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

	mung der EAPR nicht, auch nicht auszugsweise, vervie	lfältigt werden.				
Manufacturer	- Contraction of the contraction	Type testing No.	EAPR-GS-0565/17	X = 1 > 2		
	Hochriesstraße 1 D-83126 Flintsbach	serial number		Messen   Prüfen   Bewerten Rev. 2.3 - 26.11.2014		
Model	Gravis XL	Location	Schruns	EAPR GmbH - Marktstr. 11 D-87730 Bad Grönenbach - Germany		
Comment		Location	Maurach, Achensee			

Date of testing	27.10.2016	Minimum take 100 kg		eight	Maximum take 130 kg	veight	
Testpilot		Pascal Purin		LA	Anselm Rauh		20
Harness		EAPR Equipment			EAPR schwer		dis K
Pilot's take off weigl	nt	100	kg	× 1	128	kg	STATE A

	Classification		В
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Test-criteria		Minimum take off weight	Evaluation	Maximum take off weight	Evaluation
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	А	No	A
2. Landing - 4.4.2					
Special landing technique required		No	А	No	А
3. Speeds in straight flight - 4.4.3		10			
Trim speed more than 30km/h		Yes	А	Yes	А
Speed range using the controls larger than 10km/	h	Yes	A	Yes	A
Minimum speed		Less than 25 km/h	A	Less than 25 km/h	A
4. Control movement - 4.4.4					
Max. weight in flight up to 80kg			-		-
Max. weight in flight 80 to 100kg			-		-
Max. weight in flight greater than 100kg		Increasing >65 cm	А	Increasing >65 cm	А
5. Pitch stability exiting accelerated flight - 4.4	4.5				_
Dive forward angle on exit		Dive forward less than 30°	А	Dive forward less than 30°	А
Collapse occurs		No	A	No	A
6. Pitch stability operating controls during acc	celerated	flight - 4.4.6			
Collapse occurs		No	А	No	А
7. Roll stability and damping - 4.4.7					
Oscillations		Reducing	А	Reducing	А
8. Stability in gentle spirals - 4.4.8		rioddonig		Troducing	
Tendency to return to straight flight		Spontaneous exit	A	Spontaneous exit	A
9. Behaviour exiting a fully developed spiral d			A	Spontaneous exit	A
<b>*</b> <i>;</i>	ive - 4.4.:			No immediate separting	
Initial response of glider (first 180°) Tendency to return to straight flight		No immediate reaction Spontaneous exit	B	No immediate reaction Spontaneous exit	B
Turn angle to recover normal flight		Less than 720°, spontaneous recovery	A	720° to 1080°, spontaneous recovery	B
10. Symmetric front collapse - 4.4.10		Less than 720, spontalleous recovery	~		
		No		No	_
Folding lines used Entry	.0	No Rocking back less than 45°	A	No Rocking back less than 45°	A
	- 30%			•	
Recovery	speed	Spontaneous in less than 3 sec	A	Spontaneous in less than 3 sec	A
Dive forward angle on exit	trim spi	0° - 30° Keeping course	А	0° - 30° Keeping course	A
Cascade occurs		No	A	No	A
Entry	> 50%	Rocking back less than 45°	A	Rocking back less than 45°	A
Recovery		Spontaneous in less than 3 sec	A	Spontaneous in less than 3 sec	A
Dive forward angle on exit	paeds t	0° - 30° Keeping course	А	0° - 30° Keeping course	А
Cascade occurs	tri	No	A	No	A
Entry	%0	Rocking back less than 45°	А	Rocking back less than 45°	A
Recovery	rated > 50%	Spontaneous in less than 3 sec	А	Spontaneous in less than 3 sec	А
Dive forward angle on exit	accelera	0° - 30° Keeping course	А	0° - 30° Entering a turn of less than 90°	A
Cascade occurs	ac	No	A	No	A
11. Exiting deep stall (parachutal stall) - 4.4.1	1				
Deep stall achieved		Yes		Yes	
Recovery		Spontaneous in less than 3 sec	А	Spontaneous in less than 3 sec	А
Dive forward angle on exit		0° - 30°	A	0° - 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 - 4.4.12									
Recovery		Spontaneous in	less than 3 sec		А	Spontaneous in	less than 3 sec		А
Cascade occurs		Spontaneous in less than 3 sec			A	Spontaneous in less than 3 sec			A
13. Recovery from a developed full stall - 4.4.	13	110				110			
Dive forward angle on exit		0° - 30°			А	30° - 60°			В
Collapse Cascade occurs (other than collapse)		No collapse No			A	No collapse No			A
Rocking backward		Less than 45°			A	Less than 45°			A
Line tension		Most lines tight			A	Most lines tight			A
14. Asymmetric collapse (trim speed) - 4.4.14 Folding lines used		No			-	No			
Change of course until re-inflation		< 90°	Dive or roll angle	15° - 45°	А	< 90°	Dive or roll angle	15° - 45°	А
Change of course until re-initation	apse	~ 30	Dive of foir angle	15 - 45		< 30	Dive of foir angle	13 - 45	
Re-inflation behavior	trim speed, max 50% collapse	Spontaneous re	-inflation		A	Spontaneous re	-inflation		A
Total change of course Collapse on the opposite side occurs	rim s  50%	Less than 360°			A	Less than 360° No			A
Twist occurs	max	No         No           No         No           < 90°			A	No			A
Cascade occurs		No	1	1	А	No	1	1	А
Change of course until re-inflation	8e	< 90°	Dive or roll angle	15° - 45°	A	< 90°	Dive or roll angle	15° - 45°	А
Re-inflation behavior	trim speed, max 75% collapse	Spontaneous re	-inflation		А	Spontaneous re	-inflation		А
