## FTR - Flight Test Report Dieser Prüfbericht darf ohne schriftliche Zustimmung der EAPR nicht, auch nich

Manufacturer	independence glidera for real pilots	Type testing No.	EAPR-GS-0802/18	
	Fly Market GmbH & Co.KG Am Schönebach 3 D-87637 Eisenberg	serial number	2k17-Sample-084	
Model	Grasshopper M		Achensee	
Comment	glider was tested with a crossline	Location	Stubaital	



Rev. 2.3 - 26.11.2014 EAPR GmbH - Marktstr. 11 D-87730 Bad Grönenbach - Germany

Date of testing	05.02.2018	Minimum take o 80 kg	•	Maximum take 100 kg	•
Testpilot		Mike Küng		Pascal Purin	
Harness		EAPR-Testequipmen	1	EAPR-schwer	
Pilot's take off weigh	nt	80	kg	100	kg

Classification



Test-criteria	Minimum take off weight	Evaluation	Maximum take off weight	Evaluatio
1. Inflation / take-off - 4.4.1				
Rising behavior	no pilot correction required	А	no pilot correction required	А
Special take off technique required	No	A	No	A
2. Landing - 4.4.2	1	, ,,		, ,,
Special landing technique required	No	A	No	A
3. Speeds in straight flight - 4.4.3	140		110	
Trim speed more than 30km/h	Yes		Yes	Α
,		A		
Speed range using the controls larger than 10km/h	Yes	Α	Yes	Α
Minimum speed	Less than 25 km/h	Α	Less than 25 km/h	Α
4. Control movement - 4.4.4				
Max. weight in flight up to 80kg		-		-
Max. weight in flight 80 to 100kg	Increasing > 60cm	Α	Increasing > 60cm	А
Max. weight in flight greater than 100kg		-		-
5. Pitch stability exiting accelerated flight - 4.4.5				
Dive forward angle on exit	Dive forward less than 30°	l A	Dive forward less than 30°	A
Collapse occurs	No No	A	No No	Ä
6. Pitch stability operating controls during acceleration	ated flight - 4.4.6	,		<u> </u>
Collapse occurs	I No	l A	No	A
7. Roll stability and damping - 4.4.7	110	, , ,	1.0	, , ,
Oscillations	Reducing	A	Reducing	A
	reducing	A	Heddeling	A
8. Stability in gentle spirals - 4.4.8	10		0	
Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	A
9. Behaviour exiting a fully developed spiral dive				
Initial response of glider (first 180°)	Immediate reduction of rate in turn Spontaneous exit	A	Immediate reduction of rate in turn  Spontaneous exit	A
Tendency to return to straight flight Turn angle to recover normal flight	Less than 720°, spontaneous recovery	A	Less than 720°, spontaneous recovery	A
	Less than 720 , spontaneous recovery	A	Less than 720 , spontaneous recovery	А
10. Symmetric front collapse - 4.4.10	T			
Folding lines used	No	A	No	^
Entry	Rocking back less than 45°		Rocking back less than 45°	Α
Recovery		Α	Spontaneous in less than 3 sec	Α
Dive forward angle on exit	0° - 30° Keeping course	А	0° - 30° Keeping course	А
Cascade occurs	No No	Α	No	Α
Entry	Rocking back less than 45°	Α	Rocking back less than 45°	Α
Recovery	Spontaneous in less than 3 sec	Α	Spontaneous in less than 3 sec	Α
Dive forward angle on exit	E Treeping course	Α	0° - 30° Keeping course	Α
Cascade occurs	No No	Α	No	Α
Entry	Rocking back less than 45°	A	Rocking back less than 45°	A
Recovery	Spontaneous in less than 3 sec	Α	Spontaneous in less than 3 sec	А
Dive forward angle on exit	0° - 30° Keeping course	Α	0° - 30° Keeping course	Α
Cascade occurs	No No	А	No	A
11. Exiting deep stall (parachutal stall) - 4.4.11				
Deep stall achieved	Yes		Yes	
Recovery	Spontaneous in less than 3 sec	Α	Spontaneous in less than 3 sec	Α
Dive forward angle on exit	0° - 30°	Α	0° - 30°	Α
Change of course	Changing course less than 45°	Α	Changing course less than 45°	Α
Cascade occurs	No	Α	No	A

