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

auszugsweise, vervielfältigt werden.

Manufacturer		Type testing No.	EAPR-GS-0267/14	•
	MAC PARA TECHNOLOGY Telev lznl 2615 CH-756 Roznov pod Radhostem	serial number	3124-4046	
Model	Elan 24	Logotion	Achensee	
		Location	Schruns	



Rev. 2.1 - 10.05.2013 EAPR GmbH - Marktstr. 11 D-87730 Bad Grönenbach - Germany

Date of testing	1921.06.2014	Minimum take o 70 kg	off weight	Maximum take off weight 90 kg		
Testpilot			-	Hannes Tschofen	8	
Harness		EAPR-Testequipment	190	Academy Test Equipment		
Pilot's take off weigh	ht	70	kg See	90 kg		

Classification C



st-criteria		Minimum take off weight E		Evaluation	Maximum take off weight		Evaluation
1. Inflation / take-off - 4.1.1							
Rising behavior		Smooth, easy and	d constant rising	А	Smooth, easy	and constant rising	Α
Special take off technique required		No		Α	No		Α
2. Landing - 4.1.2		•					
Special landing technique required		No		Α	No		Α
3. Speeds in straight flight - 4.1.3		•					
Trim speed more than 30km/h		Yes		Α	Yes		Α
Speed range using the controls larger than 10km	/h	Yes		Α	Yes		Α
Minimum speed		Less than 25 km/	'h	Α	25 km/h to 30	km/h	В
4. Control movement - 4.1.4							
Max. weight in flight up to 80kg				-			-
Max. weight in flight 80 to 100kg		Increasing	45cm - 60cm	С	Increasing	45cm - 60cm	С
Max. weight in flight greater than 100kg				-			-
5. Pitch stability exiting accelerated flight - 4.	1.5						
Dive forward angle on exit		Dive forward less than 30°		Α	Dive forward I	less than 30°	А
Collapse occurs		No		Α	No		Α
6. Pitch stability operating controls during acc	elerated f	flight - 4.1.6					
Collapse occurs		No		Α	No		Α
7. Roll stability and damping - 4.1.7							
Oscillations		Reducing		Α	Reducing		Α
8. Stability in gentle spirals - 4.1.8							
Tendency to return to straight flight		Spontaneous exit	t	Α	Spontaneous	exit	Α
9. Behaviour in a steeply banked turn - 4.1.9							
Sink rate after two turns		More than 14m/s		В	More than 14	m/s	В
10. Symmetric front collapse - 4.1.10							
Entry	I	Rocking back les	s than 45°	Α	Rocking back	less than 45°	А
Recovery	trim speed	Spontaneous in I	Spontaneous in less than 3 sec		Spontaneous in less than 3 sec		Α
Dive forward angle on exit	. <u>Ĕ</u>	0° - 30°	Entering a turn of less than 90°	Α	0° - 30°	Entering a turn of less than 90°	Α
Cascade occurs	= =	No		A	No		A
Entry	Ф	Rocking back les	s than 45°	А	Rocking back less than 45°		
Recovery	accelerated	Spontaneous in 3	3 to 5 sec	В	Spontaneous	in 3 to 5 sec	В
Dive forward angle on exit	ccel	0° - 30°	Entering a turn of less than 90°	Α	0° - 30°	Entering a turn of less than 90°	Α
Cascade occurs	ñ	No	·	Α	No		А
11. Exiting deep stall (parachutal stall) - 4.1.11						· · · · · · · · · · · · · · · · · · ·	

