## AIR TURQUOISE SA | PARA-TEST.COM

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

Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



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

0						
Manufacturer	Advance Thun AG	Certification number	F	PG_1690.2020		
Address Uttigenstrasse 87		Flight test	3	0.10.2020		
	3600 Thun Switzerland					
Glider model	Pi3 21	Classification	ļ	N Contraction of the second seco		
Serial number 8	35013	Representative	Ν	/lichi Maurer		
Trimmer r	าด	Place of test	\	/illeneuve		
Folding lines used r	סו					
Test pilot		Magali Asseraf	C	Claude Thurnheer		
Harness		Supair - Altiplume S	A	Advance - Success 4 M		
Harness to risers dist	ance (cm)	44	4	4		
Distance between rise		40		44		
		60		5		
Total weight in flight (	Kg)	00	c	Co		
1. Inflation/Take-off		Α				
Rising behaviour		Smooth, easy and constant rising	А	Smooth, easy and constant rising	A	
Special take off technique rec	quired	No	А	No	Α	
2. Landing		Α				
Special landing technique rec	quired	No	А	No	A	
3. Speed in straight flight		Α				
Trim speed more than 30 km		Yes	Α	Yes	ł	
Speed range using the controls larger than 10 km/h		Yes	Α	Yes	F	
Minimum speed		Less than 25 km/h	A	Less than 25 km/h	A	
4. Control movement		A				
Max. weight in flight up to 8						
Symmetric control pressure / travel		Increasing / greater than 55 cm	A	not available	C	
Max. weight in flight 80 kg to 100 kg			~		,	
Symmetric control pressure /		not available	0	Increasing / greater than 60 cm	A	
Max. weight in flight greate	-	not available	0	not ovcilable	~	
Symmetric control pressure / 5. Pitch stability exiting acc		A	0	not available	C	
Dive forward angle on exit		A Dive forward less than 30°	А	Dive forward less than 30°	A	
Collapse occurs				No		
	controls during accelerated	No A	A	INU	ł	
Collapse occurs		No	А	No	,	
7. Roll stability and dampin	a	A	Α		,	
Oscillations	.9	Reducing	А	Reducing	ļ	
8. Stability in gentle spirals		A				
Tendency to return to straigh		Spontaneous exit	А	Spontaneous exit	A	
9. Behaviour exiting a fully		A				
Initial response of glider (first		Immediate reduction of rate of turn	А	Immediate reduction of rate of turn	F	
Tendency to return to straigh	·	Spontaneous exit (g force decreasing)	А	Spontaneous exit (g force decreasing)	ŀ	
Turn angle to recover normal	flight	Less than 720°, spontaneous recovery	A		/	
10. Symmetric front collaps	Se	A				
Approximately 30 % chord						
Entry		Rocking back less than 45°	А	Rocking back less than $45^{\circ}$	ŀ	
Recovery		Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	A	

