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TECHNICAL DATA DHV TESTREPORT LTF DHV TESTREPORT EN DATASHEET



DHV TESTREPORT LTF

UP SUMMIT X M

Landing

Type designation UP Summit X M Type test reference no DHV GS-01-2760-23

Holder of certification UP International GmbH Manufacturer UP International GmbH

Classification B Winch towing Yes

Number of seats min / max $\ 1\ /\ 1$ Accelerator Yes Trimmers No

BEHAVIOUR AT MIN WEIGHT IN

Test pilots



No release Inflation/take-off B



No release

Easy rising, some pilot correction is

Rising behaviour Easy rising, some pilot correction is required

Special take off technique required No

Special landing technique required No

Speeds in straight flight A Trim speed more than 30 km/h Yes

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

Control movement

Symmetric control pressure Increasing Increasing Symmetric control travel Greater than 60 cm Greater than 65 cm

Pitch stability exiting accelerated flight A

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

Pitch stability operating controls during Α accelerated flight Collapse occurs No

Roll stability and damping

Oscillations Reducing Reducing

Stability in gentle spirals A Tendency to return to straight flight Spontaneous exit Spontaneous exit

Behaviour exiting a fully developed spiral dive

Initial response of glider (first 180°) Immediate reduction of rate of turn Immediate reduction of rate of turn **Tendency to return to straight flight** Spontaneous exit (g force decreasing, rate of turn decreasing) Spontaneous exit (g force decreasing, rate of turn decreasing)

Turn angle to recover normal flight Less than 720°, spontaneous recovery Less than 720°, spontaneous recovery

Symmetric front collapse

Folding lines used no

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

Change of course Keeping course Keeping course Cascade occurs No

no

Unaccelerated collapse (at least 50 % chord)	1 _A	A
	Rocking back less than 45°	Rocking back less than 45°
	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exit	•	Dive forward 0° to 30°
Change of course	Entering a turn of less than 90°	Keeping course
Cascade occurs		No
Folding lines used	no	no
Accelerated collapse (at least 50 % chord)	A	A
L	் Rocking back less than 45°	Rocking back less than 45°
-	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exit	•	Dive forward 0° to 30°
Change of course	Entering a turn of less than 90°	Entering a turn of less than 90°
Cascade occurs		No
Folding lines used	100	no
Exiting deep stall (parachutal stall)	В	В
Deep stall achieved	Yes	Yes
	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exit	Dive forward 30° to 60°	Dive forward 30° to 60°
_	Changing course less than 45°	Changing course less than 45°
Cascade occurs	i NO	No
High angle of attack recovery	A	A
L	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Cascade occurs	•	No
Recovery from a developed full stall	В	В
Dive forward angle on exit	: Dive forward 30° to 60°	Dive forward 30° to 60°
	No collapse	No collapse
Cascade occurs (other than collapses)		No Less than 45°
_	: Less than 45° : Most lines tight	Most lines tight
Line tension	Those lines tight	Plost lines tight
Small asymmetric collapse	A	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°
	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course		Less than 360°
Conapse 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	s No	No
Cascade occurs		No
Folding lines used	no	no
Large asymmetric collapse	В	В
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°
	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course		Less than 360°
Conapse 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
Folding lines used	no	no
Small asymmetric collapse accelerated	A	A
Change of course until re-inflation	<u>i</u>	Less than 90°
Maximum dive forward or roll angle		Dive or roll angle 15° to 45°
	Spontaneous re-inflation	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	No (or only a small number of collapsed cells with a spontaneous re inflation)
	with a spontaneous re inflation i	
Twist occurs	with a spontaneous re inflation) s No	No
Cascade occurs	No No	
	No No	No
Cascade occurs Folding lines used	No No no	No No no
Cascade occurs Folding lines used Large asymmetric collapse accelerated	No No no B	No No no B
Cascade occurs Folding lines used Large asymmetric collapse accelerated Change of course until re-inflation	No No no B 90° to 180°	No No no B 90° to 180°
Cascade occurs Folding lines used Large asymmetric collapse accelerated Change of course until re-inflation Maximum dive forward or roll angle	No No no B 90° to 180°	No No no B
Cascade occurs Folding lines used Large asymmetric collapse accelerated Change of course until re-inflation Maximum dive forward or roll angle	No No No No No No Dive or roll angle 15° to 45° Spontaneous re-inflation	No No no B 90° to 180° Dive or roll angle 15° to 45°
Cascade occurs Folding lines used Large asymmetric collapse accelerated Change of course until re-inflation Maximum dive forward or roll angle Re-inflation behaviour Total change of course	No No No no B 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	No No no B 90° to 180° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360° No (or only a small number of collapsed
Cascade occurs Folding lines used Large asymmetric collapse accelerated Change of course until re-inflation Maximum dive forward or roll angle Re-inflation behaviour Total change of course	No N	No No no B 90° to 180° Dive or roll angle 15° to 45° Spontaneous re-inflation Less than 360°
Cascade occurs Folding lines used Large asymmetric collapse accelerated Change of course until re-inflation Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs	No N	No No no IB 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)
Cascade occurs Folding lines used Large asymmetric collapse accelerated Change of course until re-inflation Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs	No N	No No no 1B 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
Cascade occurs Folding lines used Large asymmetric collapse accelerated Change of course until re-inflation Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used	No N	No No no 1B 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
Cascade occurs Folding lines used Large asymmetric collapse accelerated Change of course until re-inflation Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs	No N	No No no 1B 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
Cascade occurs Folding lines used Large asymmetric collapse accelerated Change of course until re-inflation Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used Directional control with a maintained asymmetric collapse	No No No No no B 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 No No	No No no B 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
Cascade occurs Folding lines used Large asymmetric collapse accelerated Change of course until re-inflation Maximum dive forward or roll angle Re-inflation behaviour Total change of course Collapse on the opposite side occurs Twist occurs Cascade occurs Folding lines used	No Po've 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 no 1B 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

