

## Flight test report



Manufacturer **PRO-Design, Hofbauer GmbH.** Certification number PG\_0215.2009
Address Zimmeterweg 4 Date of flight test 16. 02. 2009

6020 Innsbruck

Austria

Representative None Place of test Villeneuve

Glider model Accura 2 90 Classification B

Trimmer no

Test pilot Thurnheer Claude Zoller Alain

Harness Sky Paragliders - Revel II M Sup'Air - Evo XC L

Total weight in flight (kg) 90 110

Total weight in flight (kg)	90		110	
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	Α			
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	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 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
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 30° to 60° / Keeping course	В
Deep stall achienced         Yes         A         Yes         A           Recovery         Spontaneous in less than 3 s         A         Spontaneous in less than 3 s         A           Due forward angle on exit         Dive forward 0" to 30"         A         Diventionus in less than 3 s         A         Changing course less than 45"         A           Cascade occurs         No         A         No         A         No         A           Cascade occurs         Spontaneous in less than 3 s         A         Spontaneous in less than 3 s         A         No         A           Cascade occurs         A         No         A         No         A         Version of 15 s of 15	Cascade occurs	No	Α	No	Α
Recovery         Spontaneous in least band 3 is all police forward dris gillow forward gi	11. Exiting deep stall (parachutal stall)	A			
Dive forward of pounse   Dive forward 0° to 30°   A   Changing course less than 45°   A   Changing course less than 45°   A   Changing course less than 45°   A   A   Changing course less than 45°   A   A   A   A   A   A   A   A   A	Deep stall achieved	Yes	Α	Yes	Α
Change of course (Danging course less than 45" a. Vaninging course less than 3 a. Vaninginginginginginginginginginginginging	Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	Α
Cascade occurs         No         A b         Pontaneous in less than 3 s         A contange of the pontange occurs         A contange occurs <th< td=""><td>Dive forward angle on exit</td><td>Dive forward 0° to 30°</td><td>Α</td><td>Dive forward 0° to 30°</td><td>Α</td></th<>	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
Recovery (	Change of course	Changing course less than 45°	Α	Changing course less than 45°	Α
Recovery   Spontaneous in less than 3 s	Cascade occurs	No	Α	No	Α
Cascade occurs         No         A         No         No         1.           13. Recovery from a developed full stall         A         A         VI         A         VI         A         VI         A         No         Collapse         A         No         A         No         A         Recibing than and the provided of the pro	12. High angle of attack recovery	Α			
10	Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	Α
Dive forward or "to 30"   A   Dive forward 0" to 30"   A   Collapse   Collapse   A   Collapse	Cascade occurs	No	Α	No	Α
Collapse         No collapse         A Les than 45°         A Les than 50° collapse           Change of course until re-inflation / Maximum dive forward or langle of langle         Cless than 90° / Dive or roll angle of 15°         A Less than 90° / Dive or roll angle of 15°         A Less than 90° / Dive or roll angle of 15°         A Less than 360°         A No           Collapse on the opposite side occurs         No         A No         A No         A No         A No         A With 75% collapse         A No         A No         A With 75% collapse         A No         A No         A With 75% collapse         A No         A No         A No         A No         A With 75% collapse         A No         A With 75% collapse         A No	13. Recovery from a developed full stall	A			
Cascade occurs (other than collapses)         No         A         No         A           Rocking back         Less than 45°         A         Less than 45°         A           14. Asymmetric collapse         B           With 50% collapse         B           With 50% collapse course until re-inflation / Maximum dive forward or roll angle of 10° to 15°         Cess than 90° / Dive or roll angle of 10° to 15°         A         Less than 90° / Dive or roll angle of 10° to 15°         A         Spontaneous re-inflation on A         A         Spontaneous re-inflation on A         A         Collapse on the opposite side occurs         A         No         A         A         No         A         A         Collapse on the opposite side occurs         No         A         No         A <th< td=""><td>Dive forward angle on exit</td><td>Dive forward 0° to 30°</td><td>Α</td><td>Dive forward 0° to 30°</td><td>Α</td></th<>	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