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Cascade occurs (other than collapses)NoANoRocking backLess than 45°ALess than 45°Line tensionMost lines tightAMost lines tight14. Asymmetric collapseASmall asymmetric collapseAChange of course until re-inflation / Maximum dive forward or roll angle 0° to 15°Less than 90° / Dive or roll angle 0° to 15°AChange of course until re-inflation / Maximum dive forward or roll angle 0° to 15°Spontaneous re-inflationALess than 90° / Dive or roll angle 0° to 15°Re-inflation behaviourSpontaneous re-inflationALess than 90° / Dive or roll angle 0° to 15°ALess than 90° / Dive or roll angle 0° to 15°Re-inflation behaviourSpontaneous re-inflationALess than 360°ALess than 360°Total change of courseLess than 360°ALess than 360°ALess than 360°Collapse on the opposite side occursNo (or only a small number of collapsed cells with a spontaneous reinflation)ANo (or only a small number of collapsed cells with a spontaneous reinflation)Twist occursNoANoNoANoChange of course until re-inflation / Maximum dive forward or roll angle 15° to 45°ASpontaneous re-inflationANoTwist occursNoLess than 90° / Dive or roll angle 15° to 45°ALess than 90° / Dive or roll angle 15° to 45°ALess than 360°Change of courseLess than 360°ALess than 360°A<	on exit Dive forward No collapse	0° to 30° A Dive forward 0° to 30° A No collapse	A A
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i orang mes used NO NO	osite side occurs No (or only collapsed correinflation) No		А
	osite side occurs No (or only collapsed correinflation) No No No		
Small asymmetric collapse with fully activated accelerator	osite side occurs No (or only collapsed correinflation) No No No		
Change of course until re-inflation / Maximum dive forward or roll angleLess than 90° / Dive or roll angleALess than 90° / Dive or roll angle15° to 45°	osite side occurs No (or only collapsed correinflation) No No No		
	osite side occurs No (or only collapsed careinflation) No No No No Collapse with fully activated accelerator ntil re-inflation / Maximum dive forward or Less than 9	No $^{\circ}$ / Dive or roll angle A Less than 90° / Dive or roll angle	А
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Total change of courseLess than 360°ALess than 360°	osite side occurs No (or only icollapsed careinflation) No No No Collapse with fully activated accelerator Intil re-inflation / Maximum dive forward or Less than 9 0° to 15°	No ° / Dive or roll angle A Less than 90° / Dive or roll angle 15° to 45° s re-inflation A Spontaneous re-inflation	A 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	А	No	А
Cascade occurs	No	А	No	А
Folding lines used	No		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 $15^\circ$ to $45^\circ$	A	Less than 90° / Dive or roll angle 15° to 45°	A
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
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	А	No	А
Cascade occurs	No	А	No	А
Folding lines used	No		No	
15. Directional control with a maintained asymmetric collapse	Α			
Able to keep course	Yes	А	Yes	А
180° turn away from the collapsed side possible in 10 s	Yes	А	Yes	А
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	Α			
Spin occurs	No	А	No	А
17. Low speed spin tendency	Α			
Spin occurs	No	А	No	А
18. Recovery from a developed spin	Α			
Spin rotation angle after release	Stops spinning in less than $90^\circ$	А	Stops spinning in less than 90°	А
Cascade occurs	No	А	No	А
19. B-line stall	Α			
Change of course before release	Changing course less than 45°	А	Changing course less than 45°	А
Behaviour before release	Remains stable with straight span	А	Remains stable with straight span	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Cascade occurs	No	А	No	А
20. Big ears	Α			
Entry procedure	Dedicated controls	А	Dedicated controls	А
Behaviour during big ears	Stable flight	А	Stable flight	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
21. Big ears in accelerated flight	Α			
Entry procedure	Dedicated controls	А	Dedicated controls	А
Behaviour during big ears	Stable flight	А	Stable flight	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	A	Stable flight	A
22. Alternative means of directional control	Α			
180° turn achievable in 20 s	Yes	А	Yes	А
Stall or spin occurs	No	А	No	А
23. Any other flight procedure and/or configuration described in the user's manual	0			
	not available	0	not available	0
Procedure works as described	not available			
Procedure works as described Procedure suitable for novice pilots	not available	0	not available	0

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## Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Manufacturer Advance Thun AG		Certification number	F	PG_1690.2020	
Address Uttigenstrasse 87		Flight test		0.10.2020	
	3600 Thun				
	Switzerland				
Glider model	Pi3 21	Classification	E	3	
Serial number	85013	Representative	Ν	lone	
Trimmer	no	Place of test	V	/illeneuve	
Folding lines used	no				
Test pilot		Magali Asseraf	Α	lain Zoller	
Harness		Supair - Altiplume S	Δ	dvance - Success 4 L	
	stance (cm)	44		44	
Harness to risers dis					
Distance between ris		40		46	
Total weight in flight	: (kg)	60	1	100	
1. Inflation/Take-off		Α		_	
Rising behaviour		Smooth, easy and constant rising	A	Smooth, easy and constant rising	A
Special take off technique r	equired	No	А	No	А
2. Landing		Α			
Special landing technique r	equired	No	Α	No	A
3. Speed in straight flight		B		~	
Trim speed more than 30 km		Yes	A	Yes	A
Speed range using the cont	trois larger than 10 km/n	Yes	A	Yes	A
Minimum speed		Less than 25 km/h	A	25 km/h to 30 km/h	В
4. Control movement	20 ka	Α			
Max. weight in flight up to 80 kg		Increasing / greater than 55 cm	А	not available	0
Symmetric control pressure / travel Max. weight in flight 80 kg to 100 kg		increasing / greater than 55 cm	~		0
Symmetric control pressure	-	not available	0	Increasing / greater than 60 cm	А
Max. weight in flight great			U	moreasing / greater than so shi	~
Symmetric control pressure	-	not available	0	not available	0
5. Pitch stability exiting a		A	U		Ŭ
Dive forward angle on exit	g	Dive forward less than 30°	А	Dive forward less than 30°	А
Collapse occurs		No	A	No	A
	g controls during accelerated	A			
flight	<b>55</b>				
Collapse occurs		No	А	No	А
7. Roll stability and damp	ing	Α			
Oscillations		Reducing	А	Reducing	Α
8. Stability in gentle spira		Α			
Tendency to return to straig	-	Spontaneous exit	Α	Spontaneous exit	Α
9. Behaviour exiting a full		Α			
Initial response of glider (first 180°)		Immediate reduction of rate of turn	A	Immediate reduction of rate of turn	A
Tendency to return to straig	ht 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 norm	al flight	Less than 720°, spontaneous recovery	A	Less than 720°, spontaneous recovery	A
10. Symmetric front colla	ose	Α			
Approximately 30 % chore	d				
Entry		Rocking back less than 45°	А	Rocking back less than $45^{\circ}$	А
Recovery		Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit Change of course		Dive forward 0° to 30° Keeping	А	Dive forward 0° to 30° Keeping	Α
Dive forward angle on exit		course		course	

