

TECHNICAL DATA

DHV TESTREPORT LTF

DHV TESTREPORT EN

DATASHEET

OPERATING INSTRUCTION

PRINT



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

## DAVINCI MAMBO M

<b>Type designation</b>	Davinci Mambo M
<b>Type test reference no</b>	DHV GS-01-2949-24
<b>Holder of certification</b>	Davinci Products INC
<b>Manufacturer</b>	Davinci Products INC
<b>Classification</b>	C
<b>Winch towing</b>	Yes
<b>Number of seats min / max</b>	1 / 1
<b>Accelerator</b>	Yes
<b>Trimmers</b>	No



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

## BEHAVIOUR AT MAX WEIGHT IN FLIGHT (105KG)

## Test pilots



Josef Bauer

No release

C



Sebastian Mackrodt

No release

C

Inflation/take-off

**Rising behaviour** Overshoots, shall be slowed down to avoid a front collapse

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

A

**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

Less than 25 km/h

Control movement

A

C

**Symmetric control pressure** Increasing

Increasing

**Symmetric control travel** Greater than 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

<b>Behaviour exiting a fully developed spiral dive</b>	<b>A</b>	<b>A</b>
<b>Initial response of glider (first 180°)</b>	Immediate reduction of rate of turn	Immediate reduction of rate of turn
<b>Tendency to return to straight flight</b>	Spontaneous exit (g force decreasing, rate of turn decreasing)	Spontaneous exit (g force decreasing, rate of turn decreasing)
<b>Turn angle to recover normal flight</b>	Less than 720°, spontaneous recovery	Less than 720°, spontaneous recovery
<b>Symmetric front collapse</b>	<b>C</b>	<b>C</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 0° to 30°	Dive forward 0° to 30°
<b>Change of course</b>	Keeping course	Keeping course
<b>Cascade occurs</b>	No	No
<b>Folding lines used</b>	yes	yes
<b>Unaccelerated collapse (at least 50 % chord)</b>	<b>C</b>	<b>C</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 0° to 30°	Dive forward 0° to 30°
<b>Change of course</b>	Keeping course	Entering a turn of 90° to 180°
<b>Cascade occurs</b>	No	No
<b>Folding lines used</b>	yes	yes
<b>Accelerated collapse (at least 50 % chord)</b>	<b>C</b>	<b>C</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 30° to 60°
<b>Change of course</b>	Entering a turn of less than 90°	Entering a turn of 90° to 180°
<b>Cascade occurs</b>	No	No
<b>Folding lines used</b>	yes	yes
<b>Exiting deep stall (parachutal stall)</b>	<b>A</b>	<b>C</b>
<b>Deep stall achieved</b>	Yes	Yes
<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>	Changing course less than 45°	Changing course less than 45°
<b>Cascade occurs</b>	No	No
<b>High angle of attack recovery</b>	<b>C</b>	<b>C</b>
<b>Recovery</b>	Spontaneous in 3 s to 5 s	Spontaneous in 3 s to 5 s
<b>Cascade occurs</b>	No	No
<b>Recovery from a developed full stall</b>	<b>B</b>	<b>B</b>
<b>Dive forward angle on exit</b>	Dive forward 30° to 60°	Dive forward 30° to 60°
<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>C</b>	<b>C</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>	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>Large asymmetric collapse</b>	<b>C</b>	<b>C</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 15° to 45°	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

Small asymmetric collapse accelerated

C

C

<b>Change of course until re-inflation</b>	Less than 90°	90° to 180°
<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>	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

Large asymmetric collapse accelerated

C

C

<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 15° to 45°	Dive or roll angle 45° to 60°
<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

Directional control with a maintained asymmetric collapse

A

A

<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	More than 50 % of the symmetric control travel

Trim speed spin tendency

A

A

<b>Spin occurs</b>	No	No
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Low speed spin tendency

A

A

<b>Spin occurs</b>	No	No
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Recovery from a developed spin

B

B

<b>Spin rotation angle after release</b>	Stops spinning in 90° to 180°	Stops spinning in 90° to 180°
<b>Cascade occurs</b>	No	No

B-line stall

Not carried out because the manoeuvre is excluded in the user's manual

Big ears

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°

Big ears in accelerated flight

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

**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