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Test laboratory for paragliders, paraglider harnesses
and paraglider reserve parachutes

paragliding by air turquoise

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

Manufacturer	**Flow Paragliders**	Certification number	PG_1243.2017
Address	1/24 Clyde Road NSW 2099 Dee Why Australia	Date of flight test	10. 10. 2017
Glider model	**XCRacer ML**	**Classification**	**D**
Serial number	XCR-1705007	Representative	None
Trimmer	no	Place of test	Villeneuve
Folding lines used	yes		

Test pilot	Thurnheer Claude	Zoller Alain
Harness	Niviuk - Hamak M	Gin Gliders - Gingo 2 L
Harness to risers distance (cm)	44	43
Distance between risers (cm)	44	48
Total weight in flight (kg)	95	115

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	**D**			
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 / 45 cm to 60 cm	C	not available	0
Max. weight in flight greater than 100 kg				
Symmetric control pressure / travel	not available	0	Increasing / 35 cm to 50 cm	D
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 exiting a fully developed spiral dive	**D**			
Initial response of glider (first 180°)	No immediate reaction	B	No immediate reaction	B
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
Turn angle to recover normal flight	With pilot action	D	With pilot action	D

10. Symmetric front collapse	**D**			
Approximately 30 % chord				
Entry	Rocking back less than 45°	A	Rocking back less than 45°	A
Recovery	Recovery through pilot action in less than a further 3 s	D	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° Keeping course	A
Cascade occurs	No	A	No	A
Folding lines used	Yes		No	
At least 50% chord				
Entry	Rocking back less than 45°	A	Rocking back less than 45°	A
Recovery	Spontaneous in less than 3 s	A	Spontaneous in 3 s to 5 s	B
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
Folding lines used	No		Yes	
With accelerator				
Entry	Rocking back less than 45°	A	Rocking back greater than 45°	C
Recovery	Spontaneous in less than 3 s	A	Spontaneous in 3 s to 5 s	B
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
Folding lines used	Yes		Yes	
11. Exiting deep stall (parachutal stall)	**A**			
Deep stall achieved	No	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**			
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°	A	Less than 90° / Dive or roll angle 0° to 15°	A
Re-inflation behaviour	Spontaneous re-inflation	A	Inflates in less than 3 s from start of pilot action	C
Total change of course	Less than 360°	A	Less than 360°	A
Collapse on the opposite side occurs	No (or only a small number of collapsed cells with a spontaneous reinflation)	A	No (or only a small number of collapsed cells with a spontaneous reinflation)	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
Folding lines used	Yes		No	
Large asymmetric collapse				
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	Inflates in less than 3 s from start of pilot action	C	Spontaneous re-inflation	A

Total change of course	Less than 360°	A	Less than 360°	A
Collapse on the opposite side occurs	No (or only a small number of collapsed cells with a spontaneous reinflation)	A	No (or only a small number of collapsed cells with a spontaneous reinflation)	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
Folding lines used	Yes		Yes	
Small asymmetric collapse with fully activated accelerator				
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 0° to 15°	A
Re-inflation behaviour	Inflates in less than 3 s from start of pilot action	C	Inflates in less than 3 s from start of pilot action	C
Total change of course	Less than 360°	A	Less than 360°	A
Collapse on the opposite side occurs	No (or only a small number of collapsed cells with a spontaneous reinflation)	A	No (or only a small number of collapsed cells with a spontaneous reinflation)	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
Folding lines used	Yes		Yes	
Large asymmetric collapse with fully activated accelerator				
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 15° to 45°	B
Re-inflation behaviour	Inflates in less than 3 s from start of pilot action	C	Inflates in less than 3 s from start of pilot action	C
Total change of course	Less than 360°	A	Less than 360°	A
Collapse on the opposite side occurs	No (or only a small number of collapsed cells with a spontaneous reinflation)	A	No (or only a small number of collapsed cells with a spontaneous reinflation)	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A
Folding lines used	Yes		Yes	
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	**D**			
Spin rotation angle after release	Stops spinning in 180° to 360°	D	Stops spinning in 180° to 360°	D
Cascade occurs	No	A	No	A
19. B-line stall	**0**			
Change of course before release	not available	0	not available	0
Behaviour before release	not available	0	not available	0
Recovery	not available	0	not available	0
Dive forward angle on exit	not available	0	not available	0
Cascade occurs	not available	0	not available	0
20. Big ears	**A**			
Entry procedure	Standard technique	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	**A**			
Entry procedure	Standard technique	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
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	A	Stable flight	A
22. Alternative means of directional control	**A**			
180° turn achievable in 20 s	Yes	A	Yes	A
Stall or spin occurs	No	A	No	A
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	Big ears with B3		By line stall not required by the User's Manual	