

DHV TESTREPORT EN926-2:2014

MAC PARA ILLUSION 33

**Type designation** MAC Para Illusion 33  
**Type test reference no** DHV GS-01-2294-17  
**Holder of certification** MAC Para Technology Ges.m.b.H.  
**Manufacturer** MAC Para Technology Ges.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 (115KG)

BEHAVIOUR AT MAX WEIGHT IN FLIGHT (145KG)

Test pilots



Harald Buntz



Sebastian Mackrodt

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  
**Minimum speed** Less than 25 km/h

Yes  
 Yes  
 Less than 25 km/h

Control movement

A

A

**Symmetric control pressure** Increasing  
**Symmetric control travel** Greater than 65 cm

Increasing  
 Greater than 65 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

en : Verhalten beim Verlassen einer vollständigen Steilspirale

A

A

en : Erstes Ansprechen des Gleitschirms (die ersten 180°)

en : unmittelbare Verringerung der Drehgeschwindigkeit

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**Tendency to return to straight flight** en : selbstständiges Ausleiten (G-Kraft abnehmend, Drehgeschwindigkeit abnehmend)

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**Turn angle to recover normal flight** Less than 720°, spontaneous recovery

Less than 720°, spontaneous recovery

**Symmetric front collapse**

**A**

**B**

**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** Entering a turn of less than 90°  
**Cascade occurs** No  
**en : Faltleinen wurden benutzt** no

Rocking back less than 45°  
Spontaneous in less than 3 s  
Dive forward 30° to 60°  
Entering a turn of less than 90°  
No  
no

**en : Symmetrischer Frontklapper mindestens 50% Flügeltiefe**

**A**

**B**

**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** Entering a turn of less than 90°  
**Cascade occurs** No  
**en : Faltleinen wurden benutzt** no

Rocking back less than 45°  
Spontaneous in less than 3 s  
Dive forward 30° to 60°  
Entering a turn of less than 90°  
No  
no

**en : Symmetrischer Frontklapper im beschleunigten Flug**

**B**

**A**

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

Rocking back less than 45°  
Spontaneous in less than 3 s  
Dive forward 0° to 30°  
Entering a turn of less than 90°  
No  
no

**Exiting deep stall (parachutal stall)**

**A**

**B**

**Deep stall achieved** Yes  
**Recovery** Spontaneous in less than 3 s  
**Dive forward angle on exit** Dive forward 0° to 30°  
**Change of course** Changing course less than 45°  
**Cascade occurs** No

Yes  
Spontaneous in less than 3 s  
Dive forward 30° to 60°  
Changing course less than 45°  
No

**High angle of attack recovery**

**A**

**A**

**Recovery** Spontaneous in less than 3 s  
**Cascade occurs** No

Spontaneous in less than 3 s  
No

**Recovery from a developed full stall**

**A**

**A**

**Dive forward angle on exit** Dive forward 0° to 30°  
**Collapse** No collapse  
**Cascade occurs (other than collapses)** No  
**Rocking back** Less than 45°  
**Line tension** Most lines tight

Dive forward 0° to 30°  
No collapse  
No  
Less than 45°  
Most lines tight

**en : Kleiner einseitiger Klapper**

**A**

**A**

**Change of course until re-inflation** Less than 90°  
**Maximum dive forward or roll angle** Dive or roll angle 15° to 45°  
**Re-inflation behaviour** Spontaneous re-inflation  
**Total change of course** Less than 360°  
**Collapse on the opposite side occurs** en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)  
**Twist occurs** No  
**Cascade occurs** No  
**en : Faltleinen wurden benutzt** no

Less than 90°  
Dive or roll angle 15° to 45°  
Spontaneous re-inflation  
Less than 360°  
en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)  
No  
No  
no

**en : Großer einseitiger Klapper**

**A**

**A**

**Change of course until re-inflation** Less than 90°  
**Maximum dive forward or roll angle** Dive or roll angle 15° to 45°  
**Re-inflation behaviour** Spontaneous re-inflation  
**Total change of course** Less than 360°  
**Collapse on the opposite side occurs** en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)  
**Twist occurs** No  
**Cascade occurs** No

Less than 90°  
Dive or roll angle 15° to 45°  
Spontaneous re-inflation  
Less than 360°  
en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)  
No  
No



