



## DHV TESTREPORT LTF

## UP KANGRI HPR S

**Type designation** UP Kangri HPR S  
**Type test reference no** DHV GS-01-2700-22  
**Holder of certification** [UP International GmbH](#)  
**Manufacturer** [UP International GmbH](#)  
**Classification** B  
**Winch towing** Yes  
**Number of seats min / max** 1 / 1  
**Accelerator** Yes  
**Trimmers** No



## BEHAVIOUR AT MIN WEIGHT IN FLIGHT (65KG)

## Test pilots



Josef Bauer

No release

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



Harald Buntz

No release

Inflation/take-off

**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

**Special landing technique required** No

No

Speeds in straight flight

**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

**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

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

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

Pitch stability operating controls during accelerated flight

**Collapse occurs** No

No

Roll stability and damping

**Oscillations** Reducing

Reducing

Stability in gentle spirals

**Tendency to return to straight flight** Spontaneous exit

Spontaneous exit

Behaviour exiting a fully developed spiral dive

**Initial response of glider (first 180°)** en : keine unmittelbare Reaktion  
**Tendency to return to straight flight** Spontaneous exit (g force decreasing, rate of turn decreasing)  
**Turn angle to recover normal flight** 720° to 1 080°, spontaneous recovery

**Initial response of glider (first 180°)** en : keine unmittelbare Reaktion  
**Tendency to return to straight flight** Spontaneous exit (g force decreasing, rate of turn decreasing)  
**Turn angle to recover normal flight** Less than 720°, spontaneous recovery

Symmetric front collapse

**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  
**Folding lines used** no

**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  
**Folding lines used** no

Unaccelerated collapse (at least 50 % chord)

A

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> Entering a turn of less than 90°   | Entering a turn of less than 90°   |
| <b>Cascade occurs</b> No   | No   |
| <b>Folding lines used</b> no   | no   |
| <b>Accelerated collapse (at least 50 % chord)</b>  | <b>B</b>   |
| <b>Entry</b> Rocking back less than 45°  | Rocking back less than 45°   |
| <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 30° to 60°  |
| <b>Change of course</b> Entering a turn of less than 90°   | Entering a turn of less than 90°   |
| <b>Cascade occurs</b> No   | No   |
| <b>Folding lines used</b> no   | no   |
| <b>Exiting deep stall (parachutal stall)</b>   | <b>A</b>   |
| <b>Deep stall achieved</b> Yes   | Yes  |
| <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> Changing course less than 45°  | Changing course less than 45°  |
| <b>Cascade occurs</b> No   | No   |
| <b>High angle of attack recovery</b>   | <b>A</b>   |
| <b>Recovery</b> Spontaneous in less than 3 s   | Spontaneous in less than 3 s   |
| <b>Cascade occurs</b> No   | No   |
| <b>Recovery from a developed full stall</b>  | <b>A</b>   |
| <b>Dive forward angle on exit</b> Dive forward 0° to 30°   | Dive forward 0° to 30°   |
| <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>A</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 0° to 15°   |
| <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> no   | no   |
| <b>Large asymmetric collapse</b>   | <b>B</b>   |
| <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> no   | no   |
| <b>Small asymmetric collapse accelerated</b>   | <b>A</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> no   | no   |
| <b>Large asymmetric collapse accelerated</b>   | <b>B</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> no   | no   |
| <b>Directional control with a maintained asymmetric collapse</b>   | <b>A</b>   |
| <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                                 |

|   |  |                                   |
|---|--|-----------------------------------|
| <b>Trim speed spin tendency</b>   | <b>A</b>   | <b>A</b>                          |
| Spin occurs   | No   | No                                |
| <b>Low speed spin tendency</b>  | <b>A</b>   | <b>A</b>                          |
| Spin occurs   | No   | No                                |
| <b>Recovery from a developed spin</b>   | <b>A</b>   | <b>A</b>                          |
| Spin rotation angle after release   | Stops spinning in less than 90°                          | Stops spinning in less than 90°   |
| Cascade occurs  | No   | No                                |
| <b>B-line stall</b>   | <b>A</b>   | <b>A</b>                          |
| 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                                |
| <b>Big ears</b>   | <b>B</b>   | <b>B</b>                          |
| 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 3 s to 5 s         |
| Dive forward angle on exit  | Dive forward 0° to 30°                                   | Dive forward 0° to 30°            |
| <b>Big ears in accelerated flight</b>   | <b>B</b>   | <b>A</b>                          |
| 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 3 s to 5 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                     |
| <b>Alternative means of directional control</b>                                       | <b>A</b>   | <b>A</b>                          |
| 180° turn achievable in 20 s  | Yes  | Yes                               |
| Stall or spin occurs  | 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             |  |                                   |