



Flight test report



Manufacturer Certification number PG_0211.2009 Gin Gliders Inc. Address Date of flight test 29.01.2009 586-5, Ilsan-Ri, Mohyun-Myun,

449-855 YongIn-City, Kyunggi-

Korea

Representative None Place of test Villeneuve

Glider model Airflex 28 Classification В

Trimmer yes: closed

> Test pilot Thurnheer Claude Zoller Alain Harness Gin Gliders - Gingo M Sup'Air - Evo XC L

Total weight in flight (kg)	95		115	
1. Inflation/Take-off	Α			
Rising behaviour	Smooth, easy and constant rising	Α	Smooth, easy and constant rising	Α
Special take off technique required	No	Α	No	Α
2. Landing	Α			
Special landing technique required	No	Α	No	Α
3. Speed in straight flight	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	25 km/h to 30 km/h	В	Less than 25 km/h	Α
4. Control movement	Α			
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 / greater than 60 cm	Α	not available	0
Max. weight in flight greater than 100 kg				
Symmetric control pressure / travel	not available	0	Increasing / greater than 65 cm	Α
5. Pitch stability exiting accelerated flight	Α			
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 operating controls during accelerated flight	Α			
Collapse occurs	No	Α	No	Α
7. Roll stability and damping	Α			
Oscillations	Reducing	Α	Reducing	Α
8. Stability in gentle spirals	Α			
Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	Α
9. Behaviour in a steeply banked turn	В			
Sink rate after two turns	More than 14 m/s	В	More than 14 m/s	В
10. Symmetric front collapse	В			
Entry	Rocking back less than 45°	Α	Rocking back less than 45°	Α
Recovery	Spontaneous in 3 s to 5 s	В	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 30° to 60° / Entering a turn of less than 90°	В
Cascade occurs	No	Α	No	Α
With accelerator				
Entry	Rocking back less than 45°	Α	Rocking back less than 45°	Α
Recovery	Spontaneous in 3 s to 5 s	В	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 30° to 60° / Entering a turn of less than 90°	В
Cascade occurs	No	Α	No	Α
11. Exiting deep stall (parachutal stall)	Α			
Deep stall achieved	Yes	Α	Yes	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
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 30° to 60°	В	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			
With 50% 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
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	Α	No	Α
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
With 75% 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	Α	No	Α
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
With 50% collapse and accelerator				
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	Α	No	Α
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
With 75% collapse and 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	Α	No	Α
Twist occurs	No	Α	No	Α
Cascade occurs	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	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	Α			
Spin occurs	No	Α	No	Α

