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## TESTREPORT LTF 2014

## ZOOM X2C 105

**Type designation** ZOOM X2C 105  
**Type test reference no** DHV GS-01-2847-23  
**Holder of certification** [Papesh GmbH](#)  
**Manufacturer** [Papesh GmbH](#)  
**Classification** D  
**Winch towing** Yes  
**Number of seats min / max** 1 / 1  
**Accelerator** Yes  
**Trimmers** No



## BEHAVIOUR AT MIN WEIGHT IN FLIGHT (85KG)

## BEHAVIOUR AT MAX WEIGHT IN FLIGHT (107KG)

## Test pilots



Harald Buntz

No release



Mario Eder

No release

## Inflation/take-off

B

C

**Rising behaviour** Easy rising, some pilot correction is required

Overshoots, shall be slowed down to avoid a front collapse

**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

C

C

**Symmetric control pressure** Approximately constant

Increasing

**Symmetric control travel** 45 cm to 60 cm

50 cm to 65 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

B

B

**Initial response of glider (first 180°)** en : keine unmittelbare Reaktion

en : keine unmittelbare Reaktion

**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

720° to 1 080°, spontaneous recovery

## Symmetric front collapse

D

D

<b>Entry</b> Rocking back less than 45°	Rocking back less than 45°
<b>Recovery</b> Spontaneous in less than 3 s	Spontaneous in 3 s to 5 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	Entering a turn of less than 90°
<b>Cascade occurs</b> No	No
<b>Folding lines used</b> yes	yes
<b>Unaccelerated collapse (at least 50 % chord)</b> <b>D</b>	<b>D</b>
<b>Entry</b> Rocking back less than 45°	Rocking back less than 45°
<b>Recovery</b> Spontaneous in less than 3 s	Spontaneous in 3 s to 5 s
<b>Dive forward angle on exit</b> Dive forward 30° to 60°	Dive forward 0° to 30°
<b>Change of course</b> Keeping course	Entering a turn of less than 90°
<b>Cascade occurs</b> No	No
<b>Folding lines used</b> yes	yes
<b>Accelerated collapse (at least 50 % chord)</b> <b>D</b>	<b>D</b>
<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 30° to 60°	Dive forward 0° to 30°
<b>Change of course</b> Entering a turn of less than 90°	Entering a turn of less than 90°
<b>Cascade occurs</b> No	No
<b>Folding lines used</b> yes	yes
<b>Exiting deep stall (parachutal stall)</b> <b>B</b>	<b>A</b>
<b>Deep stall achieved</b> Yes	Yes
<b>Recovery</b> Spontaneous in less than 3 s	Spontaneous in less than 3 s
<b>Dive forward angle on exit</b> Dive forward 30° to 60°	Dive forward 0° to 30°
<b>Change of course</b> Changing course less than 45°	Changing course less than 45°
<b>Cascade occurs</b> No	No
<b>High angle of attack recovery</b> <b>A</b>	<b>A</b>
<b>Recovery</b> Spontaneous in less than 3 s	Spontaneous in less than 3 s
<b>Cascade occurs</b> No	No
<b>Recovery from a developed full stall</b> <b>B</b>	<b>A</b>
<b>Dive forward angle on exit</b> Dive forward 30° to 60°	Dive forward 0° to 30°
<b>Collapse</b> No collapse	No collapse
<b>Cascade occurs (other than collapses)</b> No	No
<b>Rocking back</b> Less than 45°	Less than 45°
<b>Line tension</b> Most lines tight	Most lines tight
<b>Small asymmetric collapse</b> <b>D</b>	<b>D</b>
<b>Change of course until re-inflation</b> Less than 90°	Less than 90°
<b>Maximum dive forward or roll angle</b> Dive or roll angle 0° to 15°	Dive or roll angle 15° to 45°
<b>Re-inflation behaviour</b> Inflates in less than 3 s from start of pilot action	Spontaneous re-inflation
<b>Total change of course</b> Less than 360°	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)	No (or only a small number of collapsed cells with a spontaneous re inflation)
<b>Twist occurs</b> No	No
<b>Cascade occurs</b> No	No
<b>Folding lines used</b> yes	yes
<b>Large asymmetric collapse</b> <b>D</b>	<b>D</b>
<b>Change of course until re-inflation</b> 90° to 180°	90° to 180°
<b>Maximum dive forward or roll angle</b> Dive or roll angle 45° to 60°	Dive or roll angle 15° to 45°
<b>Re-inflation behaviour</b> Spontaneous re-inflation	Spontaneous re-inflation
<b>Total change of course</b> Less than 360°	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)	No (or only a small number of collapsed cells with a spontaneous re inflation)
<b>Twist occurs</b> No	No
<b>Cascade occurs</b> No	No
<b>Folding lines used</b> yes	yes
<b>Small asymmetric collapse accelerated</b> <b>D</b>	<b>D</b>
<b>Change of course until re-inflation</b> Less than 90°	Less than 90°
<b>Maximum dive forward or roll angle</b> Dive or roll angle 15° to 45°	Dive or roll angle 15° to 45°
<b>Re-inflation behaviour</b> Inflates in less than 3 s from start of pilot action	Spontaneous re-inflation
<b>Total change of course</b> Less than 360°	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)	No (or only a small number of collapsed cells with a spontaneous re inflation)
<b>Twist occurs</b> No	No
<b>Cascade occurs</b> No	No

