Flight test report

Classification D

 Manufacturer
 Gradient s.r.o.

 Address
 Plzeňská 221/130

 150 00 Praha 5 - Motol Czech Republic

 Representive
 none

 Type of glider
 Avax XC2 22

 Trimmer
 not available
 Certification number Date of flight test Place of test PG 118.2008 23/01/2008 Villeneuve



Test Pilot Seiko Fukuoka Harness advance proglece Total weight in flight 70 kg

Claude Thurnheer Sky Axel II M 42cm 85 kg

		Min weight		Max weight	
1. Inflation/Ta					
	Rising behaviour	Smooth, easy and constant rising	А	Overshoots, shall be slowed down to avoid front	С
	Special take off technique required	No	Α	No	Α
2. Landing					
	Special landing technique required	No	А	No	A
3. Speed in st					
	Trim speed more than 30 km/h	Yes	Α	Yes	A
	Speed range using the controls larger than 10 km/h	Yes	A	Yes	A
	Minimum speed	Less than 25 km/h	А	25 km/h to 30 km/h	E
. Control mo					
	Max. weight in flight up to 80 kg Symmetric control pressure/travel	Increasing 40 cm to EE cm	c	not available	
	Max. weight in flight 80 kg to 100 kg	Increasing, 40 cm to 55 cm	C		
	Symmetric control pressure/travel	not available	0	Increasing, 45 cm to 60 cm	(
	Max. weight in flight greater than 100 kg	not available	U	increasing, 45 cm to 60 cm	`
	Symmetric control pressure/travel	not available	0	not available	
Pitch stabil	ity exiting accelerated flight		v		
	Dive forward angle on exit	Dive forward less than 30°	А	Dive forward less than 30°	,
	Collapse occurs	No	A	No	
Pitch stabil	ity operating controls during accelerated flight				
	Collapse occurs	No	А	No	1
. Roll stabilit	y and damping				
	Oscillations	Reducing	А	Reducing	,
Stability in	gentle spirals				
	Tendency to return to straight flight	Spontaneous exit	А	Spontaneous exit	
. Behaviour i	in a steeply banked turn	•			
	Sink rate after two turns	More than 14 m/s	В	More than 14 m/s	E
0. Symmetrie	c front collapse				
	Entry	Rocking back less than 45°	А	Rocking back less than 45°	ł
	Recovery	Spontaneous in less than 3 s	Α	Spontaneous in 3 s to 5 s	E
	Dive forward angle on exit	Dive foward 0°to 30°, Entering a turn less than	А	Dive foward 0°to 30°, Keeping course	1
		90°			
	Cascade occurs	No	Α	No	1
	With accelerator				
	Entry	Rocking back less than 45°	Α	Rocking back less than 45°	1
	Recovery	Spontaneous in 3 s to 5 s	В	Spontaneous in less than 3 s	1
	Dive forward angle on exit	Dive foward 0° to 30°, Entering a turn less than	Α	Dive foward 0°to 30°, Keeping course	A
		90°			
	Cascade occurs	No	Α	No	F
1. Exiting de	ep stall (parachutal stall)				
	Deep stall achieved	Yes	A	Yes	A
	Recovery	Spontaneous in less than 3 s	A	Spontaneous in less than 3 s	ł
	Dive forward angle on exit	Dive forward 0°to 30°	A	Dive forward 0°to 30°	4
	Change of course	Changing course less than 45°	A	Changing course less than 45°	ł
	Cascade occurs	No	А	No	A
2. High angle	e of attack recovery	On an terror in large that the		On on the same in large that the	
	Recovery	Spontaneous in less than 3 s	A	Spontaneous in less than 3 s	F
Decement	Cascade occurs	No	Α	No	ł
5. Recovery	from a developed full stall	Dive featured 0°to 20°		Dive featured 20°te 60°	E
	Dive forward angle on exit	Dive forward 0°to 30°	A A	Dive forward 30°to 60° No collapse	
	Collapse	No collapse No	A	No collapse No	
	Cascade occurs (other than collapse)	INU	А	Less than 45°	ŀ
		Loss than 45°	^	LCSS UIdH 40	
	Rocking back	Less than 45° Most line tight	A A	Most line tight	
1 Asymmetr	Rocking back Line tension	Less than 45° Most line tight	A A	Most line tight	
4. Asymmetr	Rocking back Line tension ic collapse			Most line tight	
4. Asymmetr	Rocking back Line tension tic collapse With 50% collapse-Maximum dive forward or roll angle	Most line tight	A		,
l. Asymmetr	Rocking back Line tension ic collapse <i>With 50% collapse-Maximum dive forward or roll angle</i> Change of course until re-inflation	Most line tight Less than 90°, Dive or roll angle 15° to 45°	A	Less than 90°, Dive or roll angle 15° to 45°	,
I. Asymmetr	Rocking back Line tension ic collapse <i>With 50% collapse-Maximum dive forward or roll angle</i> Change of course until re-inflation Re-inflation behaviour	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation	A A A	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation	,
I. Asymmetr	Rocking back Line tension tic collapse With 50% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360°	A A A A	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360°	
l. Asymmetr	Rocking back Line tension ic collapse With 50% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No	A A A A A A	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No	
I. Asymmetr	Rocking back Line tension ic collapse With 50% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No	A A A A A A A A	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No	
I. Asymmetr	Rocking back Line tension ic collapse With 50% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No	A A A A A A	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No	
I. Asymmetr	Rocking back Line tension tic collapse With 50% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs With 75% collapse-Maximum dive forward or roll angle	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No No	A A A A A A A A	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No No	
I. Asymmetr	Rocking back Line tension ic collapse With 50% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs With 75% collapse-Maximum dive forward or roll angle Change of course until re-inflation	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No No Less than 90°, Dive or roll angle 15° to 45°	A A A A A A A A	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No No 90° to 180°, Dive or roll angle 15° to 45°	
I. Asymmetr	Rocking back Line tension ic collapse With 50% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs With 75% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation	A A A A A A A A	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No 90° to 180°, Dive or roll angle 15° to 45° Spontaneous re-inflation	
4. Asymmetr	Rocking back Line tension ic collapse With 50% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs With 75% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No No Less than 90°, Dive or roll angle 15° to 45°	<pre></pre>	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No 90° to 180°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360°	
4. Asymmetı	Rocking back Line tension tic collapse With 50% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs With 75% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No	A A A A A A A A A A A A A A A A A A A	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No 90° to 180°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No	
4. Asymmeti	Rocking back Line tension ic collapse With 50% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs With 75% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Collapse on the opposite side occurs Twist occurs	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No	A A A A A A A A A A A A A A A A A A A	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No 90° to 180°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No	
4. Asymmeti	Rocking back Line tension ic collapse With 50% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Collapse on the opposite side occurs Twist occurs Cascade occurs With 75% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No	A A A A A A A A A A A A A A A A A A A	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No 90° to 180°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No	
4. Asymmetr	Rocking back Line tension ic collapse With 50% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs With 75% collapse-Maximum dive forward or roll angle Change of course until re-inflation Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Collapse on the opposite side occurs Twist occurs	Most line tight Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No	A A A A A A A A A A A A A A A A A A A	Less than 90°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No No 90° to 180°, Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No	