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12. High angle of attack recovery - 4.4.12									
Recovery	Spontaneous in less th	han 3 sec		Α	Spontaneous in	less than 3 sec		Α	
Cascade occurs		No			Α	No			Α
13. Recovery from a developed full stall - 4.4.13									
Dive forward angle on exit		0° - 30°			Α	0° - 30°			Α
Collapse		No collapse No			A	No collapse No			A
Cascade occurs (other than collapse) Rocking backward		Less than 45°			A	Less than 45°			A
Line tension		Most lines tight			Α	Most lines tight			Α
14. Asymmetric collapse (trim speed) - 4.4.14									
Folding lines used		No				No	I		
Change of course until re-inflation	esc	< 90° Dive	e or roll angle	0° - 15°	Α	< 90°	Dive or roll angle	0° - 15°	Α
Re-inflation behavior	trim speed, max 50% collapse	Spontaneous re-inflati	on		Α	Spontaneous re	-inflation		Α
Total change of course	trim speed x 50% colla	Less than 360°			А	Less than 360° No No No No			Α
Collapse on the opposite side occurs	trin ax 5	No No		Α	Α				
Twist occurs Cascade occurs	<b>-</b>	No No		A	A				
Change of course until re-inflation			e or roll angle	15° - 45°	A	< 90°	Dive or roll angle	15° - 45°	A
orange or course until te illination	trim speed, max 75% collapse	30	or row ungio	10 40		1 30	Dive of foil dilgie	10 40	
Re-inflation behavior	colla	Spontaneous re-inflati	on		Α	Spontaneous re	-inflation		Α
Total change of course	trim speed < 75% colla	Less than 360°	Less than 360°		Α	Less than 360°			Α
Collapse on the opposite side occurs Twist occurs	nax i	No No		A	No			A	
Cascade occurs	_	No			A	No No			A
				05 1-				0- 1-	
Change of course until re-inflation	esc	< 90° Dive	e or roll angle	0° - 15°	Α	< 90°	Dive or roll angle	0° - 15°	Α
Re-inflation behavior	accelerated, max 50% collapse	Spontaneous re-inflati	on		Α	Spontaneous re	-inflation		Α
Total change of course	elera 0% c	Less than 360°			Α	Less than 360°			Α
Collapse on the opposite side occurs	acc ax 5	No			Α	No			Α
Twist occurs Cascade occurs	Ε	No No			A	No No			A
Change of course until re-inflation			e or roll angle	15° - 45°	A	< 90°	Dive or roll angle	15° - 45°	A
Change of course until re-illiation	esd.	< 90 DIVE	e or roll angle	10 - 40	A	< 90	Dive or roll angle	15 - 45	A
Re-inflation behavior	atec	Spontaneous re-inflati	on		Α	Spontaneous re	-inflation		Α
Total change of course	accelerated, max 75% collapse	Less than 360°		Α	Less than 360°			Α	
Collapse on the opposite side occurs	ac nax ī	No No			A	No No			A
Cascade occurs				A	No			A	
15. Directional control with a maintained asymmetry	metric co	llapse - 4.4.15			•				
Able to keep course straight		Yes			Α	Yes			Α
30° turn away from the collapsed side possible in 10 sec		Yes			Α	Yes			Α
Amount of control range between turn and stall or spin		More than 50% of the symmetric control travel			Α	More than 50% of the symmetric control travel			Α
-	spiri	More than 50 % of the	Symmetric C	ontroi traver		Wore than 30 %	or the symmetric t	control travel	А
16. Trim speed spin tendency - 4.4.16		T.M.				E.N.			
Spin occurs		No			Α	No			А
17. Low speed spin tendency - 4.4.17 Spin occurs		No			ΙΔ	A No			А
18. Recovery from a developed spin - 4.4.18		110				110			
		Stops spinning in less than 90°			Α	Stops spinning in less than 90°			Α
Spin rotation angle after release		· · · ·				No			
Cascade occurs  19. B-line-stall - 4.4.19		No			Α	No			А
Change of course before release		Changing course less	than 45°		A	Changing course	e less than 45°		А
Behaviour before release					Α	Remains stable with straight span			Α
		Remains stable with straight span							
Recovery		Spontaneous in less than 3 sec			Α	Spontaneous in less than 3 sec			Α
Dive forward angle on exit		30° - 60°			A	0° - 30°			A
Cascade occurs  20. Big ears - 4.4.20		No			Α	No			А
		1				I			
Entry procedure		Special device required			Α	Special device required			Α
Behaviour during big ears		Stable flight			Α	Stable flight			Α
Recovery		Spontaneous in less than 3 sec			Α	Spontaneous in less than 3 sec			Α
Dive forward angle on exit		0° - 30°			Α	0° bis 30°			Α
21. Big Ears in accelerated flight - 4.4.21									
Entry procedure		Special device required		Α	Special device required			Α	
Behaviour during big ears		Stable flight		Α	Stable flight			A	
Recovery		Spontaneous in less than 3 sec		Α	Spontaneous in less than 3 sec			Α	
Dive forward angle on exit		0° - 30°			A	0° bis 30°	A		
Behaviour immediately after releasing the accelarator while		Stable flight			A		A		
Behaviour immediately after releasing the accelara-		Stable Hight			A	Stable flight			A
maintaining big ears									
	1.4.22	1		Yes		Yes			Α
maintaining big ears	1.4.22	Yes			Α	Yes			
maintaining big ears  23. Alternative means of directional control - 4	1.4.22	Yes No			A	No			Α
maintaining big ears  23. Alternative means of directional control - 4  180° turn achievable in 20 sec		No	nual - 4.4.2	23					A
maintaining big ears  23. Alternative means of directional control - 4  180° turn achievable in 20 sec  Stall or spin occurs  23. Any other flight procedure and/or configura  Procedure works as descibed		No	nual - 4.4.2	23	A				NA
maintaining big ears  23. Alternative means of directional control - 4  180° turn achievable in 20 sec  Stall or spin occurs  23. Any other flight procedure and/or configure		No	nual - 4.4. <u>2</u>	23	А				
maintaining big ears  23. Alternative means of directional control - 4  180° turn achievable in 20 sec  Stall or spin occurs  23. Any other flight procedure and/or configure Procedure works as descibed Procedure suitable for novice pilots		No	nual - 4.4.2	23	A NA NA				NA NA