



## DHV TESTREPORT LTF 2009

## NOVA MENTOR 4 XS

**Type designation** NOVA Mentor 4 XS  
**Type test reference no** DHV GS-01-2115-14  
**Holder of certification** [NOVA Vertriebsgesellschaft m.b.H.](#)  
**Manufacturer** [NOVA Vertriebsgesellschaft m.b.H.](#)  
**Classification** B  
**Winch towing** Yes  
**Number of seats min / max** 1 / 1  
**Accelerator** Yes  
**Trimmers** No



## BEHAVIOUR AT MIN WEIGHT IN FLIGHT (70KG)

## Test pilots



Beni Stocker

## BEHAVIOUR AT MAX WEIGHT IN FLIGHT (90KG)



Harald Buntz

Inflation/take-off

A

A

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

**Rising behaviour** Smooth, easy and constant rising  
**Special take off technique required** 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

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

Control movement

A

A

**Symmetric control pressure** Increasing  
**Symmetric control travel** Greater than 55 cm

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

Pitch stability exiting accelerated flight

A

A

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

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**Collapse occurs** 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 in a steeply banked turn ⚠

B

B

**Sink rate after two turns** More than 14 m/s

More than 14 m/s

Symmetric front collapse

B

B

**Entry** Rocking back less than 45°  
**Recovery** Spontaneous in 3 s to 5 s  
**Dive forward angle on exit** Dive forward 30° to 60°  
**Change of course** Entering a turn of less than 90°  
**Cascade occurs** No

**Entry** Rocking back less than 45°  
**Recovery** Spontaneous in 3 s to 5 s  
**Dive forward angle on exit** Dive forward 30° to 60°  
**Change of course** Entering a turn of less than 90°  
**Cascade occurs** No

Symmetric front collapse in accelerated flight

B

B

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

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**Recovery** Spontaneous in 3 s to 5 s  
**Dive forward angle on exit** 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

**Exiting deep stall (parachutal stall)****A****A****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 0° to 30°**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**Asymmetric collapse 45-50%****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 No**Twist occurs** No No**Cascade occurs** No No**Asymmetric collapse 70-75%****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 No**Twist occurs** No No**Cascade occurs** No No**Asymmetric collapse 45-50% in accelerated****flight****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 No**Twist occurs** No No**Cascade occurs** No No**Asymmetric collapse 70-75% in accelerated****flight****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 No**Twist occurs** No No**Cascade occurs** 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 30° to 60° Dive forward 30° to 60°**Cascade occurs** No No

<b>Big ears</b>	<b>B</b>	<b>B</b>
<b>Entry procedure</b>	Dedicated controls	Dedicated controls
<b>Behaviour during big ears</b>	Stable flight	Stable flight
<b>Recovery</b>	Spontaneous in 3 s to 5 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>Big ears in accelerated flight</b>	<b>B</b>	<b>B</b>
<b>Entry procedure</b>	Dedicated controls	Dedicated controls
<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>Behaviour exiting a steep spiral</b>	<b>A</b>	<b>A</b>
<b>Tendency to return to straight flight</b>	Spontaneous exit	Spontaneous exit
<b>Turn angle to recover normal flight</b>	Less than 720°, spontaneous recovery	Less than 720°, spontaneous recovery
<b>Sink rate when evaluating spiral stability [m/s]</b>	14	14
<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		