	C
16. Trim speed spin tendency	A			
Spin occurs	No	A	No	A

17. Low speed spin tendency	D			
Spin occurs	Yes	D	Yes	D
18. Recovery from a developed spin	A			
Spin rotation angle after release	Stops spinning in less than 90°	A	Stops spinning in less than 90°	A
Cascade occurs	No	A	No	A
19. B-line stall	C			
Change of course before release	Changing course less than 45°	A	Changing course less than 45°	A
Behaviour before release	Remains stable without straight span	C	Remains stable without straight span	C
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 30° to 60°	A
Cascade occurs	No	A	No	A
20. Big ears	B			
Entry procedure	Dedicated controls	A	Dedicated controls	A
Behaviour during big ears	Stable flight	A	Stable flight	A
Recovery	Recovery through pilot action in less than a further 3 s	B	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	B			
Entry procedure	Dedicated controls	A	Dedicated controls	A
Behaviour during big ears	Stable flight	A	Stable flight	A
Recovery	Recovery through pilot action in less than a further 3 s	B	Spontaneous in 3 s to 5 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. Behaviour exiting a steep spiral	D			
Tendency to return to straight flight	Spontaneous exit	A	Turn remains constant	D
Turn angle to recover normal flight	720° to 1080°, spontaneous recovery	C	With pilot action	D
Sink rate when evaluating spiral stability [m/s]	21		28	
23. Alternative means of directional control	A			
180° turn achievable in 20 s	Yes	A	Yes	A
Stall or spin occurs	No	A	No	A
24. 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
25. Comments of test pilot				
Comments				