

DHV TESTREPORT EN 926-2:2013+A1:2021

UP KIBO X SM

Type designation UP Kibo X SM
Type test reference no DHV GS-01-2885-24
Holder of certification [UP International GmbH](#)
Manufacturer [UP International GmbH](#)
Classification B
Winch towing No
Number of seats min / max 1 / 1
Accelerator Yes
Trimmers No



BEHAVIOUR AT MIN WEIGHT IN FLIGHT (80KG)

BEHAVIOUR AT MAX WEIGHT IN FLIGHT (103KG)

Test pilots



Josef Bauer

No release



Harald Buntz

No release

Inflation/take-off

A

A

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

Smooth, easy and constant rising
 No

Landing

A

A

Special landing technique required No

No

Speeds in straight flight

A

A

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

A

A

Symmetric control pressure Increasing
Symmetric control travel Greater than 60 cm

Increasing
 Greater than 65 cm

Pitch stability exiting accelerated flight

A

A

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

A

A

Collapse occurs No

No

Roll stability and damping

A

A

Oscillations Reducing

Reducing

Stability in gentle spirals

A

A

Tendency to return to straight flight Spontaneous exit

Spontaneous exit

Behaviour exiting a fully developed spiral dive

A

A

Initial response of glider (first 180°) Immediate reduction of rate of turn
Tendency to return to straight flight Spontaneous exit (g force decreasing, rate of turn decreasing)
Turn angle to recover normal flight Less than 720°, spontaneous recovery

Immediate reduction of rate of turn
 Spontaneous exit (g force decreasing, rate of turn decreasing)
 Less than 720°, spontaneous recovery

Symmetric front collapse

A

A

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
Folding lines used no

No
no

Unaccelerated collapse (at least 50 % chord) :A

:A

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
Cascade occurs No
Folding lines used no

Rocking back less than 45°
Spontaneous in less than 3 s
Dive forward 0° to 30°
Keeping course
No
no

Accelerated collapse (at least 50 % chord) :B

:A

Entry Rocking back less than 45°
Recovery Spontaneous in less than 3 s
Dive forward angle on exit Dive forward 30° to 60°
Change of course Entering a turn of less than 90°
Cascade occurs No
Folding lines used no

Rocking back less than 45°
Spontaneous in less than 3 s
Dive forward 0° to 30°
Keeping course
No
no

Exiting deep stall (parachutal stall) :B

:A

Deep stall achieved Yes
Recovery Spontaneous in less than 3 s
Dive forward angle on exit Dive forward 30° to 60°
Change of course Changing course less than 45°
Cascade occurs No

Yes
Spontaneous in less than 3 s
Dive forward 0° to 30°
Changing course less than 45°
No

High angle of attack recovery :A

:A

Recovery Spontaneous in less than 3 s
Cascade occurs No

Spontaneous in less than 3 s
No

Recovery from a developed full stall :B

:A

Dive forward angle on exit Dive forward 30° to 60°
Collapse No collapse
Cascade occurs (other than collapses) No
Rocking back Less than 45°
Line tension Most lines tight

Dive forward 0° to 30°
No collapse
No
Less than 45°
Most lines tight

Small asymmetric collapse :A

:A

Change of course until re-inflation Less than 90°
Maximum dive forward or roll angle Dive or roll angle 15° to 45°
Re-inflation behaviour Spontaneous re-inflation
Total change of course Less than 360°
Collapse on the opposite side occurs No (or only a small number of collapsed cells with a spontaneous re inflation)
Twist occurs No
Cascade occurs No
Folding lines used no

Less than 90°
Dive or roll angle 15° to 45°
Spontaneous re-inflation
Less than 360°
No (or only a small number of collapsed cells with a spontaneous re inflation)
No
No
no

Large asymmetric collapse :B

:B

Change of course until re-inflation 90° to 180°
Maximum dive forward or roll angle Dive or roll angle 15° to 45°
Re-inflation behaviour Spontaneous re-inflation
Total change of course Less than 360°
Collapse on the opposite side occurs No (or only a small number of collapsed cells with a spontaneous re inflation)
Twist occurs No
Cascade occurs No
Folding lines used no

90° to 180°
Dive or roll angle 15° to 45°
Spontaneous re-inflation
Less than 360°
No (or only a small number of collapsed cells with a spontaneous re inflation)
No
No
no

Small asymmetric collapse accelerated :A

:A

Change of course until re-inflation Less than 90°
Maximum dive forward or roll angle Dive or roll angle 15° to 45°
Re-inflation behaviour Spontaneous re-inflation
Total change of course Less than 360°
Collapse on the opposite side occurs No (or only a small number of collapsed cells with a spontaneous re inflation)
Twist occurs No
Cascade occurs No
Folding lines used no

Less than 90°
Dive or roll angle 15° to 45°
Spontaneous re-inflation
Less than 360°
No (or only a small number of collapsed cells with a spontaneous re inflation)
No
No
no

Large asymmetric collapse accelerated	B	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 (or only a small number of collapsed cells with a spontaneous re inflation)	No (or only a small number of collapsed cells with a spontaneous re inflation)
Twist occurs	No	No
Cascade occurs	No	No
Folding lines used	no	no
Directional control with a maintained asymmetric collapse	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
Trim speed spin tendency	A	A
Spin occurs	No	No
Low speed spin tendency	A	A
Spin occurs	No	No
Recovery from a developed spin	A	B
Spin rotation angle after release	Stops spinning in less than 90°	Stops spinning in 90° to 180°
Cascade occurs	No	No
B-line stall	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
Big ears	A	A
Entry procedure	Standard technique	Standard technique
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°
Big ears in accelerated flight	A	A
Entry procedure	Standard technique	Standard technique
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°
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	Stable flight
Alternative means of directional control	A	A
180° turn achievable in 20 s	Yes	Yes
Stall or spin occurs	No	No
Any other flight procedure and/or configuration described in the user's manual		
No other flight procedure or configuration described in the user's manual		