A Stops spinning in less than 90° A Stops spinning in less than 90° A No A N	17. Low speed spin tendency	A			
Spin rotation angle after release Stops spinning in less than 90° A No A N	Spin occurs	No	Α	No	Α
A 19. B-line stall A 19. B-line stall A 2	18. Recovery from a developed spin	Α			
19. B-line stall Change of course before release Changing course less than 45° A Changing course less than 45° A Behaviour before release Remains stable with straight spain Remains stable with straight spain A Remains stable with straight spain A Remains stable with straight spain A Spontaneous in less than 3 s A Spontaneous in less than 3 s A Dive forward 0° to 30° A	Spin rotation angle after release	Stops spinning in less than 90°	Α	Stops spinning in less than 90°	Α
Change of course before release Behaviour before release Remains stable with straight span Recovery Spontaneous in less than 3 s A Spontaneous in less than 3 s A Dive forward 0° to 30° A Dive forw	Cascade occurs	No	Α	No	Α
Behaviour before release Remains stable with straight span Recovery Spontaneous in less than 3 s A Spontaneous in less than 3 s A Dive forward 0° to 30° A Dive forward 0	19. B-line stall	A			
Recovery Spontaneous in less than 3 s A Spontaneous in less than 3 s A Dive forward 0° to 30° A Dive forward 0° to 30° A No A No A Recovery No A Recovery No A No A No A No A No A Recovery No A Recovery Standard technique A Standard technique A Stable flight A Recovery Spontaneous in 3 s to 5 s B Spontaneous in 3 s to 5 s A Spontaneous i	Change of course before release	Changing course less than 45°	Α	Changing course less than 45°	Α
Dive forward angle on exit Cascade occurs No No A A Cascade occurs No A No A No A No A A No A A Cascade occurs No A No A No A No A A No A A A No A A A Cascade occurs B B Entry procedure Standard technique A Stable flight A Stable f	Behaviour before release		Α	Remains stable with straight span	Α
Cascade occurs No No A No A No A No A A No A A A A A A A A A A A A A	Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	Α
Entry procedure Standard technique A Standard technique A Standard technique A Sehaviour during big ears Stable flight A Dive forward one vit Dive forward 0° to 30° A D	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
Entry procedure Behaviour during big ears Stable flight A Dive forward one to 30 one A Dive forward	Cascade occurs	No	Α	No	Α
Behaviour during big ears Stable flight A Stable flight A Stable flight A Stable flight A Dive forward angle on exit Dive forward angle on exit Dive forward 0° to 30° A Standard technique A Stable flight A Dive forward angle on exit A Dive forward angle on exit Dive forward 0° to 30° A Dive forward 0° to	20. Big ears	В			
Recovery Spontaneous in 3 s to 5 s Dive forward angle on exit Dive forward 0° to 30° A Stable flight A Recovery Spontaneous in 3 s to 5 s A Spontaneous in 3 s to 5 s A Stable flight A Recovery Spontaneous in 3 s to 5 s A Dive forward 0° to 30° A	Entry procedure	Standard technique	Α	Standard technique	Α
Dive forward angle on exit Dive forward 0° to 30° A Standard technique A Stable flight A Dive forward 0° to 30° A Stable flight	Behaviour during big ears	Stable flight	Α	Stable flight	Α
21. Big ears in accelerated flight Entry procedure Standard technique A Standard technique A Standard technique A Stable flight A Dive forward on to 30 on A Dive forward 0 on	Recovery	Spontaneous in 3 s to 5 s	В	Spontaneous in 3 s to 5 s	В
Entry procedure Standard technique A Standard technique A Standard technique A Standard technique Behaviour during big ears Stable flight A Spontaneous in 3 s to 5 s A Spontaneous in 3 s to 5 s A Dive forward 0° to 30° A Dive forward 0° to 30° A Dive forward 0° to 30° A Stable flight	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
Behaviour during big ears Stable flight A Stable flight A Stable flight A Spontaneous in 3 s to 5 s A Spontaneous in 3 s to 5 s A Dive forward angle on exit Dive forward 0° to 30° A Dive forward	21. Big ears in accelerated flight	Α			
Recovery Spontaneous in 3 s to 5 s A Spontaneous in 3 s to 5 s A Dive forward angle on exit Dive forward 0° to 30° A Di	Entry procedure	Standard technique	Α	Standard technique	Α
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 22. Behaviour exiting a steep spiral A Stable flight A Spontaneous exit A Spontaneous exit A Spontaneous exit A Less than 720°, spontaneous recovery Sink rate when evaluating spiral stability [m/s] 19 20 23. Alternative means of directional control A Stall or spin occurs No A No A No A Pes A Procedure works as described Yes A Yes A Yes A Procedure suitable for novice pilots Yes No A No A No A No A Stall or Spin occurs A Yes Cascade occurs No A N	Behaviour during big ears	Stable flight	Α	Stable flight	Α
Behaviour immediately after releasing the accelerator while maintaining big ears 22. Behaviour exiting a steep spiral A Tendency to return to straight flight Spontaneous exit A Spontaneous exit A Less than 720°, spontaneous exit A Less than 720° Spontaneous exit A Yes A Yes A Yes A Yes	Recovery	Spontaneous in 3 s to 5 s	Α	Spontaneous in 3 s to 5 s	Α
### Procedure works as described ### Procedure suitable for novice pilots ### Procedure works as described in the user's manual ### Procedure suitable for novice pilots ### Procedure works as described in the user's manual ### Procedure suitable for novice pilots ### Procedure works of test pilot #### Procedure works of test pilot #### Procedure works of test pilot ####################################	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
Tendency to return to straight flight Spontaneous exit A Less than 720°, spontaneous recovery 20 23. Alternative means of directional control A Yes A No A No A Yes A No Cascade occurs No A No	Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	Α	Stable flight	Α
Turn angle to recover normal flight Less than 720°, spontaneous recovery A Less than 720°, spontaneous recovery Sink rate when evaluating spiral stability [m/s] 19 20 23. Alternative means of directional control A 180° turn achievable in 20 s Stall or spin occurs No A 24. Any other flight procedure and/or configuration described in the user's manual Procedure works as described Yes A Yes A Yes A Yes A Yes A Procedure suitable for novice pilots Yes No A No A A Yes A Yes A Yes A Yes A A A Procedure suitable for novice pilots Yes No A No A A A A A A A A A A A A A	22. Behaviour exiting a steep spiral	Α			
recovery Sink rate when evaluating spiral stability [m/s] 20 23. Alternative means of directional control A 180° turn achievable in 20 s Yes A Yes A Stall or spin occurs No A 24. Any other flight procedure and/or configuration described in the user's manual Procedure works as described Yes A Cascade occurs No A No A No A No A No A	Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	Α
23. Alternative means of directional control 180° turn achievable in 20 s Yes A Yes Yes	Turn angle to recover normal flight		Α		Α
180° turn achievable in 20 s Yes No No A No A No A 24. Any other flight procedure and/or configuration described in the user's manual Procedure works as described Yes A	Sink rate when evaluating spiral stability [m/s]	19		20	
Stall or spin occurs No A No A No A No A No A A A A A A A A	23. Alternative means of directional control	Α			
24. Any other flight procedure and/or configuration described in the user's manual Procedure works as described Yes A Yes A Yes A Cascade occurs No A No A No A No A	180° turn achievable in 20 s	Yes	Α	Yes	Α
described in the user's manual Procedure works as described Yes A Yes A Yes A Yes A Cascade occurs No A No A No A 25. Comments of test pilot	Stall or spin occurs	No	Α	No	Α
Procedure suitable for novice pilots Yes A Yes A Cascade occurs No A No A 25. Comments of test pilot	24. Any other flight procedure and/or configuration described in the user's manual	Α			
Cascade occurs No A No A 25. Comments of test pilot	Procedure works as described	Yes	Α	Yes	Α
25. Comments of test pilot	Procedure suitable for novice pilots	Yes	Α	Yes	Α
	Cascade occurs	No	Α	No	Α
Comments	25. Comments of test pilot				
	Comments				