Amount of control range between turn and stall or spir	More than 50 % of the symmetric control a travel	More than 50 % of the symmetric control travel
Trim speed spin tendency	A	Α
Spin occurs	s No	No
Low speed spin tendency	A	A
Spin occurs	i No	No
Recovery from a developed spin	A	A
Spin rotation angle after release	Stone eninging in less than 90°	Stops spinning in less than 90°
Cascade occurs		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 30° to 60°
Cascade occurs	s No	No
Big ears	В	A
Entry procedure	Standard technique	Standard technique
Behaviour during big ears	Stable flight	Stable flight
Recovery	Recovery through pilot action in less than a	Spontaneous in less than 3 s
	further 3 s	
Dive forward angle on exi		Dive forward 0° to 30°
Dive forward angle on exit		Dive forward 0° to 30°
Big ears in accelerated flight	t Dive forward 0° to 30°	
Big ears in accelerated flight	Dive forward 0° to 30° B Standard technique	Α
Big ears in accelerated flight Entry procedure Behaviour during big ears	Dive forward 0° to 30° B Standard technique	A Standard technique
Big ears in accelerated flight Entry procedure Behaviour during big ears	B Standard technique Stable flight Recovery through pilot action in less than a further 3 s	A Standard technique Stable flight
Big ears in accelerated flight Entry procedure Behaviour during big ears Recovery	E Dive forward 0° to 30° B Standard technique S Stable flight Recovery through pilot action in less than a further 3 s Dive forward 0° to 30° Stable flight	Standard technique Stable flight Spontaneous in less than 3 s
Big ears in accelerated flight Entry procedure Behaviour during big ears Recovery Dive forward angle on exit	E Dive forward 0° to 30° B Standard technique S Stable flight Recovery through pilot action in less than a further 3 s Dive forward 0° to 30° Stable flight	Standard technique Stable flight Spontaneous in less than 3 s Dive forward 0° to 30°
Entry procedure Behaviour during big ears Recovery Dive forward angle on exit Behaviour immediately after releasing the accelerator while maintaining big ears	B Standard technique Stable flight Recovery through pilot action in less than a further 3 s Dive forward 0° to 30° Stable flight	Standard technique Stable flight Spontaneous in less than 3 s Dive forward 0° to 30° Stable flight
Big ears in accelerated flight Entry procedure Behaviour during big ears Recovery Dive forward angle on exit Behaviour immediately after releasing the accelerator while maintaining big ears	B Standard technique Stable flight Recovery through pilot action in less than a further 3 s Dive forward 0° to 30° Stable flight A Syes	Standard technique Stable flight Spontaneous in less than 3 s Dive forward 0° to 30° Stable flight
Entry procedure Behaviour during big ears Recovery Dive forward angle on exit Behaviour immediately after releasing the accelerator while maintaining big ears Alternative means of directional control 180° turn achievable in 20 s	B Standard technique Stable flight Recovery through pilot action in less than a further 3 s Dive forward 0° to 30° Stable flight A Yes	Standard technique Stable flight Spontaneous in less than 3 s Dive forward 0° to 30° Stable flight A Yes

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