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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°			A	
Change of course		Changing course less than 45°		Α	Changing course less than 45°			Α	
Cascade occurs		No			Α	No			Α
12. High angle of attack recovery - 4.1.12		<u> </u>				T			
Recovery		Spontaneous in less than 3 sec			Α	Spontaneous in	less than 3 sec		Α
Cascade occurs		No			Α	No			Α
13. Recovery from a developed full stall - 4.1.1	13								
Dive forward angle on exit Collapse		30° - 60° No collapse			B A	30° - 60° No collapse			B A
Cascade occurs (other than collapse)		No			A	No			A
Rocking backward Line tension		Less than 45° Most lines tight			A	Less than 45° Most lines tight			A
14. Asymmetric collapse (trim speed) - 4.1.14		Wost lines tight			А	Wost lines tight			Α
	T	000	Dive or roll angle	450 450		000		450 450	
Change of course until re-inflation	trim speed, max 50% collapse	< 90°		15° - 45°	A	< 90°	Dive or roll angle	15° - 45°	A
Re-inflation behavior	beec c coll	Spontaneous re-inflation			А	Spontaneous re-inflation Less than 360° No			Α
Total change of course Collapse on the opposite side occurs	- jii 8	Less than 360° No	Less than 360°						A
Twist occurs	– t	No			A	No			A
Cascade occurs	<u> </u>	No			A	No			A
Change of course until re-inflation	99	90° - 180°	Dive or roll angle	45° - 60°	С	90° - 180°	Dive or roll angle	45° - 60°	С
Re-inflation behavior	trim speed, max 75% collapse	Spontaneous re-in	flation		А	Spontaneous re	-inflation		Α
Total change of course	1 sp. c	Less than 360°			A	Less than 360°			A
Collapse on the opposite side occurs	trim ax 75	No			Α	No			A
Twist occurs	_ 🖺	No			A	No			A
Cascade occurs	_	No			А	No			Α
Change of course until re-inflation	es c	< 90°	Dive or roll angle	15° - 45°	А	< 90°	Dive or roll angle	15° - 45°	Α
Re-inflation behavior	accelerated, max 50% collapse	Spontaneous re-inflation			А	Spontaneous re-inflation			Α
Total change of course	cele 20%	Less than 360°			Α	Less than 360°			Α
Collapse on the opposite side occurs Twist occurs	a	No No			A	No No			A
Cascade occurs	_ =	No			A	No			A
Change of course until re-inflation	e e	90° - 180°	Dive or roll angle	45° - 60°	С	90° - 180°	Dive or roll angle	45° - 60°	С
Re-inflation behavior	accelerated, max 75% collapse	Spontaneous re-in	flation		А	Spontaneous re	-inflation		А
Total change of course	elera	Less than 360°			Α	Less than 360°		Α	
Collapse on the opposite side occurs	acc ax 73	No			Α	No			Α
Twist occurs Cascade occurs	Ë	No No			A	No No			A
15. Directional control with a maintained asym	nmetric co					110			
Able to keep course straight		Yes			Α	Yes			Α
180° turn away from the collapsed side possible i	in 10 sec	Yes			Α	Yes			Α
Amount of control range between turn and stall o	or spin	More than 50% of	the symmetric co	ontrol travel	А	More than 50% of the symmetric control travel			Α
16. Trim speed spin tendency - 4.1.16									
Spin occurs									
17. Low speed spin tendency - 4.1.17		No			A	No			А
						•			
17. Low speed spin tendency - 4.1.17 Spin occurs 18. Recovery from a developed spin - 4.1.18		No No			A	No No			A
Spin occurs			30° to 180°			•	n 90° to 180°		
Spin occurs 18. Recovery from a developed spin - 4.1.18		No	90° to 180°		A	No	n 90° to 180°		A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19		No Stops spinning in 9			C A	Stops spinning i			C A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs		No Stops spinning in 9			A C	No Stops spinning i			A C
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19		No Stops spinning in 9	less than 45°		C A	No Stops spinning in No Changing cours			C A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19 Change of course before release Behaviour before release Recovery		Stops spinning in S No Changing course It Remains stable wit Spontaneous in les	less than 45° th straight span		C A A A A	No Stops spinning i No Changing cours Remains stable Spontaneous in	e less than 45° with straight span		C A A A A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19 Change of course before release Behaviour before release		No Stops spinning in 9 No Changing course I Remains stable wit	less than 45° th straight span		C A A A A A	No Stops spinning i No Changing cours Remains stable	e less than 45° with straight span		C A A A A A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19 Change of course before release Behaviour before release Recovery Dive forward angle on exit		Stops spinning in 9 No Changing course Ic Remains stable wit Spontaneous in let 0° - 30°	less than 45° th straight span		C A A A A	No Stops spinning i No Changing cours Remains stable Spontaneous in 0° - 30°	e less than 45° with straight span		C A A A A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19 Change of course before release Behaviour before release Recovery Dive forward angle on exit Cascade occurs		Stops spinning in 9 No Changing course Ic Remains stable wit Spontaneous in let 0° - 30°	ess than 45° th straight span ss than 3 sec		C A A A A A	No Stops spinning i No Changing cours Remains stable Spontaneous in 0° - 30°	e less than 45° with straight span less than 3 sec		C A A A A A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19 Change of course before release Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.1.20		Stops spinning in S No Changing course It Remains stable wit Spontaneous in let 0° - 30° No	ess than 45° th straight span ss than 3 sec		C A A A A A A	No Stops spinning i No Changing cours Remains stable Spontaneous in 0° - 30° No	e less than 45° with straight span less than 3 sec		A A A A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19 Change of course before release Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.1.20 Entry procedure		Stops spinning