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

Manufacturer	Madeana	Type testing No.	EAPR-GS-0285/14	
	MAC PARA TECHNOLOGY Telev Izni 2615 CH-756 Roznov pod Radhostem	serial number	3130-4069	
Model	Elan 30	Lagation	Achensee	
Comment		Location	Rofan, Achensee	



Rev. 2.1 - 06.03.2014 EAPR GmbH - Marktstr. 11 D-87730 Bad Grönenbach - Germany

Date of testing	29.09.2014	Minimum take off 105 kg	weight	Maximum take off weight 130 kg			
Testpilot				Anselm Rauh			
Harness		Eapr Testgurtzeug		EAPR schwer			
Pilot's take off weight	t	105 k	g S	129 kg	1		

Classification C



Test-criteria	ia		Minimum take off weight		n Maximum take off weight		Evaluation
1. Inflation / take-off - 4.1.1							
Rising behavior		Smooth, easy and	constant rising	А	Smooth, easy and constant rising		А
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		A	Yes		А
Speed range using the controls larger than 10km/	h	Yes		А	Yes		А
Minimum speed		Less than 25 km/h		Α	Less than 25	km/h	Α
4. Control movement - 4.1.4							
Max. weight in flight up to 80kg				-			-
Max. weight in flight 80 to 100kg				-			-
Max. weight in flight greater than 100kg		Increasing	50cm - 65cm	С	Increasing	>65 cm	А
5. Pitch stability exiting accelerated flight - 4.1	.5						
Dive forward angle on exit		Dive forward less th	an 30°	Α	Dive forward I	ess than 30°	Α
Collapse occurs		No		A	No		Α
6. Pitch stability operating controls during acc	elerated t	flight - 4.1.6					
Collapse occurs		No		A	No		Α
7. Roll stability and damping - 4.1.7							
Oscillations		Reducing		Α	Reducing		А
8. Stability in gentle spirals - 4.1.8							
Tendency to return to straight flight		Spontaneous exit		Α	Spontaneous	exit	А
9. Behaviour in a steeply banked turn - 4.1.9		•		•			
Sink rate after two turns		More than 14m/s		В	More than 14r	m/s	В
10. Symmetric front collapse - 4.1.10		•					
Entry	I	Rocking back less t	han 45°	А	Rocking back	less than 45°	A
Recovery	peeds	Spontaneous in 3 to 5 sec		В	-	in less than 3 sec	A
Dive forward angle on exit	trim (	30° - 60° Ke	eping course	В	30° - 60°	Keeping course	В
Cascade occurs	#	No		A	No		A
Entry	р	Rocking back less t	Rocking back less than 45°		Rocking back greater than 45°		С
Recovery	accelerated	Spontaneous in 3 to	5 sec	В	Spontaneous	in 3 to 5 sec	В
Dive forward angle on exit	900	30° - 60° Ke	eping course	В	30° - 60°	Keeping course	В
Cascade occurs	۵	No		Α	No		Α

