

DHV TESTREPORT LTF 2009

MUSE 4 - 24

Type designation Muse 4 - 24
Type test reference no DHV GS-01-2135-15
Holder of certification [MAC Para Technology Ltd](#)
Manufacturer [MAC Para Technology Ltd](#)
Classification A
Winch towing Yes
Number of seats min / max 1 / 1
Accelerator Yes
Trimmers No

BEHAVIOUR AT MIN WEIGHT IN FLIGHT (67KG)

BEHAVIOUR AT MAX WEIGHT IN FLIGHT (85KG)

Test pilots



Beni Stocker



Harald Buntz

Inflation/take-off

A

A

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

Smooth, easy and constant rising
 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

Yes
 Yes

Minimum speed Less than 25 km/h

Less than 25 km/h

Control movement

A

A

Symmetric control pressure Increasing
Symmetric control travel Greater than 55 cm

Increasing
 Greater than 60 cm

Pitch stability exiting accelerated flight

A

A

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

Dive forward less than 30°
 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 

A

A

Sink rate after two turns Up to 12 m/s

Up to 12 m/s

Symmetric front collapse

A

A

Entry Rocking back less than 45°
Recovery Spontaneous in less than 3 s
Dive forward angle on exit Dive forward 0° to 30°
Change of course Keeping course
Cascade occurs No

Rocking back less than 45°
 Spontaneous in less than 3 s
 Dive forward 0° to 30°
 Keeping course
 No

<u>Symmetric front collapse in accelerated flight</u>	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
<u>Exiting deep stall (parachutal stall)</u>	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
<u>High angle of attack recovery</u>	A	A
Recovery Spontaneous in less than 3 s		Spontaneous in less than 3 s
Cascade occurs No		No
<u>Recovery from a developed full stall</u>	A	A
Dive forward angle on exit Dive forward 0° to 30°		Dive forward 0° to 30°
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
<u>Asymmetric collapse 45-50%</u>	A	A
Change of course until re-inflation Less than 90°		Less than 90°
Maximum dive forward or roll angle Dive or roll angle 0° to 15°		Dive or roll angle 0° to 15°
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
<u>Asymmetric collapse 70-75%</u>	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
<u>Asymmetric collapse 45-50% in accelerated flight</u>	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
<u>Asymmetric collapse 70-75% in accelerated flight</u>	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
<u>Directional control with a maintained asymmetric collapse</u>	A	A
Able to keep course Yes		Yes
180° turn away from the collapsed side possible Yes		Yes

	in 10 s	
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 0° to 30°
Cascade occurs	No	No
Big ears	A	A
Entry procedure	Dedicated controls	Dedicated controls
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	Dedicated controls	Dedicated controls
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
Behaviour exiting a steep spiral	A	A
Tendency to return to straight flight	Spontaneous exit	Spontaneous exit
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	Less than 720°, spontaneous recovery
Sink rate when evaluating spiral stability [m/s]	14	14
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		