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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 & NfL 2-565-20

Manufacturer	**Skywalk GmbH & Co. KG**	Certification number	PG_1883.2021
Address	Windeckstr. 4 83250 Marquartstein Germany	Flight test	15.11.2019
Glider model	**Spirit 75+**	**Classification**	**C**
Serial number	SX20 S 001	Representative	None
Trimmer	no	Place of test	Villeneuve
Folding lines used	no		

Test pilot	Light pilot under Air Turquoise supervision	Claude Thurnheer
Harness	Flugsau - XX-Lite	Advance - Success 4 M
Harness to risers distance (cm)	40	44
Distance between risers (cm)	40	44
Total weight in flight (kg)	50	95

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	**C**				
Max. weight in flight up to 80 kg				
Symmetric control pressure / travel	Increasing / greater than 55 cm	A	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	C
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°	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	**A**				
Initial response of glider (first 180°)	Immediate reduction of rate of turn	A	Immediate reduction of rate of turn	A
Tendency to return to straight flight	Spontaneous exit (g force decreasing, rate of turn decreasing)	A	Spontaneous exit (g force decreasing, rate of turn decreasing)	A
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	A	Less than 720°, spontaneous recovery	A
10. Symmetric front collapse	**B**				
Approximately 30 % chord				
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° Entering a turn of less than 90°	A	Dive forward 0° to 30° Keeping course	A
Cascade occurs	Not available	0	No	A
Folding lines used	No	A	No	A
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 less than 3 s	A
Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Entering a turn of less than 90°	A	Dive forward 0° to 30° / Entering a turn of less than 90°	A
Cascade occurs	No	A	No	A
Folding lines used	No	A	No	A
With accelerator				
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° / Entering a turn of less than 90°	A	Dive forward 30° to 60° / Entering a turn of less than 90°	B
Cascade occurs	No	A	No	A
Folding lines used	No	A	No	A
11. Exiting deep stall (parachutal stall)	**B**			
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 30° to 60°	B	Dive forward 30° to 60°	B
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 60° to 90°	C	Dive forward 60° to 90°	C
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	**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 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 (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	No	A	No	A
Large asymmetric collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 0° to 15°	A	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 (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	No	A	No	A
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°	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 (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	No	A	No	A
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 45° to 60°	C	90° to 180° / Dive or roll angle 45° to 60°	C
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 (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	No	A	No	A
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	Changing course less than 45°	A
Behaviour before release	Remains stable with straight span	A	Remains stable with straight span	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 30° to 60°	A
Cascade occurs	No	A	No	A
20. Big ears	**A**			
Entry procedure	Standard technique	A	Standard technique	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	Standard technique	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