


# FTR - Flight Test Report

Dieser Prüfbericht darf ohne schriftliche Zustimmung der EAPR nicht, auch nicht auszugsweise, veröffentlicht werden.

|              |   |                  |                        |
|--------------|---|------------------|------------------------|
| Manufacturer | <br>Swing Flugsportgeräte GmbH<br>An der Leiten 4<br>D-82290 Landsberied | Type testing No. | EAPR-GS-0641/17        |
|              |   | serial number    | 1272329852             |
| Model        | Apus RS 23  | Location         | Gardasee               |
| Comment      |   |                  | Malcesine, Monte Baldo |



Rev. 2.3 - 26.11.2014  
 EAPR GmbH - Marktstr. 11  
 D-87730 Bad Grönenbach - Germany

|                         |            |                         |   |                         |   |
|-------------------------|------------|-------------------------|---|-------------------------|---|
| Date of testing         | 24.04.2017 | Minimum take off weight | 70 kg   | Maximum take off weight | 90 kg   |
| Testpilot               |            | Mike Küng               |  | Pascal Purin            |  |
| Harness                 |            | EAPR                    |   | EAPR                    |   |
| Pilot's take off weight |            | 70 kg                   |   | 90 kg                   |   |

|                |   |
|----------------|---|
| Classification | A |
|----------------|---|




| Test-criteria  | Minimum take off weight  | Evaluation | Maximum take off weight  | Evaluation |
|--|--|------------|--|------------|
| <b>1. Inflation / take-off - 4.4.1</b>   |  |            |  |            |
| Rising behavior  | Smooth, easy and constant rising, no pilot correction required | A          | Smooth, easy and constant rising, no pilot correction required | A          |
| Special take off technique required  | No   | A          | No   | A          |
| <b>2. Landing - 4.4.2</b>  |  |            |  |            |
| Special landing technique required   | No   | A          | No   | A          |
| <b>3. Speeds in straight flight - 4.4.3</b>                                    |  |            |  |            |
| Trim speed more than 30km/h  | Yes  | A          | Yes  | A          |
| Speed range using the controls larger than 10km/h                              | Yes  | A          | Yes  | A          |
| Minimum speed  | Less than 25 km/h  | A          | Less than 25 km/h  | A          |
| <b>4. Control movement - 4.4.4</b>   |  |            |  |            |
| Max. weight in flight up to 80kg   |  | -          |  | -          |
| Max. weight in flight 80 to 100kg  | Increasing > 60cm  | A          | Increasing > 60cm  | A          |
| Max. weight in flight greater than 100kg                                       |  | -          |  | -          |
| <b>5. Pitch stability exiting accelerated flight - 4.4.5</b>                   |  |            |  |            |
| Dive forward angle on exit   | Dive forward less than 30°                                     | A          | Dive forward less than 30°                                     | A          |
| Collapse occurs  | No   | A          | No   | A          |
| <b>6. Pitch stability operating controls during accelerated flight - 4.4.6</b> |  |            |  |            |
| Collapse occurs  | No   | A          | No   | A          |
| <b>7. Roll stability and damping - 4.4.7</b>                                   |  |            |  |            |
| Oscillations   | Reducing   | A          | Reducing   | A          |
| <b>8. Stability in gentle spirals - 4.4.8</b>                                  |  |            |  |            |
| Tendency to return to straight flight  | Spontaneous exit   | A          | Spontaneous exit   | A          |
| <b>9. Behaviour exiting a fully developed spiral dive - 4.4.9</b>              |  |            |  |            |
| Initial response of glider (first 180°)  | Immediate reduction of rate in turn                            | A          | Immediate reduction of rate in turn                            | A          |
| Tendency to return to straight flight  | Spontaneous exit   | A          | Spontaneous exit   | A          |
| Turn angle to recover normal flight  | Less than 720°, spontaneous recovery                           | A          | Less than 720°, spontaneous recovery                           | A          |
| <b>10. Symmetric front collapse - 4.4.10</b>                                   |  |            |  |            |
| Folding lines used   | No   |            | No   |            |
| Entry  | Rocking back less than 45°                                     | A          | Rocking back less than 45°                                     | A          |
| Recovery   | Spontaneous in less than 3 sec                                 | A          | Spontaneous in less than 3 sec                                 | A          |
| Dive forward angle on exit   | 0° - 30°   Keeping course                                      | A          | 0° - 30°   Keeping course                                      | A          |
| Cascade occurs   | No   | A          | No   | A          |
| Entry  | Rocking back less than 45°                                     | A          | Rocking back less than 45°                                     | A          |
| Recovery   | Spontaneous in less than 3 sec                                 | A          | Spontaneous in less than 3 sec                                 | A          |
| Dive forward angle on exit   | 0° - 30°   Keeping course                                      | A          | 0° - 30°   Keeping course                                      | A          |
| Cascade occurs   | No   | A          | No   | A          |
| Entry  | Rocking back less than 45°                                     | A          | Rocking back less than 45°                                     | A          |
| Recovery   | Spontaneous in less than 3 sec                                 | A          | Spontaneous in less than 3 sec                                 | A          |
| Dive forward angle on exit   | 0° - 30°   Keeping course                                      | A          | 0° - 30°   Keeping course                                      | A          |
| Cascade occurs   | No   | A          | No   | A          |
| <b>11. Exiting deep stall (parachutal stall) - 4.4.11</b>                      |  |            |  |            |
| Deep stall achieved  | Yes  |            | Yes  |            |
| Recovery   | Spontaneous in less than 3 sec                                 | A          | Spontaneous in less than 3 sec                                 | A          |
| Dive forward angle on exit   | 0° - 30°   | A          | 0° - 30°   | A          |
| Change of course   | Changing course less than 45°                                  | A          | Changing course less than 45°                                  | A          |
| Cascade occurs   | No   | A          | No   | A          |