	Total change of course	Less than 360°	А	Less than 360°	А
	Collapse on the opposite side occurs	No	A	No	A
	Twist occurs	No	Â	No	Â
	Cascade occurs	No	Â	No	Ā
	With 75% collapse and accelerator-Maximum dive forward of		~	140	~
	Change of course until re-inflation	90° to 180°, Dive or roll angle 15° to 45°	в	90° to 180°, Dive or roll angle 15° to 45°	В
	Re-inflation behaviour	Spontaneous re-inflation	A	Spontaneous re-inflation	A
		Less than 360°	A	Less than 360°	A
	Total change of course			No	
	Collapse on the opposite side occurs	No	A		A
	Twist occurs	No	A	No	A
	Cascade occurs	No	A	No	A
15. Direction	al control with a maintained asymmetric collapse				
	Able to keep course	Yes	Α	Yes	A
	180° turn away from the collapsed side possible in 10 s	Yes	А	Yes	Α
	Amount of control range between turn and stall or spin	More than 50 % of the symmetric control travel	А	More than 50 % of the symmetric control travel	A
16. Trim spee	ed spin tendency				
	Spin occurs	No	Α	No	A
17. Low spee	ed spin tendency				
	Spin occurs	Yes	D	Yes	D
18. Recovery	r from a developed spin				
	Spin rotation angle after release	Stops spinning in 90°to 180°	С	Stops spinning in less than 90°	Α
	Cascade occurs	No	Α	No	Α
19. B-line sta	ll .				
	Change of course before release	Change of course less than 45°	Α	Change of course less than 45°	Α
	Behaviour before release	Remains stable with straight span	А	Remains stable with straight span	Α
	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	A	No	A
20. Big ears					
	Entry procedure	Dedicated controls	А	Standard technique	А
	Behaviour during big ears	Stable flight	A	Stable flight	A
	Recovery	Recovery through pilot action in less than a	В	Spontaneous in 3 s to 5 s	В
	Trecovery .	further 3 s	U		5
	Dive ferward analy on avit	Dive forward 0° to 30°	^	Dive featured 0° to 20°	А
21 Big ooro i	Dive forward angle on exit in accelerated flight	Dive forward 0 to 30	A	Dive forward 0° to 30°	A
Z1. Big ears i	5	De disete des stads		Observational to sharing a	
	Entry procedure	Dedicated controls	A	Standard technique	A
	Behaviour during big ears	Stable flight	A	Stable flight	A
	Recovery	Recovery through pilot action in less than a	В	Recovery through pilot action in less than a	В
		further 3 s		further 3 s	
	Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	Α
	Behaviour immediately after releasing the accelerator while	Stable flight	А	Stable flight	Α
	maintaining big ears				
22. Behaviou	r exiting a steep spiral				
	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]	15 m/s		18 m/s	
23. Alternativ	ve means of directional control				
	180° turn achievable in 20 s	Yes	Α	Yes	Α
	Stall or spin occurs	No	А	No	А
24. Any other	r flight procedure and/or configuration described in the us	er's manual			
.,	Procedure works as described	not available	0	not available	0
	Procedure suitable for novice pilots	not available	Ő	not available	0
	Cascade occurs	not available	0	not available	0
Comments o		not available	0		0
Commenta U	Comments	A cravate can occur during big ears		no	
	Commonto	A Gravate can occur during big cars			



Air Turquoise Rue de la Poterlaz 6 Case postale 10 CH- 1844 Villeneuve Switzerland mobile: +41 79 202 52 30 Tel. no: +41 21 965 65 65 fax : +41 219 65 65 66 email: info@airturquoise.ch homepage: www.para-test.com



ISO 9001:2000