Rocking back   Line tension   Most lines tight   A   Most lines tight   A   Line tension   Most lines tight   A   Most lines tight   A	Collapse	No collapse	Α	No collapse	Α
Rocking back   Line tension   Most lines tight   A   Most lines tight   A   Line tension   Most lines tight   A   Most lines tight   A	Cascade occurs (other than collapses)	No	Α	No	Α
Line tension         Most lines tight         A. Most lines tight         A. But lines tight         A. It lies than 90° / Dive or roll angle 0° for 16 ° for 1		Less than 45°	Α	Less than 45°	Α
With 50% collapse         Change of course until re-inflation / Maximum dive forward or langle of "o" to 15"         Less than 90" / Dive or roll angle of to 15"         A but 15"         Less than 90" / Dive or roll angle of to 15"         A but 15"         A collapse or the opposite side occurs         A collapse on the opposite side occurs         A no         A with 15% collapse or the opposite side occurs         A no         A no         A no         A no         A with 15% collapse         A no         A with 15% collapse or course until re-inflation / Maximum dive forward or langle 15" to 45"         B collapse or course until re-inflation / Maximum dive forward or langle 15" to 45"         B collapse or me the opposite side occurs         A no         A no <th< td=""><td>Line tension</td><td>Most lines tight</td><td>Α</td><td>Most lines tight</td><td>Α</td></th<>	Line tension	Most lines tight	Α	Most lines tight	Α
With 50% collapse         Change of course until re-inflation / Maximum dive forward or langle of "o" to 15"         Less than 90" / Dive or roll angle of to 15"         A but 15"         Less than 90" / Dive or roll angle of to 15"         A but 15"         A collapse or the opposite side occurs         A collapse on the opposite side occurs         A no         A with 15% collapse or the opposite side occurs         A no         A no         A no         A no         A with 15% collapse         A no         A with 15% collapse or course until re-inflation / Maximum dive forward or langle 15" to 45"         B collapse or course until re-inflation / Maximum dive forward or langle 15" to 45"         B collapse or me the opposite side occurs         A no         A no <th< td=""><td>14. Asymmetric collapse</td><td>В</td><td></td><td>-</td><td></td></th<>	14. Asymmetric collapse	В		-	
roll angle         0° to 15°         to 15°           Re-inflation behaviour         Spontaneous re-inflation         A         Less than 360°         A           Collapse on the opposite side occurs         No         A         No         A           Cascade occurs         No         A         No         A           Cascade occurs         No         A         No         A           With 75% collapse         V         A         No         A           Change of course until re-inflation / Maximum dive forward or langle of fourse until re-inflation behaviour         Spontaneous re-inflation         A         Spontaneous re-inflation         A           Re-inflation behaviour         Spontaneous re-inflation         A         Less than 360°         A         Less than 360°         A         No         A           Collapse on the opposite side occurs         No         A         No         A         No         A         No         A           Cascade occurs         No         A         No         A         No         A         No         A         Less than 360°         A         No         A         Less than 360°         A         No         A         No         A         No         A         No					
Collapse on the opposite side occurs			Α		Α
Collapse on the opposite side occurs	Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α
