



DHV TESTREPORT EN926-2:2005

SWING ARCUS 7.22

Type designation Swing Arcus 7.22
Type test reference no DHV GS-01-1994-12
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 (60KG)

BEHAVIOUR AT MAX WEIGHT IN FLIGHT (80KG)

Test pilots



Gudrun Öchsl

The manufacturer does not want the videos of this test flight to be published.



Beni Stocker

The manufacturer does not want the videos of this test flight to be published.

Inflation/take-off

Rising behaviour Smooth, easy and constant rising
Special take off technique required No

Rising behaviour Smooth, easy and constant rising
Special take off technique required No

Landing

Special landing technique required No

No

Speeds in straight flight

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

Yes
 Yes
 Less than 25 km/h

Control movement

Symmetric control pressure Increasing
Symmetric control travel Greater than 55 cm

Increasing
 Greater than 60 cm

Pitch stability exiting accelerated flight

Dive forward angle on exit Dive forward less than 30°
Collapse occurs No

Dive forward less than 30°
 No

Pitch stability operating controls during accelerated flight

Collapse occurs No

No

Roll stability and damping

Oscillations Reducing

Reducing

Stability in gentle spirals

Tendency to return to straight flight Spontaneous exit

Spontaneous exit

Behaviour in a steeply banked turn ⚠️

Sink rate after two turns 12 m/s to 14 m/s

12 m/s to 14 m/s

Symmetric front collapse

Entry Rocking back less than 45°
Recovery Spontaneous in less than 3 s
Dive forward angle on exit Dive forward 0° to 30°
Change of course Keeping course

Rocking back less than 45°
 Spontaneous in less than 3 s
 Dive forward 0° to 30°
 Keeping course

Cascade occurs	No	No
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Symmetric front collapse in accelerated flight		A
Entry	Rocking back less than 45°	Rocking back less than 45°
Recovery	Spontaneous in less than 3 s	Spontaneous in 3 s to 5 s
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Change of course	Keeping course	Keeping course
Cascade occurs	No	No
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Exiting deep stall (parachutal stall)		A
Deep stall achieved	Yes	Yes
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°
Change of course	Changing course less than 45°	Changing course less than 45°
Cascade occurs	No	No
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High angle of attack recovery		A
Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Cascade occurs	No	No
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Recovery from a developed full stall		A
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Collapse	No collapse	No collapse
Cascade occurs (other than collapses)	No	No
Rocking back	Less than 45°	Less than 45°
Line tension	Most lines tight	Most lines tight
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Asymmetric collapse 45-50%		A
Change of course until re-inflation	Less than 90°	Less than 90°
Maximum dive forward or roll angle	Dive or roll angle 15° to 45°	Dive or roll angle 15° to 45°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	No	No
Twist occurs	No	No
Cascade occurs	No	No
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Asymmetric collapse 70-75%		A
Change of course until re-inflation	Less than 90°	Less than 90°
Maximum dive forward or roll angle	Dive or roll angle 15° to 45°	Dive or roll angle 15° to 45°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	No	No
Twist occurs	No	No
Cascade occurs	No	No
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Asymmetric collapse 45-50% in accelerated flight		A
Change of course until re-inflation	Less than 90°	Less than 90°
Maximum dive forward or roll angle	Dive or roll angle 15° to 45°	Dive or roll angle 15° to 45°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	No	No
Twist occurs	No	No
Cascade occurs	No	No
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Asymmetric collapse 70-75% in accelerated flight		B
Change of course until re-inflation	90° to 180°	90° to 180°
Maximum dive forward or roll angle	Dive or roll angle 15° to 45°	Dive or roll angle 15° to 45°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	No	No
Twist occurs	No	No
Cascade occurs	No	No

<u>Directional control with a maintained asymmetric collapse</u>	A	A
Able to keep course	Yes	Yes
180° turn away from the collapsed side possible in 10 s	Yes	Yes
Amount of control range between turn and stall or spin	More than 50 % of the symmetric control travel	More than 50 % of the symmetric control travel
<u>Trim speed spin tendency</u>	A	A
Spin occurs	No	No
<u>Low speed spin tendency</u>	A	A
Spin occurs	No	No
<u>Recovery from a developed spin</u>	A	A
Spin rotation angle after release	Stops spinning in less than 90°	Stops spinning in less than 90°
Cascade occurs	No	No
<u>B-line stall</u>	A	A
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
<u>Big ears</u>	A	A
Entry procedure	Dedicated controls	Dedicated controls
Behaviour during big ears	Stable flight	Stable flight
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°
<u>Big ears in accelerated flight</u>	A	A
Entry procedure	Dedicated controls	Dedicated controls
Behaviour during big ears	Stable flight	Stable flight
Recovery	Spontaneous in 3 s to 5 s	Spontaneous in 3 s to 5 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
<u>Behaviour exiting a steep spiral</u>	A	A
Tendency to return to straight flight	Spontaneous exit	Spontaneous exit
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	Less than 720°, spontaneous recovery
Sink rate when evaluating spiral stability [m/s]	14	14
<u>Alternative means of directional control</u>	A	A
180° turn achievable in 20 s	Yes	Yes
Stall or spin occurs	No	No
<u>Any other flight procedure and/or configuration described in the user's manual</u>		
No other flight procedure or configuration described in the user's manual		