Total change of course	i speed, 5% colla				А	Less than 360°			А
Collapse on the opposite side occurs	trim ax 75	No			А	No			Α
Twist occurs Cascade occurs	Ê				A	No No			A
						1			
Change of course until re-inflation	es	< 90°	Dive or roll angle	15° - 45°	A	< 90°	Dive or roll angle	15° - 45°	А
Re-inflation behavior	accelerated, max 50% collapse	Spontaneous re	-inflation		А	Spontaneous re	-inflation		А
Total change of course	accelerated x 50% colla	Less than 360°			A	Less than 360°			А
Collapse on the opposite side occurs	acc ax 5(	No	Less than 360° No No 90° - 180° Dive or roll angle 15° - 45°		А	No			
Twist occurs Cascade occurs	Ē				A	No No			A
Change of course until re-inflation			Dive or roll apple	15° - 45°	В	90° - 180°	Dive or roll angle	15° - 45°	В
Change of course until re-initation	d, apse	90 - 180	Dive or roll angle	10 - 40	В	90 - 180	Dive or roll angle	15 - 45	D
Re-inflation behavior	accelerated, max 75% collapse	Spontaneous re	-inflation		A	Spontaneous re	-inflation	A	
Total change of course	cele 75%	Less than 360°			A	Less than 360°			A
Collapse on the opposite side occurs Twist occurs	ac max	No No			A	No			A
Cascade occurs	_	No			A				A
15. Directional control with a maintained asymptotic	metric co								
Able to keep course straight		Yes			A	Yes			A
180° turn away from the collapsed side possible in 10 sec		Yes			A	Yes			A
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			А
16. Trim speed spin tendency - 4.4.16		I				· · · · · · · · · · · · · · · · · · ·			
Spin occurs		No			A	No			A
17. Low speed spin tendency - 4.4.17		-							
Spin occurs		No			А	No			А
18. Recovery from a developed spin - 4.4.18						-			
Spin rotation angle after release		Stops spinning i	in less than 90°		А	Stops spinning i	n less than 90°		А
Cascade occurs		No							
19. B-line-stall - 4.4.19					А	No			A
Change of course before release		1							
-		Changing cours			A	Changing cours			A
Behaviour before release			e less than 45° with straight span			Changing cours	e less than 45° with straight span		
-			with straight span		A	Changing cours Remains stable			A
Behaviour before release Recovery Dive forward angle on exit		Remains stable Spontaneous in 0° - 30°	with straight span		A A	Changing cours Remains stable Spontaneous in 0° - 30°	with straight span		A A
Behaviour before release Recovery Dive forward angle on exit Cascade occurs		Remains stable Spontaneous in	with straight span		A A B	Changing cours Remains stable Spontaneous in	with straight span		A A A
Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.4.20		Remains stable Spontaneous in 0° - 30°	with straight span		A A B A	Changing cours Remains stable Spontaneous in 0° - 30° No	with straight span less than 3 sec		A A A A
Behaviour before release Recovery Dive forward angle on exit Cascade occurs		Remains stable Spontaneous in 0° - 30°	with straight span 3 to 5 sec		A A B A	Changing cours Remains stable Spontaneous in 0° - 30°	with straight span less than 3 sec		A A A A
Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.4.20		Remains stable Spontaneous in 0° - 30° No	with straight span 3 to 5 sec		A A B A A	Changing cours Remains stable Spontaneous in 0° - 30° No	with straight span less than 3 sec		A A A A A
Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.4.20 Entry procedure		Remains stable Spontaneous in 0° - 30° No Standard techni	with straight span 3 to 5 sec que		A A B A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device I Stable flight	with straight span less than 3 sec		A A A A A
Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.4.20 Entry procedure Behaviour during big ears		Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight	with straight span 3 to 5 sec que		A A B A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device I Stable flight	with straight span less than 3 sec required		A A A A A A
Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.4.20 Entry procedure Behaviour during big ears Recovery		Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in	with straight span 3 to 5 sec que		A A B A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device n Stable flight Spontaneous in	with straight span less than 3 sec required		A A A A A A A A
Behaviour before release         Recovery         Dive forward angle on exit         Cascade occurs         20. Big ears - 4.4.20         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit		Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in	with straight span 3 to 5 sec que less than 3 sec		A A B A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device n Stable flight Spontaneous in	with straight span less than 3 sec required less than 3 sec		A A A A A A A A