Collapse on the opposite side occurs         No         A         No         A           Twist occurs         No         A         No         A           Cascade occurs         No         A         No         A           With 75% collapse         Change of course until re-inflation / Maximum dive forward or foll angle of 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           Collapse on the opposite side occurs         No         A         No         A           Cascade occurs         No         A         No         A           With 50% collapse and accelerator         No         A         No         A           Change of course until re-inflation / Maximum dive forward or lail angle         Less than 90° / Dive or roll angle 15° to 45°         A         Less than 90° / Dive or roll angle 15° to 45°         A           Change of course until re-inflation / Maximum dive forward or laise in the opposite side occurs         Spontaneous re-inflation         A         Less than 90° / Dive or roll angle 15° to 45°         A           Re-inflation behaviour         Spontaneous re-inflation         A         No         No         No         No         No         N	Total change of course	•	Α	·	Α
Twist occurs         No         A         No         A           Cascade occurs         No         A         No         A           With 75% collapse         Change of course until re-inflation / Maximum dive forward or roll angle         90° to 180° / Dive or roll angle in 15° to 45°         B         90° to 180° / Dive or roll angle in 15° to 45°         B           Re-inflation behaviour         Spontaneous re-inflation         A         Less than 360°         A         Less than 360°         A           Collapse on the opposite side occurs         No         A         No         A         No         A           Ciscacade occurs         No         A         No         A         No         A           Cascade occurs         No         A         No         A         No         A           Cascade occurs         No         A         No         A         No         A           Cascade occurs until re-inflation / Maximum dive forward or loll angle of course until re-inflation / Maximum dive forward or loll angle of 5' to 45°         A         Less than 90° / Dive or roll angle in 15° to 45°         A         Less than 360°         A         No	-	No	Α	No	Α
Cascade occurs         No         A         No         A           With 75% collapse         With 75% collapse         B         90° to 180° / Dive or roll angle 15° to 45° 15° 15° to 45° 15° to 45° 15° to 45° 15° 15° to 45° 15° 15° to 45° 15° 15° to			Α	No	Α
Change of course until re-inflation / Maximum dive forward or roll angle angle   S to 45° t	Cascade occurs	No	Α	No	Α
Change of course until re-inflation / Maximum dive forward or roll angle angle   S to 45° t					
Total change of course Less than 360° A Less than 360° A No			В		В
Collapse on the opposite side occurs  No No No A No No A No No A No Cascade occurs No No No A No A No A No A No A No A Cascade occurs No No No A No A No A No A No A No A No	Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α
Collapse on the opposite side occurs  No No A No A No A No A No A Cascade occurs No No A No A No A No A No A A No A A Cascade occurs No No A No A No A No A No A A No A A No A A No A A No A A A No A A A No A A A A	Total change of course	Less than 360°	Α	Less than 360°	Α
Twist occurs No	-	No	Α	No	Α
Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45°  Re-inflation behaviour Spontaneous re-inflation A Spontaneous re-inflation A Less than 360° A No A N		No	Α	No	Α
Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45°  Re-inflation behaviour Spontaneous re-inflation A Spontaneous re-inflation A Less than 90° / Dive or roll angle 15° to 45°  Re-inflation behaviour Spontaneous re-inflation A Spontaneous re-inflation A Less than 360° A Less than 360° A Less than 360° A No	Cascade occurs	No	Α	No	Α
roll angle 15° to 45° 15° to 45° 15° to 45°  Re-inflation behaviour Spontaneous re-inflation A Spontaneous re-inflation A Collapse on the opposite side occurs No A No A No A No A Cascade occurs No A No A No A No A No A No A Mith 75% collapse and accelerator  Change of course until re-inflation / Maximum dive forward or loll angle 15° to 45°  Re-inflation behaviour Spontaneous re-inflation A No A	With 50% collapse and accelerator				
Total change of course  Less than 360° A Less than 360° A No			Α		Α
Collapse on the opposite side occurs  No No A No A No A No A No A No Cascade occurs No No No A No A No A No A No A No A No	Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α
Twist occurs  No No A Twist occurs No A Cascade occurs No A Cascade occurs No A Cascade occurs No A Cascade occurs No A No	Total change of course	Less than 360°	Α	Less than 360°	Α