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|              |   |                  |                        |
|--------------|---|------------------|------------------------|
| Manufacturer | <br>Swing Flugsportgeräte GmbH<br>An der Leiten 4<br>D-82290 Landsberied | Type testing No. | EAPR-GS-0642/17        |
|              |   | serial number    | 1272329852             |
| Model        | Apus RS 23  | Location         | Gardasee               |
| Comment      |   |                  | Malcesine, Monte Baldo |



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|                         |            |                         |   |                         |   |
|-------------------------|------------|-------------------------|---|-------------------------|---|
| Date of testing         | 25.04.2017 | Minimum take off weight | 90 kg   | Maximum take off weight | 110 kg  |
| Testpilot               |            | Pascal Purin            |  | Anselm Rauh             |  |
| Harness                 |            | EAPR                    |   | EAPR schwer             |   |
| Pilot's take off weight |            | 90 kg                   |   | 112 kg                  |   |

|                |          |
|----------------|----------|
| Classification | <b>B</b> |
|----------------|----------|



| Test-criteria  | Minimum take off weight  | Evaluation | Maximum take off weight  | Evaluation |
|--|--|------------|--|------------|
| <b>1. Inflation / take-off - 4.4.1</b>   |  |            |  |            |
| Rising behavior  | Smooth, easy and constant rising, no pilot correction required | A          | Smooth, easy and constant rising, no pilot correction required | A          |
| Special take off technique required  | No   | A          | No   | A          |
| <b>2. Landing - 4.4.2</b>  |  |            |  |            |
| Special landing technique required   | No   | A          | No   | A          |
| <b>3. Speeds in straight flight - 4.4.3</b>                                    |  |            |  |            |
| Trim speed more than 30km/h  | Yes  | A          | Yes  | A          |
| Speed range using the controls larger than 10km/h                              | Yes  | A          | Yes  | A          |
| Minimum speed  | Less than 25 km/h  | A          | 25 km/h to 30 km/h   | B          |
| <b>4. Control movement - 4.4.4</b>   |  |            |  |            |
| Max. weight in flight up to 80kg   |  | -          |  | -          |
| Max. weight in flight 80 to 100kg  |  | -          |  | -          |
| Max. weight in flight greater than 100kg                                       | Increasing >65 cm  | A          | Increasing >65 cm  | A          |
| <b>5. Pitch stability exiting accelerated flight - 4.4.5</b>                   |  |            |  |            |
| Dive forward angle on exit   | Dive forward less than 30°                                     | A          | Dive forward less than 30°                                     | A          |
| Collapse occurs  | No   | A          | No   | A          |
| <b>6. Pitch stability operating controls during accelerated flight - 4.4.6</b> |  |            |  |            |
| Collapse occurs  | No   | A          | No   | A          |
| <b>7. Roll stability and damping - 4.4.7</b>                                   |  |            |  |            |
| Oscillations   | Reducing   | A          | Reducing   | A          |
| <b>8. Stability in gentle spirals - 4.4.8</b>                                  |  |            |  |            |
| Tendency to return to straight flight  | Spontaneous exit   | A          | Spontaneous exit   | A          |
| <b>9. Behaviour exiting a fully developed spiral dive - 4.4.9</b>              |  |            |  |            |
| Initial response of glider (first 180°)  | Immediate reduction of rate in turn                            | A          | No immediate reaction  | B          |
| Tendency to return to straight flight  | Spontaneous exit   | A          | Spontaneous exit   | A          |
| Turn angle to recover normal flight  | Less than 720°, spontaneous recovery                           | A          | 720° to 1080°, spontaneous recovery                            | B          |
| <b>10. Symmetric front collapse - 4.4.10</b>                                   |  |            |  |            |
| Folding lines used   | No   |            | No   |            |
| Entry  | Rocking back less than 45°                                     | A          | Rocking back less than 45°                                     | A          |
| Recovery   | Spontaneous in less than 3 sec                                 | A          | Spontaneous in less than 3 sec                                 | A          |
| Dive forward angle on exit   | 0° - 30°   Keeping course                                      | A          | 0° - 30°   Keeping course                                      | A          |
| Cascade occurs   | No   | A          | No   | A          |
| Entry  | Rocking back less than 45°                                     | A          | Rocking back less than 45°                                     | A          |
| Recovery   | Spontaneous in less than 3 sec                                 | A          | Spontaneous in less than 3 sec                                 | A          |
| Dive forward angle on exit   | 0° - 30°   Keeping course                                      | A          | 0° - 30°   Keeping course                                      | A          |
| Cascade occurs   | No   | A          | No   | A          |
| Entry  | Rocking back less than 45°                                     | A          | Rocking back less than 45°                                     | A          |
| Recovery   | Spontaneous in less than 3 sec                                 | A          | Spontaneous in less than 3 sec                                 | A          |
| Dive forward angle on exit   | 0° - 30°   Keeping course                                      | A          | 0° - 30°   Keeping course                                      | A          |
| Cascade occurs   | No   | A          | No   | A          |
| <b>11. Exiting deep stall (parachutal stall) - 4.4.11</b>                      |  |            |  |            |
| Deep stall achieved  | Yes  |            | Yes  |            |
| Recovery   | Spontaneous in less than 3 sec                                 | A          | Spontaneous in less than 3 sec                                 | A          |
| Dive forward angle on exit   | 0° - 30°   | A          | 0° - 30°   | A          |
| Change of course   | Changing course less than 45°                                  | A          | Changing course less than 45°                                  | A          |
| Cascade occurs   | No   | A          | No   | A          |