Behaviour before release         Recovery         Dive forward angle on exit         Cascade occurs         20. Big ears - 4.4.20         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         21. Big Ears in accelerated flight - 4.4.21		Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in 0° - 30°	with straight span 3 to 5 sec que less than 3 sec		A A B A A A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device to Stable flight Spontaneous in 0° bis 30°	with straight span less than 3 sec required less than 3 sec		A A A A A A A A A
Behaviour before release         Recovery         Dive forward angle on exit         Cascade occurs         20. Big ears - 4.4.20         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         21. Big Ears in accelerated flight - 4.4.21         Entry procedure		Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in 0° - 30° Standard techni	with straight span 3 to 5 sec que less than 3 sec que		A A B A A A A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device 1 Stable flight Spontaneous in 0° bis 30° Special device 1 Stable flight	with straight span less than 3 sec required less than 3 sec		A A A A A A A A A A
Behaviour before release         Recovery         Dive forward angle on exit         Cascade occurs         20. Big ears - 4.4.20         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         21. Big Ears in accelerated flight - 4.4.21         Entry procedure         Behaviour during big ears		Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in 0° - 30° Standard techni Stable flight	with straight span 3 to 5 sec que less than 3 sec que		A A B A A A A A A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device 1 Stable flight Spontaneous in 0° bis 30° Special device 1 Stable flight	with straight span less than 3 sec required less than 3 sec required		A A A A A A A A A A A A
Behaviour before release         Recovery         Dive forward angle on exit         Cascade occurs         20. Big ears - 4.4.20         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         21. Big Ears in accelerated flight - 4.4.21         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour immediately after releasing the accelar	ator while	Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in 0° - 30° Standard techni Stable flight Spontaneous in	with straight span 3 to 5 sec que less than 3 sec que		A A B A A A A A A A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device to Stable flight Spontaneous in 0° bis 30° Special device to Stable flight Spontaneous in	with straight span less than 3 sec required less than 3 sec required		A A A A A A A A A A A A
Behaviour before release         Recovery         Dive forward angle on exit         Cascade occurs         20. Big ears - 4.4.20         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         21. Big Ears in accelerated flight - 4.4.21         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour immediately after releasing the accelar maintaining big ears		Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in 0° - 30° Standard techni Stable flight Spontaneous in 0° - 30°	with straight span 3 to 5 sec que less than 3 sec que		A A B A A A A A A A A A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device to Stable flight Spontaneous in 0° bis 30° Special device to Stable flight Spontaneous in Special device to Stable flight	with straight span less than 3 sec required less than 3 sec required		A A A A A A A A A A A A A A
Behaviour before release         Recovery         Dive forward angle on exit         Cascade occurs         20. Big ears - 4.4.20         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         21. Big Ears in accelerated flight - 4.4.21         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour immediately after releasing the accelar maintaining big ears         23. Alternative means of directional control - 4		Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in 0° - 30° Standard techni Stable flight Spontaneous in 0° - 30° Stable flight	with straight span 3 to 5 sec que less than 3 sec que		A A A A A A A A A A A A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device I Stable flight Spontaneous in 0° bis 30° Special device I Stable flight Spontaneous in 0° bis 30° Stable flight	with straight span less than 3 sec required less than 3 sec required		A A A A A A A A A A A A A
