## AIR TURQUOISE SA | PARA-TEST.COM

Route du Pré-au-Comte 8 A CH-1844 Villeneuve A +41 (0)21 965 65 65

Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes

France



## Flight test report: EN 926-2:2013 & LTF 91/09

Manufacturer DLCO - Little Cloud Certification number PG\_1188.2017
Address Le Villaret Date of flight test 09. 05. 2017

05120 St Martin de Queyrières

Glider model Gyps 22 Classification D
Serial number GYPS 22 001 Representative None
Trimmer no Place of test Villeneuve

Folding lines used yes

Test pilotDupont PhilippeThurnheer ClaudeHarnessSupair - Access SNiviuk - Hamak M

Harness to risers distance (cm) 43 44

Distance between risers (cm) 40 44

Total weight in flight (kg) 70 90

1. Inflation/Take-off	С			
Rising behaviour	Overshoots, shall be slowed down to avoid a front collapse	С	Overshoots, shall be slowed down to avoid a front collapse	С
Special take off technique required	No	Α	No	Α
2. Landing	A			
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	Less than 25 km/h	Α	25 km/h to 30 km/h	В
4. Control movement	С			
Max. weight in flight up to 80 kg				
Symmetric control pressure / travel	Increasing / 40 cm to 55 cm	С	not available	0
Max. weight in flight 80 kg to 100 kg				
Symmetric control pressure / travel	not available	0	Increasing / 45 cm to 60 cm	С
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°	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	A			
Oscillations	Reducing	Α	Reducing	Α
8. Stability in gentle spirals	A		-	
Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	Α
9. Behaviour exiting a fully developed spiral dive	D			
Initial response of glider (first 180°)	No immediate reaction	В	No immediate reaction	В
Tendency to return to straight flight	Turn remains constant (g force constant, rate of turn constant)	D	Turn remains constant (g force constant, rate of turn constant)	D

Time and to receive named flight	VACALA SILAA SIATA	_	NAVIALE INC. TO A COLUMN	_
Turn angle to recover normal flight	With pilot action  D	D	With pilot action	D
10. Symmetric front collapse	Ь			
Approximately 30 % chord				
Entry	Rocking back less than 45°	Α	Rocking back less than 45°	Α
Recovery	Spontaneous in less than 3 s	Α	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 0° to 30° Keeping course	Α
Cascade occurs	No	Α	No	Α
Folding lines used	Yes		No	
At least 50% chord				
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 0° to 30° / Keeping course	Α
Cascade occurs	No	Α	No	Α
Folding lines used	Yes		No	
With accelerator				
Entry	Rocking back less than 45°	Α	Rocking back less than 45°	Α
Recovery	Recovery through pilot action in less than a further 3 s	D	Spontaneous in 3 s to 5 s	В
Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Entering a turn of less than 90°	Α	Dive forward 0° to 30° / Keeping course	Α
Cascade occurs	No	Α	No	Α
Folding lines used	Yes		No	
11. Exiting deep stall (parachutal stall)	A			
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	С			
Recovery	Spontaneous in 3 s to 5 s	С	Spontaneous in less than 3 s	Α
Cascade occurs	No	Α	No	Α
13. Recovery from a developed full stall	A			
Dive forward angle on exit	Dive forward 0° to 30°	Α	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	D			
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°	Α	Less than 90° / Dive or roll angle 15° to 45°	Α
Re-inflation behaviour	Spontaneous re-inflation	Α	Inflates in less than 3 s from start of pilot action	С
Total change of course	Less than 360°	Α	Less than 360°	Α
Collapse on the opposite side occurs	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
Folding lines used	Yes		No	
Large asymmetric collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle 15° to 45°	Α	$90^{\circ}$ to $180^{\circ}$ / Dive or roll angle $45^{\circ}$ to $60^{\circ}$	С

