

DHV TESTREPORT EN926-2:2014

MAC PARA PARADIS 28

Type designation	MAC Para Paradis 28
Type test reference no	DHV GS-01-2306-17
Holder of certification	MAC Para Technology Ges.m.b.H.
Manufacturer	MAC Para Technology
Classification	B
Winch towing	Yes
Number of seats min / max	1 / 1
Accelerator	Yes
Trimmers	No


BEHAVIOUR AT MIN WEIGHT IN FLIGHT (90KG)
BEHAVIOUR AT MAX WEIGHT IN FLIGHT (112KG)
Test pilots

Harald Buntz

Sebastian Mackrodt
Inflation/take-off
A
B
Rising behaviour Smooth, easy and constant rising

 en : einfaches Aufziehen, etwas Korrektur des Piloten erforderlich
 No

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

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
A
Symmetric control pressure Increasing

Increasing

Symmetric control travel Greater than 60 cm

Greater than 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

en : Verhalten beim Verlassen einer vollständigen Steilspirale
A
A
en : Erstes Ansprechen des Gleitschirms (die ersten 180°) en : unmittelbare Verringerung der Drehgeschwindigkeit

en : unmittelbare Verringerung der Drehgeschwindigkeit

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

en : selbstständiges Ausleiten (G-Kraft abnehmend, Drehgeschwindigkeit abnehmend)

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

Less than 720°, spontaneous recovery

Symmetric front collapse
A
A

	<p>Entry Rocking back less than 45°</p> <p>Recovery Spontaneous in less than 3 s</p> <p>Dive forward angle on exit Dive forward 0° to 30°</p> <p>Change of course Entering a turn of less than 90°</p> <p>Cascade occurs No</p> <p>en : Faltleinen wurden benutzt no</p>	<p>Rocking back less than 45°</p> <p>Spontaneous in less than 3 s</p> <p>Dive forward 0° to 30°</p> <p>Keeping course</p> <p>No</p> <p>no</p>
en : Symmetrischer Frontklapper mindestens 50% Flügeltiefe	B	B
	<p>Entry Rocking back less than 45°</p> <p>Recovery Spontaneous in 3 s to 5 s</p> <p>Dive forward angle on exit Dive forward 0° to 30°</p> <p>Change of course Entering a turn of less than 90°</p> <p>Cascade occurs No</p> <p>en : Faltleinen wurden benutzt no</p>	<p>Rocking back less than 45°</p> <p>Spontaneous in 3 s to 5 s</p> <p>Dive forward 30° to 60°</p> <p>Entering a turn of less than 90°</p> <p>No</p> <p>no</p>
en : Symmetrischer Frontklapper im beschleunigten Flug	B	B
	<p>Entry Rocking back less than 45°</p> <p>Recovery Spontaneous in 3 s to 5 s</p> <p>Dive forward angle on exit Dive forward 30° to 60°</p> <p>Change of course Entering a turn of less than 90°</p> <p>Cascade occurs No</p> <p>en : Faltleinen wurden benutzt no</p>	<p>Rocking back less than 45°</p> <p>Spontaneous in 3 s to 5 s</p> <p>Dive forward 30° to 60°</p> <p>Entering a turn of less than 90°</p> <p>No</p> <p>no</p>
Exiting deep stall (parachutal stall)	A	A
	<p>Deep stall achieved Yes</p> <p>Recovery Spontaneous in less than 3 s</p> <p>Dive forward angle on exit Dive forward 0° to 30°</p> <p>Change of course Changing course less than 45°</p> <p>Cascade occurs No</p>	<p>Yes</p> <p>Spontaneous in less than 3 s</p> <p>Dive forward 0° to 30°</p> <p>Changing course less than 45°</p> <p>No</p>
High angle of attack recovery	A	A
	<p>Recovery Spontaneous in less than 3 s</p> <p>Cascade occurs No</p>	<p>Spontaneous in less than 3 s</p> <p>No</p>
Recovery from a developed full stall	B	B
	<p>Dive forward angle on exit Dive forward 30° to 60°</p> <p>Collapse No collapse</p> <p>Cascade occurs (other than collapses) No</p> <p>Rocking back Less than 45°</p> <p>Line tension Most lines tight</p>	<p>Dive forward 30° to 60°</p> <p>No collapse</p> <p>No</p> <p>Less than 45°</p> <p>Most lines tight</p>
en : Kleiner einseitiger Klapper	A	A
	<p>Change of course until re-inflation Less than 90°</p> <p>Maximum dive forward or roll angle Dive or roll angle 15° to 45°</p> <p>Re-inflation behaviour Spontaneous re-inflation</p> <p>Total change of course Less than 360°</p> <p>Collapse on the opposite side occurs en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)</p> <p>Twist occurs No</p> <p>Cascade occurs No</p> <p>en : Faltleinen wurden benutzt no</p>	<p>Less than 90°</p> <p>Dive or roll angle 15° to 45°</p> <p>Spontaneous re-inflation</p> <p>Less than 360°</p> <p>en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)</p> <p>No</p> <p>No</p> <p>no</p>
en : Großer einseitiger Klapper	B	B
	<p>Change of course until re-inflation 90° to 180°</p> <p>Maximum dive forward or roll angle Dive or roll angle 15° to 45°</p> <p>Re-inflation behaviour Spontaneous re-inflation</p> <p>Total change of course Less than 360°</p> <p>Collapse on the opposite side occurs en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)</p> <p>Twist occurs No</p> <p>Cascade occurs No</p> <p>en : Faltleinen wurden benutzt no</p>	<p>90° to 180°</p> <p>Dive or roll angle 15° to 45°</p> <p>Spontaneous re-inflation</p> <p>Less than 360°</p> <p>en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)</p> <p>No</p> <p>No</p> <p>no</p>
en : Kleiner einseitiger Klapper im beschleunigten Flug	A	A
	<p>Change of course until re-inflation Less than 90°</p>	<p>Less than 90°</p>

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	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)
Twist occurs	No	No
Cascade occurs	No	No
en : Faltleinen wurden benutzt	no	no

en : Großer einseitiger Klapper im beschleunigten Flug

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	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)
Twist occurs	No	No
Cascade occurs	No	No
en : Faltleinen wurden benutzt	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
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Low speed spin tendency

A

A

Spin occurs	No	No
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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

B

A

Entry procedure	Dedicated controls	Dedicated controls
Behaviour during big ears	Stable flight	Stable flight
Recovery	Recovery through pilot action in less than a further 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

B

A

Entry procedure	Dedicated controls	Dedicated controls
Behaviour during big ears	Stable flight	Stable flight
Recovery	Recovery through pilot action in less than a further 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

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