<b>Folding lines used</b> yes		yes
<b>Large asymmetric collapse accelerated</b>	<b>D</b>	<b>D</b>
<b>Change of course until re-inflation</b>	90° to 180°	90° to 180°
<b>Maximum dive forward or roll angle</b>	Dive or roll angle 45° to 60°	Dive or roll angle 15° to 45°
<b>Re-inflation behaviour</b>	Inflates in less than 3 s from start of pilot action	Spontaneous re-inflation
<b>Total change of course</b>	Less than 360°	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)	No (or only a small number of collapsed cells with a spontaneous re inflation)
<b>Twist occurs</b>	No	No
<b>Cascade occurs</b>	No	No
<b>Folding lines used</b>	yes	yes
<b>Directional control with a maintained asymmetric collapse</b>	<b>A</b>	<b>C</b>
<b>Able to keep course</b>	Yes	Yes
<b>180° turn away from the collapsed side possible in 10 s</b>	Yes	Yes
<b>Amount of control range between turn and stall or spin</b>	More than 50 % of the symmetric control travel	25 % to 50 % of the symmetric control travel
<b>Trim speed spin tendency</b>	<b>A</b>	<b>A</b>
<b>Spin occurs</b>	No	No
<b>Low speed spin tendency</b>	<b>A</b>	<b>A</b>
<b>Spin occurs</b>	No	No
<b>Recovery from a developed spin</b>	<b>A</b>	<b>A</b>
<b>Spin rotation angle after release</b>	Stops spinning in less than 90°	Stops spinning in less than 90°
<b>Cascade occurs</b>	No	No
<b>B-line stall</b>		
Not carried out because the manoeuvre is excluded in the user's manual		
<b>Big ears</b>	<b>A</b>	<b>B</b>
<b>Entry procedure</b>	Standard technique	Standard technique
<b>Behaviour during big ears</b>	Stable flight	Stable flight
<b>Recovery</b>	Spontaneous in less than 3 s	Recovery through pilot action in less than a further 3 s
<b>Dive forward angle on exit</b>	Dive forward 0° to 30°	Dive forward 0° to 30°
<b>Big ears in accelerated flight</b>	<b>B</b>	<b>B</b>
<b>Entry procedure</b>	Standard technique	Standard technique
<b>Behaviour during big ears</b>	Stable flight	Stable flight
<b>Recovery</b>	Recovery through pilot action in less than a further 3 s	Recovery through pilot action in less than a further 3 s
<b>Dive forward angle on exit</b>	Dive forward 0° to 30°	Dive forward 0° to 30°
<b>Behaviour immediately after releasing the accelerator while maintaining big ears</b>	Stable flight	Stable flight
<b>Alternative means of directional control</b>	<b>A</b>	<b>A</b>
<b>180° turn achievable in 20 s</b>	Yes	Yes
<b>Stall or spin occurs</b>	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		