Re-inflation behaviour	Inflates in 3 s to 5 s from start of pilot action	D	Spontaneous re-inflation	Α
Total change of course	Less than 360°	Α	Less than 360°	Α
Collapse on the opposite side occurs	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
Folding lines used	Yes		No	
-				
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°	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 (or only a small number of collapsed cells with a spontaneous reinflation)	Α	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α
Twist occurs	No	Α	No	Α
Cascade occurs	No	Α	No	Α
Folding lines used	Yes		No	
Large 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°	Α	$90^{\circ}$ to $180^{\circ}$ / Dive or roll angle $45^{\circ}$ to $60^{\circ}$	С
Re-inflation behaviour	Inflates in 3 s to 5 s from start of pilot action	D	Spontaneous re-inflation	Α
Total change of course	Less than 360°	Α	Less than 360°	Α
Collapse on the opposite side occurs	No (or only a small number of collapsed cells with a spontaneous reinflation)	Α	Yes, no turn reversal	С
	oponianous rommanom,			
Twist occurs	No	Δ	No	Δ
Twist occurs	No No	Α Δ	No No	Α Δ
Cascade occurs	No	A A	No	A A
Cascade occurs Folding lines used	No Yes			
Cascade occurs	No		No	
Cascade occurs Folding lines used 15. Directional control with a maintained asymmetric	No Yes		No	
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse	No Yes C	A	No No	A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course  180° turn away from the collapsed side possible in 10 s	No Yes C Yes	A	No No Yes	A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course	No Yes C Yes	A	No No Yes Yes	A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course  180° turn away from the collapsed side possible in 10 s	No Yes C Yes Yes More than 50 % of the	A	No No Yes Yes 25 % to 50 % of the symmetric	A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin	No Yes C Yes Yes More than 50 % of the symmetric control travel	A	No No Yes Yes 25 % to 50 % of the symmetric	A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency	No Yes C Yes Yes More than 50 % of the symmetric control travel A	A A A	No No Yes Yes 25 % to 50 % of the symmetric control travel	A A A C
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs	No Yes C Yes Yes More than 50 % of the symmetric control travel A No	A A A	No No Yes Yes 25 % to 50 % of the symmetric control travel	A A A C
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs  17. Low speed spin tendency	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A	A A A	Yes Yes 25 % to 50 % of the symmetric control travel	A A C
Cascade occurs  Folding lines used  15. Directional control with a maintained asymmetric collapse  Able to keep course  180° turn away from the collapsed side possible in 10 s  Amount of control range between turn and stall or spin  16. Trim speed spin tendency  Spin occurs  17. Low speed spin tendency  Spin occurs	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A No	A A A	Yes Yes 25 % to 50 % of the symmetric control travel	A A C
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs 17. Low speed spin tendency Spin occurs 18. Recovery from a developed spin	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A No B	A A A A A	No No Yes Yes 25 % to 50 % of the symmetric control travel No No	A A C
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs  17. Low speed spin tendency Spin occurs  18. Recovery from a developed spin Spin rotation angle after release	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A No B Stops spinning in less than 90°	A A A A A	No No Yes Yes 25 % to 50 % of the symmetric control travel No No Stops spinning in 90° to 180°	A A C A A B
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs  17. Low speed spin tendency Spin occurs  18. Recovery from a developed spin Spin rotation angle after release Cascade occurs  19. B-line stall	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A No B Stops spinning in less than 90° No A	A A A A A A	No No Yes Yes 25 % to 50 % of the symmetric control travel No No Stops spinning in 90° to 180° No	A A C A A A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs 17. Low speed spin tendency Spin occurs 18. Recovery from a developed spin Spin rotation angle after release Cascade occurs  19. B-line stall Change of course before release	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A No B Stops spinning in less than 90° No A Changing course less than 45°	A A A A A A	No  Yes  Yes  25 % to 50 % of the symmetric control travel  No  No  Stops spinning in 90° to 180°  No  Changing course less than 45°	A A A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs  17. Low speed spin tendency Spin occurs  18. Recovery from a developed spin Spin rotation angle after release Cascade occurs  19. B-line stall	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A No B Stops spinning in less than 90° No A	A A A A A A	No No Yes Yes 25 % to 50 % of the symmetric control travel No No Stops spinning in 90° to 180° No	A A C A A A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs 17. Low speed spin tendency Spin occurs 18. Recovery from a developed spin Spin rotation angle after release Cascade occurs  19. B-line stall Change of course before release	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A No B Stops spinning in less than 90° No A Changing course less than 45° Remains stable with straight	A A A A A A	No  Yes  Yes  25 % to 50 % of the symmetric control travel  No  No  Stops spinning in 90° to 180°  No  Changing course less than 45°	A A A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs 17. Low speed spin tendency Spin occurs 18. Recovery from a developed spin Spin rotation angle after release Cascade occurs 19. B-line stall Change of course before release Behaviour before release	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A