FTR - Flight Test Report

Manufacturer	Swing Flugsportgeräte GmbH An der Leiten 4 D-82290 Landsberied	**Type testing No.**	**EAPR-GS-0561/16**
		serial number	**99136**
Model	**Apus RS 16**	**Location**	**Gardasee**
Comment			**Schruns**

Messen | Prüfen | Bewerten

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

Date of testing 10.10.2016	**Minimum take off weight 70 kg**		**Maximum take off weight 100 kg**	
Testpilot	**Mike Küng**		**Hannes Tschofen**	
Harness	**EAPR-Testequipment**		**EAPR - Testequipment**	
Pilot's take off weight	**70 kg**		**100 kg**	

Classification	**C**

Test-criteria		Minimum take off weight		Evaluation	Maximum take off weight		Evaluation
1. Inflation / take-off - 4.4.1							
Rising behavior		Smooth, easy and constant rising, no pilot correction required		A	Easy rising, some pilot correction is required		B
Special take off technique required		No		A	No		A
2. Landing - 4.4.2							
Special landing technique required		No		A	No		A
3. Speeds in straight flight - 4.4.3							
Trim speed more than 30km/h		Yes		A	Yes		A
Speed range using the controls larger than 10km/h		Yes		A	Yes		A
Minimum speed		Less than 25 km/h		A	25 km/h to 30 km/h		B
4. Control movement - 4.4.4							
Max. weight in flight up to 80kg				-			-
Max. weight in flight 80 to 100kg		Increasing	> 60cm	A	Increasing	45cm - 60cm	C
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°		A	Dive forward less than 30°		A
Collapse occurs		No		A	No		A
6. Pitch stability operating controls during accelerated flight - 4.4.6							
Collapse occurs		No		A	No		A
7. Roll stability and damping - 4.4.7							
Oscillations		Reducing		A	Reducing		A
8. Stability in gentle spirals - 4.4.8							
Tendency to return to straight flight		Spontaneous exit		A	Spontaneous exit		A
9. Behaviour exiting a fully developed spiral dive - 4.4.9							
Initial response of glider (first 180°)		No immediate reaction		B	Immediate increase in rate of turn		C
Tendency to return to straight flight		Spontaneous exit		A	Spontaneous exit		A
Turn angle to recover normal flight		720° to 1080°, spontaneous recovery		B	1080° to 1440°, spontaneous recovery		C
10. Symmetric front collapse - 4.4.10							
Folding lines used		No			No		
Entry	trim speed - 30%	Rocking back less than 45°		A	Rocking back less than 45°		A
Recovery	trim speed - 30%	Spontaneous in less than 3 sec		A	Spontaneous in less than 3 sec		A
Dive forward angle on exit	trim speed - 30%	0° - 30°	Entering a turn of less than 90°	A	0° - 30°	Keeping course	A
Cascade occurs	trim speed - 30%	No		A	No		A
Entry	trim speed > 50%	Rocking back less than 45°		A	Rocking back less than 45°		A
Recovery	trim speed > 50%	Spontaneous in 3 to 5 sec		B	Spontaneous in less than 3 sec		A
Dive forward angle on exit	trim speed > 50%	30° - 60°	Entering a turn of less than 90°	B	0° - 30°	Entering a turn of less than 90°	A
Cascade occurs	trim speed > 50%	No		A	No		A
Entry	accelerated > 50%	Rocking back less than 45°		A	Rocking back less than 45°		A
Recovery	accelerated > 50%	Spontaneous in 3 to 5 sec		B	Spontaneous in less than 3 sec		A
Dive forward angle on exit	accelerated > 50%	30° - 60°	Entering a turn of less than 90°	B	30° - 60°	Keeping course	B
Cascade occurs	accelerated > 50%	No		A	No		A
11. Exiting deep stall (parachutal stall) - 4.4.11							
Deep stall achieved		Yes			Yes		
Recovery		Spontaneous in less than 3 sec		A	Spontaneous in less than 3 sec		A
Dive forward angle on exit		0° - 30°		A	30° - 60°		B
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			A	Spontaneous in less than 3 sec			A
Cascade occurs		No			A	No			A
13. Recovery from a developed full stall - 4.4.13										
Dive forward angle on exit		30° - 60°			B	60° - 90°			C
Collapse		No collapse			A	No collapse			A
Cascade occurs (other than collapse)		No			A	No			A
Rocking backward		Less than 45°			A	Greater than 45°			C
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	trim speed, max 50% collapse	< 90°	Dive or roll angle	15° - 45°	A	< 90°	Dive or roll angle	0° - 15°	A
