



DHV-tested Equipment

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TECHNICAL DATA DHV TESTREPORT LTF DATASHEET PARTS LIST OPERATING INSTRUCTION PRINT



DHV TESTREPORT LTF

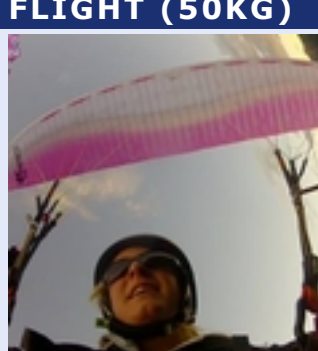

SKYWALK TONIC2 S

Type designation	Skywalk Tonic2 S
Type test reference no	DHV GS-01-2496-19
Holder of certification	Skywalk GmbH & Co. KG
Manufacturer	Skywalk GmbH & Co. KG
Classification	B
Winch towing	Yes
Number of seats min / max	1 / 1
Accelerator	Yes
Trimmers	No



BEHAVIOUR AT MIN WEIGHT IN FLIGHT (50KG)

BEHAVIOUR AT MAX WEIGHT IN FLIGHT (85KG)

Test pilots  

Expert **Beni Stocker**

Inflation/take-off :A :A

Rising behaviour Smooth, easy and constant rising Smooth, easy and constant rising

Special take off technique required No No

Landing :A :A

Special landing technique required No No

Speeds in straight flight :A :B

Trim speed more than 30 km/h Yes 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 :A :A

Symmetric control pressure Increasing Increasing

Symmetric control travel Greater than 55 cm Greater than 60 cm

Pitch stability exiting accelerated flight :A :A

Dive forward angle on exit Dive forward less than 30° Dive forward less than 30°

Collapse occurs No 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 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 :A :A

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 angle on exit Dive forward 0° to 30° Dive forward 0° to 30°

Change of course Keeping course Entering a turn of less than 90°

Cascade occurs No No

Folding lines used no no

Unaccelerated collapse (at least 50 % chord) :A :A

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 angle on exit Dive forward 0° to 30° 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 No

Folding lines used no no

Accelerated collapse (at least 50 % chord) :A :B

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 angle on exit Dive forward 0° to 30° Dive forward 30° to 60°

Change of course Entering a turn of less than 90° Entering a turn of less than 90°

Cascade occurs No No

Folding lines used no no

Exiting deep stall (parachutal stall) :A :B

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 30° to 60°

Change of course Changing course less than 45° Changing course less than 45°

Cascade occurs No No

High angle of attack recovery :A :A

Recovery Spontaneous in less than 3 s Spontaneous in less than 3 s

Cascade occurs No No

Recovery from a developed full stall :B :B

Dive forward angle on exit Dive forward 30° to 60° Dive forward 30° to 60°

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

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°

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

Large asymmetric collapse :A :B

Change of course until re-inflation Less than 90° 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

Small asymmetric collapse accelerated :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°

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

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 :A

Spin rotation angle after release Stops spinning in less than 90° Stops spinning in less than 90°

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 30° to 60°

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

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