No B Stops spinning in less than 90° No A Changing course less than 45° Remains stable with straight span	A A A A A A A	No  Yes Yes 25 % to 50 % of the symmetric control travel  No  No  Stops spinning in 90° to 180° No  Changing course less than 45° Remains stable with straight span	A A A A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs 17. Low speed spin tendency Spin occurs 18. Recovery from a developed spin Spin rotation angle after release Cascade occurs 19. B-line stall Change of course before release Behaviour before release Recovery	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A No B Stops spinning in less than 90° No A Changing course less than 45° Remains stable with straight span Spontaneous in less than 3 s	A A A A A A A	No  Yes Yes 25 % to 50 % of the symmetric control travel  No  No  Stops spinning in 90° to 180° No  Changing course less than 45° Remains stable with straight span  Spontaneous in less than 3 s	A A A A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs  17. Low speed spin tendency Spin occurs  18. Recovery from a developed spin Spin rotation angle after release Cascade occurs  19. B-line stall Change of course before release Behaviour before release  Recovery Dive forward angle on exit	No Yes C Yes Yes Yes More than 50 % of the symmetric control travel A No A No B Stops spinning in less than 90° No A Changing course less than 45° Remains stable with straight span Spontaneous in less than 3 s Dive forward 0° to 30°	A A A A A A A A	No  Yes Yes 25 % to 50 % of the symmetric control travel  No  No  Stops spinning in 90° to 180° No  Changing course less than 45° Remains stable with straight span  Spontaneous in less than 3 s Dive forward 0° to 30°	A A A A A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs 17. Low speed spin tendency Spin occurs 18. Recovery from a developed spin Spin rotation angle after release Cascade occurs 19. B-line stall Change of course before release Behaviour before release Recovery Dive forward angle on exit Cascade occurs	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A No B Stops spinning in less than 90° No A Changing course less than 45° Remains stable with straight span Spontaneous in less than 3 s Dive forward 0° to 30° No	A A A A A A A A	No  Yes Yes 25 % to 50 % of the symmetric control travel  No  No  Stops spinning in 90° to 180° No  Changing course less than 45° Remains stable with straight span  Spontaneous in less than 3 s Dive forward 0° to 30°	A A A A A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs 17. Low speed spin tendency Spin occurs 18. Recovery from a developed spin Spin rotation angle after release Cascade occurs 19. B-line stall Change of course before release Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears Entry procedure	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A No B Stops spinning in less than 90° No A Changing course less than 45° Remains stable with straight span Spontaneous in less than 3 s Dive forward 0° to 30° No A Dedicated controls	A A A A A A A A A A A A A A A A A A A	No No Yes Yes 25 % to 50 % of the symmetric control travel No No Stops spinning in 90° to 180° No Changing course less than 45° Remains stable with straight span Spontaneous in less than 3 s Dive forward 0° to 30° No Dedicated controls	A A A A A A A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs  17. Low speed spin tendency Spin occurs  18. Recovery from a developed spin Spin rotation angle after release Cascade occurs  19. B-line stall Change of course before release Behaviour before release  Recovery Dive forward angle on exit Cascade occurs  20. Big ears Entry procedure Behaviour during big ears	No Yes C Yes Yes Yes More than 50 % of the symmetric control travel A No A No B Stops spinning in less than 90° No A Changing course less than 45° Remains stable with straight span Spontaneous in less than 3 s Dive forward 0° to 30° No A Dedicated controls Stable flight	A A A A A A A A A A A A A A A A A A A	No No Yes Yes 25 % to 50 % of the symmetric control travel No No Stops spinning in 90° to 180° No Changing course less than 45° Remains stable with straight span Spontaneous in less than 3 s Dive forward 0° to 30° No Dedicated controls Stable flight	A A A A A A A A A A A A A A A A A A A
Cascade occurs Folding lines used  15. Directional control with a maintained asymmetric collapse Able to keep course 180° turn away from the collapsed side possible in 10 s Amount of control range between turn and stall or spin  16. Trim speed spin tendency Spin occurs 17. Low speed spin tendency Spin occurs 18. Recovery from a developed spin Spin rotation angle after release Cascade occurs 19. B-line stall Change of course before release Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears Entry procedure	No Yes C Yes Yes More than 50 % of the symmetric control travel A No A No B Stops spinning in less than 90° No A Changing course less than 45° Remains stable with straight span Spontaneous in less than 3 s Dive forward 0° to 30° No A Dedicated controls	A A A A A A A A A A A A A A A A A A A	No No Yes Yes 25 % to 50 % of the symmetric control travel No No Stops spinning in 90° to 180° No Changing course less than 45° Remains stable with straight span Spontaneous in less than 3 s Dive forward 0° to 30° No Dedicated controls	A A A A A A A A A

21. Big ears in accelerated flight	С			
Entry procedure	Dedicated controls	Α	Dedicated controls	Α
Behaviour during big ears	Stable flight	Α	Unstable flight	С
Recovery	Spontaneous in less than 3 s	Α	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	Unstable flight	С
22. Alternative means of directional control	A			
180° turn achievable in 20 s	Yes	Α	Yes	Α
Stall or spin occurs	No	Α	No	Α
23. 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

24. Comments of test pilot

Comments