Folding lines used	No		No	
Folding lines used	No		No	
At least 50% chord	Decking book loss then 45°	•	Decking book loss then 45°	•
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° / Keeping course	A	Dive forward 0° to 30° / Keeping course	A
Cascade occurs	No	А	No	A
Folding lines used	No		No	
With accelerator				
Entry	Rocking back less than 45°	А	Rocking back less than 45°	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Keeping course	A	Dive forward 0° to 30° / Keeping course	А
Cascade occurs	No	А	No	А
Folding lines used	No		No	
11. Exiting deep stall (parachutal stall)	Α			
Deep stall achieved	Yes	А	Yes	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Change of course	Changing course less than 45°	А	Changing course less than 45°	А
Cascade occurs	No	А	No	А
12. High angle of attack recovery	Α			
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Cascade occurs	No	А	No	А
13. Recovery from a developed full stall	В			
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 30° to 60°	В
Collapse	No collapse	А	No collapse	А
Cascade occurs (other than collapses)	No	А	No	А
Rocking back	Less than 45°	А	Less than 45°	А
Line tension	Most lines tight	А	Most lines tight	А
14. Asymmetric collapse	В			
Small asymmetric collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle 0° to 15°	А	Less than 90° / Dive or roll angle 0° to 15°	А
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
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	А	No	А
Cascade occurs	No	А	No	А
Folding lines used	No		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°	А	Less than 90° / Dive or roll angle 15° to 45°	А
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
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	А	No	А
Cascade occurs	No	А	No	А
Folding lines used	No		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 0° to 15°	А	Less than 90° / Dive or roll angle 0° to 15° $$	А
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
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		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°	A	90° to 180° / Dive or roll angle 15° to 45°	В
Re-inflation behaviour	Spontaneous re-inflation	Α	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
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	А	No	А
Cascade occurs	No	А	No	А
Folding lines used	No		No	
15. Directional control with a maintained asymmetric collapse	Α			
Able to keep course	Yes	А	Yes	А
180° turn away from the collapsed side possible in 10 s	Yes	А	Yes	А
Amount of control range between turn and stall or spin	More than 50 % of the symmetric	А	More than 50 % of the symmetric	А
	control travel		control travel	
16. Trim speed spin tendency	Α			
Spin occurs	No	А	No	А
17. Low speed spin tendency	А			
Spin occurs	No	А	No	А
18. Recovery from a developed spin	Α			
Spin rotation angle after release	Stops spinning in less than $90^\circ$	А	Stops spinning in less than 90°	А
Cascade occurs	No	А	No	А
19. B-line stall	А			
Change of course before release	Changing course less than 45°	А	Changing course less than 45°	А
Behaviour before release	Remains stable with straight span	А	Remains stable with straight span	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Cascade occurs	No	А	No	А
20. Big ears	Α			
Entry procedure	Dedicated controls	А	Dedicated controls	А
Behaviour during big ears	Stable flight	А	Stable flight	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
21. Big ears in accelerated flight	Α			
Entry procedure	Dedicated controls	А	Dedicated controls	А
Behaviour during big ears	Stable flight	А	Stable flight	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	А	Stable flight	А
22. Alternative means of directional control	Α			
180° turn achievable in 20 s	Yes	А	Yes	А
Stall or spin occurs	No	А	No	А
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				