in S No Changing course It Remains stable wit Spontaneous in les 0° - 30° No Special device requ	ess than 45° th straight span ss than 3 sec uired		A A A A A A	No Stops spinning i No Changing cours Remains stable Spontaneous in 0° - 30° No Special device re	e less than 45° with straight span less than 3 sec		A A A A A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19 Change of course before release Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.1.20 Entry procedure Behaviour during big ears		Stops spinning in S No Changing course Iv Remains stable wit Spontaneous in les 0° - 30° No Special device requires table flight	ess than 45° th straight span ss than 3 sec uired		A A A A A A	No Stops spinning i No Changing cours Remains stable Spontaneous in 0° - 30° No Special device in Stable flight	e less than 45° with straight span less than 3 sec		A A A A A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19 Change of course before release Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.1.20 Entry procedure Behaviour during big ears Recovery Dive forward angle on exit		Stops spinning in 9 No Changing course I. Remains stable wit Spontaneous in let 0° - 30° No Special device requ Stable flight Spontaneous in 3 1 0° - 30°	less than 45° th straight span ss than 3 sec uired to 5 sec		A A A A A A A A A A A A A A A A A A A	No Stops spinning i No Changing cours Remains stable Spontaneous in 0° - 30° No Special device in Stable flight Spontaneous in 0° bis 30°	e less than 45° with straight span less than 3 sec equired 3 to 5 sec		A A A A B A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19 Change of course before release Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.1.20 Entry procedure Behaviour during big ears Recovery Dive forward angle on exit 21. Big Ears in accelerated flight - 4.1.21 Entry procedure		Stops spinning in 9 No Changing course Ic Remains stable wit Spontaneous in let 0° - 30° No Special device requestable flight Spontaneous in 3 to 0° - 30° Special device requestable flight	less than 45° th straight span ss than 3 sec uired to 5 sec		A A A A A A A A A A A A A A A A A A A	Stops spinning in No Changing cours Remains stable Spontaneous in 0° - 30° No Special device in Stable flight Spontaneous in 0° bis 30°	e less than 45° with straight span less than 3 sec equired 3 to 5 sec		A A A A B A A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19 Change of course before release Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.1.20 Entry procedure Behaviour during big ears Recovery Dive forward angle on exit 21. Big Ears in accelerated flight - 4.1.21 Entry procedure Behaviour during big ears		Stops spinning in 9 No Changing course Ic Remains stable wit Spontaneous in les 0° - 30° No Special device requestable flight Spontaneous in 3 to 0° - 30° Special device requestable flight	dess than 45° th straight span ss than 3 sec uired to 5 sec uired		A A A A A A A A A A A A A A A A A A A	Stops spinning in No Changing cours Remains stable Spontaneous in 0° - 30° No Special device in Stable flight Spontaneous in 0° bis 30°	e less than 45° with straight span less than 3 sec equired 3 to 5 sec		A A A A A A A A A A A A A A A A A A A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19 Change of course before release Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.1.20 Entry procedure Behaviour during big ears Recovery Dive forward angle on exit 21. Big Ears in accelerated flight - 4.1.21 Entry procedure		Stops spinning in 9 No Changing course Ic Remains stable wit Spontaneous in let 0° - 30° No Special device requestable flight Spontaneous in 3 to 0° - 30° Special device requestable flight	dess than 45° th straight span ss than 3 sec uired to 5 sec uired		A A A A A A A A A A A A A A A A A A A	Stops spinning in No Changing cours Remains stable Spontaneous in 0° - 30° No Special device in Stable flight Spontaneous in 0° bis 30°	e less than 45° with straight span less than 3 sec equired 3 to 5 sec		A A A A B A A
Spin occurs 18. Recovery from a developed spin - 4.1.18 Spin rotation angle after release Cascade occurs 19. B-line-stall - 4.1.19 Change of course before release Behaviour before release Recovery Dive forward angle on exit Cascade occurs 20. Big ears - 4.1.20 Entry procedure Behaviour during big ears Recovery Dive forward angle on exit 21. Big Ears in accelerated flight - 4.1.21 Entry procedure Behaviour during big ears Recovery	ator while	Stops spinning in S No Changing course Iven the spontaneous in less of the spontaneous in less of the spontaneous in Special device requestable flight Spontaneous in 3 to 5 of the spontane	dess than 45° th straight span ss than 3 sec uired to 5 sec uired		A A A A A A A A A A A A A A A A A A A	No Stops spinning i No Changing cours Remains stable Spontaneous in 0° - 30° No Special device in Stable flight Spontaneous in 0° bis 30° Special device in Stable flight Spontaneous in Stable flight Spontaneous in	e less than 45° with straight span less than 3 sec equired 3 to 5 sec		A A A A A A A A A A A A A A A A A A A

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Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	Α	
Turn angle to recover normal flight	720° to 1080°, spontaneous recovery	С	720° to 1080°, spontaneous recovery	С	
23. Alternative means of directional control - 4	l.1.23				
180° turn achievable in 20 sec	Yes	А	Yes	А	
Stall or spin occurs	No	А	No	Α	
24. Any other flight procedure and/or configura	ation described in the user's manual - 4.1.24				
Procedure works as descibed		NA		NA	
Procedure suitable for novice pilots		NA		NA	
Cascade occurs		NA		NA	
25. Remarks of testpilot:					
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