



DHV TESTREPORT LTF

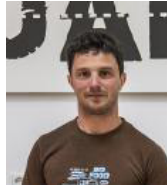
SWING SERAC RS S

**Type designation** SWING Serac RS S  
**Type test reference no** DHV GS-01-2711-22  
**Holder of certification** [Swing Flugsportgeräte GmbH](#)  
**Manufacturer** [Swing Flugsportgeräte GmbH](#)  
**Classification** B  
**Winch towing** Yes  
**Number of seats min / max** 1 / 1  
**Accelerator** Yes  
**Trimmers** No



BEHAVIOUR AT MIN WEIGHT IN FLIGHT (70KG)

Test pilots



Josef Bauer

No release

BEHAVIOUR AT MAX WEIGHT IN FLIGHT (90KG)



Harald Buntz

No release

Inflation/take-off

<b>Rising behaviour</b>	Smooth, easy and constant rising	Smooth, easy and constant rising
<b>Special take off technique required</b>	No	No

Landing

<b>Special landing technique required</b>	No	No
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Speeds in straight flight

<b>Trim speed more than 30 km/h</b>	Yes	Yes
<b>Speed range using the controls larger than 10 km/h</b>	Yes	Yes
<b>Minimum speed</b>	Less than 25 km/h	Less than 25 km/h

Control movement

<b>Symmetric control pressure</b>	Increasing	Increasing
<b>Symmetric control travel</b>	Greater than 55 cm	Greater than 60 cm

Pitch stability exiting accelerated flight

<b>Dive forward angle on exit</b>	Dive forward less than 30°	Dive forward less than 30°
<b>Collapse occurs</b>	No	No

Pitch stability operating controls during accelerated flight

<b>Collapse occurs</b>	No	No
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Roll stability and damping

<b>Oscillations</b>	Reducing	Reducing
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Stability in gentle spirals

<b>Tendency to return to straight flight</b>	Spontaneous exit	Spontaneous exit
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Behaviour exiting a fully developed spiral dive

<b>Initial response of glider (first 180°)</b>	en : keine unmittelbare Reaktion	en : keine unmittelbare Reaktion
<b>Tendency to return to straight flight</b>	Spontaneous exit (g force decreasing, rate of turn decreasing)	Spontaneous exit (g force decreasing, rate of turn decreasing)
<b>Turn angle to recover normal flight</b>	Less than 720°, spontaneous recovery	Less than 720°, spontaneous recovery

Symmetric front collapse

<b>Entry</b>	Rocking back less than 45°	Rocking back less than 45°
<b>Recovery</b>	Spontaneous in less than 3 s	Spontaneous in less than 3 s
<b>Dive forward angle on exit</b>	Dive forward 0° to 30°	Dive forward 0° to 30°
<b>Change of course</b>	Keeping course	Keeping course
<b>Cascade occurs</b>	No	No
<b>Folding lines used</b>	no	no

Unaccelerated collapse (at least 50 % chord)

