

Flight test report: EN



Manufacturer	Apco Aviation Ltd.	Certification number	PG_0359.2010
Address	7, Chalamish St., Industrial park 38900 Caesarea Israel	Date of flight test	15. 07. 2010
Representative	None	Place of test	Villeneuve
Glider model	Fun 42 II	Classification	B
Trimmer	yes: opened		

Test pilot	Thurnheer Claude	Zoller Alain
Harness	Sky Paragliders - Twin	Advance - Bi Pro 2
Total weight in flight (kg)	140	230

Category	Test Pilot	Zoller Alain
1. Inflation/Take-off	A	
Rising behaviour	Smooth, easy and constant rising	A Smooth, easy and constant rising A
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	A	
<i>Max. weight in flight up to 80 kg</i>		
Symmetric control pressure / travel	not available	0 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	Increasing / greater than 65 cm	A Increasing / greater than 65 cm A
5. Pitch stability exiting accelerated flight	0	
Dive forward angle on exit	not available	0 not available 0
Collapse occurs	not available	0 not available 0
6. Pitch stability operating controls during accelerated flight	0	
Collapse occurs	not available	0 not available 0
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	B	
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 30° to 60° / Keeping course B
Cascade occurs	No	A No A
<i>With accelerator</i>		
Entry	not available	0 not available 0
Recovery	not available	0 not available 0

Dive forward angle on exit / Change of course	not available	0	not available	0
Cascade occurs	not available	0	not available	0
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	not available	0
Cascade occurs	No	A	not available	0
13. Recovery from a developed full stall	B			
Dive forward angle on exit	Dive forward 30° to 60°	B	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	B			
<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	not available	0	not available	0
Re-inflation behaviour	not available	0	not available	0
Total change of course	not available	0	not available	0
Collapse on the opposite side occurs	not available	0	not available	0
Twist occurs	not available	0	not available	0
Cascade occurs	not available	0	not available	0
<i>With 75% collapse and accelerator</i>				
Change of course until re-inflation / Maximum dive forward or roll angle	not available	0	not available	0
Re-inflation behaviour	not available	0	not available	0
Total change of course	not available	0	not available	0
Collapse on the opposite side occurs	not available	0	not available	0
Twist occurs	not available	0	not available	0
Cascade occurs	not available	0	not available	0
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	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	A			
Change of course before release	Changing course less than 45°	A	not available	0
Behaviour before release	Remains stable with straight span	A	not available	0
Recovery	Spontaneous in less than 3 s	A	not available	0
Dive forward angle on exit	Dive forward 0° to 30°	A	not available	0
Cascade occurs	No	A	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	0			
Entry procedure	not available	0	not available	0
Behaviour during big ears	not available	0	not available	0
Recovery	not available	0	not available	0
Dive forward angle on exit	not available	0	not available	0
Behaviour immediately after releasing the accelerator while maintaining big ears	not available	0	not available	0
22. Behaviour exiting a steep spiral	A			
Tendency to return to straight flight	Spontaneous exit	A	Spontaneous exit	A
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	A	Less than 720°, spontaneous recovery	A
Sink rate when evaluating spiral stability [m/s]	21		24	
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	Impossible to do B-Stall with open trimmer. Steep spiral, we can archive 24 m/sec with neutrality spiral. At 14 m/sec, the glider recovery the normal flight without intervention and without any neutrality tendency.			