Cascade occurs  With 75% collapse and accelerator  Change of course until re-inflation / Maximum dive forward or roll angle  Re-inflation behaviour  Total change of course  Less than 360°  No  No  A  No  A  No  A  No  A  No  A  Total change of course  No  Collapse on the opposite side occurs  No  No  A  Total occurs  No  No  A  Total change of course  No  A  No  A  No  A  No  A  Twist occurs  No  A  Twist occurs  No  A  No  A  No  A  No  A  Total change of course  No  A  Twist occurs  No  A  No  A  No  A  No  A  No  A  No  A  Total change of course  No  No  A  No  A  No  A  No  A  No  A  Twist occurs  A  Cascade occurs  No  No  A  Total change of course  No  No  No  No  A  No  No  A  No  Total change of course  No  No  No  No  No  No  No  No  No  N	Collapse on the opposite side occurs	No	Α	No	Α
With 75% collapse and accelerator  Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45°  Re-inflation behaviour  Spontaneous re-inflation  A Spontaneous re-inflation  A Spontaneous re-inflation  A Spontaneous re-inflation  A Less than 360°  A Less than 360°  A Less than 360°  A Collapse on the opposite side occurs  No  No  A No  A No  A No  A Spontaneous re-inflation  A Less than 360°  A Less than 360°  A No  15. Directional control with a maintained asymmetric collapse  Able to keep course  A Yes  A More than 50 % of the symmetric control travel  A More than 50 % of the symmetric control travel  16. Trim speed spin tendency  A	Twist occurs	No	Α	No	Α
Change of course until re-inflation / Maximum dive forward or roll angle 15° to 45°    Re-inflation behaviour	Cascade occurs	No	Α	No	Α
roll angle 15° to 45° to 45°  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 No A  Twist occurs No A No A No A  Cascade occurs No A No A No A  15. Directional control with a maintained asymmetric collapse  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  16. Trim speed spin tendency A	With 75% collapse and accelerator				
Total change of course  Less than 360° A Less than 360° A Collapse on the opposite side occurs  No A No A No A No A Cascade occurs  No A No			В		В
Collapse on the opposite side occurs  No A No A No A No A Cascade occurs No A No A No A No A Cascade occurs No A No A No A No A No A  Thist occurs No A No A No A No A No A  Thist occurs A  Thist occurs No A  Thist occurs A  Thist occurs No A No	Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	Α
Twist occurs  No A No A No A No A No A No A  The collapse  A  A No	Total change of course	Less than 360°	Α	Less than 360°	Α
Cascade occurs  No A No	Collapse on the opposite side occurs	No	Α	No	Α
15. Directional control with a maintained asymmetric collapse  Able to keep course  Able to keep course  Able to keep course  Able to keep course  Yes  A Yes  A Yes  A Yes  A Yes  A More than 50 % of the symmetric control travel  16. Trim speed spin tendency  A	Twist occurs	No	Α	No	Α
Collapse  Able to keep course  A Yes  A Yes  A 180° turn away from the collapsed side possible in 10 s  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 More than 50 % of the symmetric control travel	Cascade occurs	No	Α	No	Α
180° turn away from the collapsed side possible in 10 s  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  A  A  A  A  A  A  A  A  A  A  A  B  A  A		Α			
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  16. Trim speed spin tendency  A	Able to keep course	Yes	Α	Yes	Α
symmetric control travel control travel  16. Trim speed spin tendency  A	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		Α		Α
Spin occurs No A No A	16. Trim speed spin tendency	A			
	Spin occurs	No	Α	No	Α

17. Low speed spin tendency	Α			
Spin occurs	No	Α	No	Α
18. Recovery from a developed spin	A			
Spin rotation angle after release	Stops spinning in less than 90°	Α	Stops spinning in less than 90°	Α
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	В			
Entry procedure	Dedicated controls	Α	Dedicated controls	Α
Behaviour during big ears	Stable flight	Α	Stable flight	Α
Recovery	Recovery through pilot action in less than a further 3 s	В	Spontaneous in 3 s to 5 s	В
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
21. Big ears in accelerated flight	В			
Entry procedure	Dedicated controls	Α	Dedicated controls	Α
Behaviour during big ears	Stable flight	Α	Stable flight	Α
Recovery	Recovery through pilot action in less than a further 3 s	В	Recovery through pilot action in less than a further 3 s	В
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. Behaviour exiting a steep spiral	A			
Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	Α
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	Α	Less than 720°, spontaneous recovery	Α
Sink rate when evaluating spiral stability [m/s]	19		20	
23. Alternative means of directional control	Α			
180° turn achievable in 20 s	Yes	Α	Yes	Α
Stall or spin occurs	No	Α	No	Α
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				