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Deep stall achieved		Yes				Yes			
Recovery		Spontaneous in less than 3 sec			Α	A Spontaneous in less than 3 sec			
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		T				I			
Recovery		Spontaneous in less than 3 sec A Spontaneous in less than 3 sec				Α			
Cascade occurs		No			Α	No			Α
13. Recovery from a developed full stall - 4.1.1	13	T ann ann							
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 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			A	Wost lines tight			А
		90° - 180°	Dive or roll angle	15° - 45°	В	< 90°	Dive or roll angle	15° - 45°	۸
Change of course until re-inflation	trim speed, max 50% collapse	90 - 180	Dive of foil aligle	15 - 45	В	< 90	Dive or foil angle	15 - 45	Α
Re-inflation behavior	peed colls	Spontaneous re-in	flation		Α	Spontaneous re	-inflation		Α
Total change of course	gs m	Less than 360°			Α	Less than 360° No No No No			Α
Collapse on the opposite side occurs	ax Eri	No No			A				A
Twist occurs  Cascade occurs	= =	No			A				A A
Change of course until re-inflation		90° - 180°	Dive or roll angle	15° - 45°	В	90° - 180°	Dive or roll angle	15° - 45°	В
•	trim speed, max 75% collapse	$\vdash$	Ť	10 - 40				10 - 40	
Re-inflation behavior	speed, % collap	Spontaneous re-in	flation		Α	Spontaneous re	-inflation		Α
Total change of course	trim sp x 75%	Less than 360°			A	Less than 360°			Α
Collapse on the opposite side occurs  Twist occurs	ax 7	No No			A	No No			A
Cascade occurs	₽	No			A	No			A A
		T							
Change of course until re-inflation	accelerated, max 50% collapse	90° - 180°	Dive or roll angle	15° - 45°	В	< 90°	Dive or roll angle	15° - 45°	A
Re-inflation behavior	accelerated, x 50% collap	Spontaneous re-inflation			Α	Spontaneous re-inflation  Less than 360°			Α
Total change of course	cele 50%		Less than 360°						A
Collapse on the opposite side occurs Twist occurs	тах а	No No			A A	No No			A A
Cascade occurs		No			A	No			A
Change of course until re-inflation	Se	90° - 180°	Dive or roll angle	15° - 45°	В	90° - 180°	Dive or roll angle	45° - 60°	С
Re-inflation behavior	accelerated, max 75% collapse	Spontaneous re-inflation  Less than 360°			Α	Spontaneous re	-inflation		Α
Total change of course	eler 5% (				Α	Less than 360°			Α
Collapse on the opposite side occurs	acc ax 73	No			Α	No			Α
Twist occurs  Cascade occurs	Ĕ	No No			A	No No			A A
15. Directional control with a maintained asym	metric co				A	140			A
Able to keep course straight		Yes			А	Yes			А
180° turn away from the collapsed side possible in	n 10 sec	Yes				A Yes			A
Amount of control range between turn and stall or		More than 50% of	the symmetric c	ontrol travel	A	More than 50%	control travel	A	
16. Trim speed spin tendency - 4.1.16	орш	Word triair 6070 or	ine symmetrie e	ontrol travel		Word than 50%	or the symmetre c	ontrol travel	A
Spin occurs		No			А	No			Α
17. Low speed spin tendency - 4.1.17									
Spin occurs  18. Recovery from a developed spin - 4.1.18		No			А	No			А
Spin rotation angle after release		Stops spinning in I	ess than 90°		А	Stops spinning i	n less than 90°		А
Cascade occurs		No			A	No			A
19. B-line-stall - 4.1.19		1			, A				, A
Change of course before release		Changing course le	ess than 45°		А	Changing cours	e less than 45°		А
Behaviour before release		Remains stable with straight span			A	Remains stable	A		
Recovery		Spontaneous in 3 to 5 sec			В	Spontaneous in	А		
Dive forward angle on exit  Cascade occurs	•	0° - 30° No				30° - 60° No			A
20. Big ears - 4.1.20		1 140			Α	140			А
		Special device requ	uired		А	Special device re	equired		А
Entry procedure	<u> </u>		Stable flight			Stable flight			A
Entry procedure  Behaviour during big ears				A Stable flight  B Spontaneous in 3 to 5 sec				В	
Behaviour during big ears		-	to 5 sec						
Behaviour during big ears Recovery		Spontaneous in 3	to 5 sec						Δ
Behaviour during big ears		-	to 5 sec		A	0° bis 30°			А
Behaviour during big ears Recovery Dive forward angle on exit		Spontaneous in 3							A
Behaviour during big ears  Recovery  Dive forward angle on exit  21. Big Ears in accelerated flight - 4.1.21  Entry procedure		Spontaneous in 3 l			A	0° bis 30°  Special device n			А
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		Spontaneous in 3 l 0° - 30°  Special device requirements of the stable flight	uired		A A A	0° bis 30°  Special device n  Stable flight	equired		A A
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		Spontaneous in 3 to 0° - 30°  Special device requestable flight Spontaneous in 3 to 3 t	uired		A A A	0° bis 30°  Special device n  Stable flight  Spontaneous in	equired		A A A
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	ator while	Spontaneous in 3 l 0° - 30°  Special device requestable flight Spontaneous in 3 l 0° - 30°	uired		A A A A	Special device no Stable flight Spontaneous in 0° bis 30°	equired		A A A
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  Dive forward angle on exit	ator while	Spontaneous in 3 to 0° - 30°  Special device requestable flight Spontaneous in 3 to 3 t	uired		A A A	0° bis 30°  Special device n  Stable flight  Spontaneous in	equired		A A A

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Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	А
Turn angle to recover normal flight	720° to 1080°, spontaneous recovery	С	720° to 1080°, spontaneous recovery	С
23. Alternative means of directional control -	4.1.23			•
180° turn achievable in 20 sec	Yes	А	Yes	А
Stall or spin occurs	No	А	No	А
24. Any other flight procedure and/or configur	ration 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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