A

<b>Entry</b> Rocking back less than 45°	A	Rocking back less than 45°
<b>Recovery</b> Spontaneous in less than 3 s	A	Spontaneous in less than 3 s
<b>Dive forward angle on exit</b> Dive forward 0° to 30°	A	Dive forward 0° to 30°
<b>Change of course</b> Keeping course	A	Keeping course
<b>Cascade occurs</b> No	A	No
<b>Folding lines used</b> no	A	no
<b>Accelerated collapse (at least 50 % chord)</b>		
<b>Entry</b> Rocking back less than 45°	A	Rocking back less than 45°
<b>Recovery</b> Spontaneous in less than 3 s	A	Spontaneous in less than 3 s
<b>Dive forward angle on exit</b> Dive forward 0° to 30°	A	Dive forward 0° to 30°
<b>Change of course</b> Keeping course	A	Keeping course
<b>Cascade occurs</b> No	A	No
<b>Folding lines used</b> no	A	no
<b>Exiting deep stall (parachutal stall)</b>		
<b>Deep stall achieved</b> Yes	A	Yes
<b>Recovery</b> Spontaneous in less than 3 s	A	Spontaneous in less than 3 s
<b>Dive forward angle on exit</b> Dive forward 0° to 30°	A	Dive forward 0° to 30°
<b>Change of course</b> Changing course less than 45°	A	Changing course less than 45°
<b>Cascade occurs</b> No	A	No
<b>High angle of attack recovery</b>		
<b>Recovery</b> Spontaneous in less than 3 s	A	Spontaneous in less than 3 s
<b>Cascade occurs</b> No	A	No
<b>Recovery from a developed full stall</b>		
<b>Dive forward angle on exit</b> Dive forward 0° to 30°	A	Dive forward 0° to 30°
<b>Collapse</b> No collapse	A	No collapse
<b>Cascade occurs (other than collapses)</b> No	A	No
<b>Rocking back</b> Less than 45°	A	Less than 45°
<b>Line tension</b> Most lines tight	A	Most lines tight
<b>Small asymmetric collapse</b>		
<b>Change of course until re-inflation</b> Less than 90°	A	Less than 90°
<b>Maximum dive forward or roll angle</b> Dive or roll angle 0° to 15°	A	Dive or roll angle 0° to 15°
<b>Re-inflation behaviour</b> Spontaneous re-inflation	A	Spontaneous re-inflation
<b>Total change of course</b> Less than 360°	A	Less than 360°
<b>Collapse on the opposite side occurs</b> No (or only a small number of collapsed cells with a spontaneous re inflation)	A	No (or only a small number of collapsed cells with a spontaneous re inflation)
<b>Twist occurs</b> No	A	No
<b>Cascade occurs</b> No	A	No
<b>Folding lines used</b> no	A	no
<b>Large asymmetric collapse</b>		
<b>Change of course until re-inflation</b> Less than 90°	A	Less than 90°
<b>Maximum dive forward or roll angle</b> Dive or roll angle 15° to 45°	A	Dive or roll angle 15° to 45°
<b>Re-inflation behaviour</b> Spontaneous re-inflation	A	Spontaneous re-inflation
<b>Total change of course</b> Less than 360°	A	Less than 360°
<b>Collapse on the opposite side occurs</b> No (or only a small number of collapsed cells with a spontaneous re inflation)	A	No (or only a small number of collapsed cells with a spontaneous re inflation)
<b>Twist occurs</b> No	A	No
<b>Cascade occurs</b> No	A	No
<b>Folding lines used</b> no	A	no
<b>Small asymmetric collapse accelerated</b>		
<b>Change of course until re-inflation</b> Less than 90°	A	Less than 90°
<b>Maximum dive forward or roll angle</b> Dive or roll angle 15° to 45°	A	Dive or roll angle 15° to 45°
<b>Re-inflation behaviour</b> Spontaneous re-inflation	A	Spontaneous re-inflation
<b>Total change of course</b> Less than 360°	A	Less than 360°
<b>Collapse on the opposite side occurs</b> No (or only a small number of collapsed cells with a spontaneous re inflation)	A	No (or only a small number of collapsed cells with a spontaneous re inflation)
<b>Twist occurs</b> No	A	No
<b>Cascade occurs</b> No	A	No
<b>Folding lines used</b> no	A	no
<b>Large asymmetric collapse accelerated</b>		
<b>Change of course until re-inflation</b> 90° to 180°	B	90° to 180°
<b>Maximum dive forward or roll angle</b> Dive or roll angle 15° to 45°	B	Dive or roll angle 15° to 45°
<b>Re-inflation behaviour</b> Spontaneous re-inflation	B	Spontaneous re-inflation
<b>Total change of course</b> Less than 360°	B	Less than 360°
<b>Collapse on the opposite side occurs</b> No (or only a small number of collapsed cells with a spontaneous re inflation)	B	No (or only a small number of collapsed cells with a spontaneous re inflation)
<b>Twist occurs</b> No	B	No
<b>Cascade occurs</b> No	B	No
<b>Folding lines used</b> no	B	no
<b>Directional control with a maintained asymmetric collapse</b>		
<b>Able to keep course</b> Yes	A	Yes
<b>180° turn away from the collapsed side possible in 10 s</b> Yes	A	Yes
<b>Amount of control range between turn and stall or spin</b> More than 50 % of the symmetric control travel	A	More than 50 % of the symmetric control travel

<b>Trim speed spin tendency</b>	<b>A</b>	<b>A</b>
Spin occurs	No	No
<b>Low speed spin tendency</b>	<b>A</b>	<b>A</b>
Spin occurs	No	No
<b>Recovery from a developed spin</b>	<b>A</b>	<b>A</b>
Spin rotation angle after release	Stops spinning in less than 90°	Stops spinning in less than 90°
Cascade occurs	No	No
<b>B-line stall</b>	<b>A</b>	<b>A</b>
Change of course before release	Changing course less than 45°	Changing course less than 45°
Behaviour before release	Remains stable with straight span	Remains stable with straight span
Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Cascade occurs	No	No
<b>Big ears</b>	<b>B</b>	<b>B</b>
Entry procedure	Standard technique	Standard technique
Behaviour during big ears	Stable flight	Stable flight
Recovery	Recovery through pilot action in less than a further 3 s	Recovery through pilot action in less than a further 3 s
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
<b>Big ears in accelerated flight</b>	<b>B</b>	<b>B</b>
Entry procedure	Standard technique	Standard technique
Behaviour during big ears	Stable flight	Stable flight
Recovery	Recovery through pilot action in less than a further 3 s	Recovery through pilot action in less than a further 3 s
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	Stable flight
<b>Alternative means of directional control</b>	<b>A</b>	<b>A</b>
180° turn achievable in 20 s	Yes	Yes
Stall or spin occurs	No	No
<b>Any other flight procedure and/or configuration described in the user's manual</b>		

No other flight procedure or configuration described in the user's manual