Behaviour before release         Recovery         Dive forward angle on exit         Cascade occurs         20. Big ears - 4.4.20         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         21. Big Ears in accelerated flight - 4.4.21         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour immediately after releasing the accelar maintaining big ears         23. Alternative means of directional control - 4         180° turn achievable in 20 sec		Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in 0° - 30° Standard techni Stable flight Spontaneous in 0° - 30° Stable flight Yes	with straight span 3 to 5 sec que less than 3 sec que		A A B A A A A A A A A A A A A A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device I Stable flight Spontaneous in 0° bis 30° Special device I Stable flight Spontaneous in 0° bis 30° Stable flight Yes	with straight span less than 3 sec required less than 3 sec required		A A A A A A A A A A A A A A A
Behaviour before release         Recovery         Dive forward angle on exit         Cascade occurs         20. Big ears - 4.4.20         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         21. Big Ears in accelerated flight - 4.4.21         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour immediately after releasing the accelar: maintaining big ears         23. Alternative means of directional control - 4 180° turn achievable in 20 sec         Stall or spin occurs	1.4.22	Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in 0° - 30° Standard techni Stable flight Spontaneous in 0° - 30° Stable flight Spontaneous in 0° - 30° Stable flight	with straight span 3 to 5 sec que less than 3 sec que less than 3 sec		A A A A A A A A A A A A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device I Stable flight Spontaneous in 0° bis 30° Special device I Stable flight Spontaneous in 0° bis 30° Stable flight	with straight span less than 3 sec required less than 3 sec required		A A A A A A A A A A A A A
Behaviour before release         Recovery         Dive forward angle on exit         Cascade occurs         20. Big ears - 4.4.20         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         21. Big Ears in accelerated flight - 4.4.21         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour immediately after releasing the accelar 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	1.4.22	Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in 0° - 30° Standard techni Stable flight Spontaneous in 0° - 30° Stable flight Spontaneous in 0° - 30° Stable flight	with straight span 3 to 5 sec que less than 3 sec que less than 3 sec		A A B A A A A A A A A A A A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device I Stable flight Spontaneous in 0° bis 30° Special device I Stable flight Spontaneous in 0° bis 30° Stable flight Yes	with straight span less than 3 sec required less than 3 sec required		A A A A A A A A A A A A A A A A A
Behaviour before release         Recovery         Dive forward angle on exit         Cascade occurs         20. Big ears - 4.4.20         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         21. Big Ears in accelerated flight - 4.4.21         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour immediately after releasing the accelar: maintaining big ears         23. Alternative means of directional control - 4 180° turn achievable in 20 sec         Stall or spin occurs	1.4.22	Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in 0° - 30° Standard techni Stable flight Spontaneous in 0° - 30° Stable flight Spontaneous in 0° - 30° Stable flight	with straight span 3 to 5 sec que less than 3 sec que less than 3 sec		A A B A A A A A A A A A A A A A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device I Stable flight Spontaneous in 0° bis 30° Special device I Stable flight Spontaneous in 0° bis 30° Stable flight Yes	with straight span less than 3 sec required less than 3 sec required		A A A A A A A A A A A A A A A
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Behaviour before release         Recovery         Dive forward angle on exit         Cascade occurs         20. Big ears - 4.4.20         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         21. Big Ears in accelerated flight - 4.4.21         Entry procedure         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour during big ears         Recovery         Dive forward angle on exit         Behaviour during 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	1.4.22	Remains stable Spontaneous in 0° - 30° No Standard techni Stable flight Spontaneous in 0° - 30° Standard techni Stable flight Spontaneous in 0° - 30° Stable flight Spontaneous in 0° - 30° Stable flight	with straight span 3 to 5 sec que less than 3 sec que less than 3 sec		A A B A A A A A A A A A A A A A A A A A	Changing cours Remains stable Spontaneous in 0° - 30° No Special device I Stable flight Spontaneous in 0° bis 30° Special device I Stable flight Spontaneous in 0° bis 30° Stable flight Yes	with straight span less than 3 sec required less than 3 sec required		A A A A A A A A A A A A A A A A A A A