Re-inflation behavior	trim speed, max 50% collapse	Spontaneous re-inflation			A	Spontaneous re-inflation			A
Total change of course	trim speed, max 50% collapse	Less than 360°			A	Less than 360°			A
Collapse on the opposite side occurs	trim speed, max 50% collapse	No			A	No			A
Twist occurs	trim speed, max 50% collapse	No			A	No			A
Cascade occurs	trim speed, max 50% collapse	No			A	No			A
Change of course until re-inflation	trim speed, max 75% collapse	90° - 180°	Dive or roll angle	15° - 45°	B	< 90°	Dive or roll angle	45° - 60°	C
Re-inflation behavior	trim speed, max 75% collapse	Spontaneous re-inflation			A	Spontaneous re-inflation			A
Total change of course	trim speed, max 75% collapse	Less than 360°			A	Less than 360°			A
Collapse on the opposite side occurs	trim speed, max 75% collapse	No			A	No			A
Twist occurs	trim speed, max 75% collapse	No			A	No			A
Cascade occurs	trim speed, max 75% collapse	No			A	No			A
Change of course until re-inflation	accelerated, max 50% collapse	< 90°	Dive or roll angle	15° - 45°	A	< 90°	Dive or roll angle	15° - 45°	A
Re-inflation behavior	accelerated, max 50% collapse	Spontaneous re-inflation			A	Spontaneous re-inflation			A
Total change of course	accelerated, max 50% collapse	Less than 360°			A	Less than 360°			A
Collapse on the opposite side occurs	accelerated, max 50% collapse	No			A	No			A
Twist occurs	accelerated, max 50% collapse	No			A	No			A
Cascade occurs	accelerated, max 50% collapse	No			A	No			A
Change of course until re-inflation	accelerated, max 75% collapse	90° - 180°	Dive or roll angle	45° - 60°	C	< 90°	Dive or roll angle	45° - 60°	C
Re-inflation behavior	accelerated, max 75% collapse	Spontaneous re-inflation			A	Spontaneous re-inflation			A
Total change of course	accelerated, max 75% collapse	Less than 360°			A	Less than 360°			A
Collapse on the opposite side occurs	accelerated, max 75% collapse	No			A	No			A
Twist occurs	accelerated, max 75% collapse	No			A	No			A
Cascade occurs	accelerated, max 75% collapse	No			A	No			A
15. Directional control with a maintained asymmetric collapse - 4.4.15										
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			A	More than 50% of the symmetric control travel			A
16. Trim speed spin tendency - 4.4.16										
Spin occurs		No			A	No			A
17. Low speed spin tendency - 4.4.17										
Spin occurs		No			A	No			A
18. Recovery from a developed spin - 4.4.18										
Spin rotation angle after release		Stops spinning in less than 90°			A	Stops spinning in 90° to 180°			C
Cascade occurs		No			A	No			A
19. B-line-stall - 4.4.19										
Change of course before release		Changing course less than 45°			A	Changing course less than 45°			A
Behaviour before release		Remains stable with straight span			A	Remains stable with straight span			A
Recovery		Spontaneous in less than 3 sec			A	Spontaneous in less than 3 sec			A
Dive forward angle on exit		30° - 60°			A	30° - 60°			A
Cascade occurs		No			A	No			A
20. Big ears - 4.4.20										
Entry procedure		Standard technique			A	Special device required			A
Behaviour during big ears		Stable flight			A	Stable flight			A
Recovery		Spontaneous in less than 3 sec			A	Spontaneous in less than 3 sec			A
Dive forward angle on exit		0° - 30°			A	0° bis 30°			A
21. Big Ears in accelerated flight - 4.4.21										
Entry procedure		Standard technique			A	Special device required			A
Behaviour during big ears		Stable flight			A	Stable flight			A
Recovery		Spontaneous in 3 to 5 sec			A	Spontaneous in less than 3 sec			A
Dive forward angle on exit		0° - 30°			A	0° bis 30°			A
Behaviour immediately after releasing the accelarator while maintaining big ears		Stable flight			A	Stable flight			A
23. Alternative means of directional control - 4.4.22										
180° turn achievable in 20 sec		Yes			A	Yes			A
Stall or spin occurs		No			A	No			A
23. Any other flight procedure and/or configuration described in the user's manual - 4.4.23										
Procedure works as descibed					NA				NA
Procedure suitable for novice pilots					NA				NA
Cascade occurs					NA				NA
24. Remarks of testpilot:										