The original of the Final Report was issued in the Slovak language.
In case of inconsistency original version in Slovak language is applicable.

MINISTRY
OF TRANSPORT
AND CONSTRUCTION
OF THE SLOVAK REPUBLIC

AVIATION AND MARITIME INVESTIGATION AUTHORITY
Námestie slobody 6, P.O.BOX 100
810 05 Bratislava

FINAL REPORT

on the safety investigation of an air accident

of a glider type **Ventus bT**

registration mark **D-KEYX**

Reg. No: SKA2018003

The investigation of occurrence has been conducted pursuant to Art. 18 of the Act No. 143/1998 on Civil Aviation (Civil Aviation Act) and on Amendment of Certain Acts and in accordance with the Regulation (EU) No. 996/2010 of the European Parliament and of the Council on investigation and prevention of civil aviation accidents and incidents, governing the investigation of civil aviation accidents and incidents.

The final report is issued in accordance with the Regulation L 13 that is the application of the provisions of ANNEX 13 Aircraft Accident and Incident Investigation to the Convention on International Civil Aviation.

The exclusive aim of investigation is to establish causes of accident, incident and to prevent their occurrence, but not to refer to any fault or liability of persons.

This final report, its individual parts or other documents related to the investigation of occurrence in question have an informative character and can only be used as recommendation for the implementation of measures to prevent occurrence of other accidents and incidents with similar causes.

A. INTRODUCTION

Flight type:	general aviation/sports and recreational flying
Glider type:	Ventus bT
Registration mark:	D-KEYX
Flight phase:	landing
Incident site:	Prievidza airport / LZPE
Accident date and time:	22 April 2018 15:24

Note: All time data in this Report is reported in UTC time.

B. INFORMATIVE SUMMARY

On 22 April 2018 at 15:23, the pilot was performing approach and landing on a grass runway 22 (hereinafter referred to as "VPD22") at LZPE. During the landing the glider made a hard touchdown on VPD22 at a high speed and bounced several times afterwards. After the last bounce of the glider and its subsequent touchdown on VPD22, its right wing got caught on the ground, the glider started rotating around its vertical axis, made a 360° turn and was destroyed.

No one was injured in the occurrence.

The following person was appointed to investigate the causes of the occurrence:

Ing. Juraj Gyenes

The Report has been issued by:

Aviation and Maritime Investigation Authority
of the Ministry of Transport and Construction of the Slovak Republic

C. MAIN PART OF THE REPORT

1. FACTUAL INFORMATION

1.1 History of the flight

On 22 April 2018 the pilot decided to perform a recreational thermal flight without a previous flight plan or designated route.

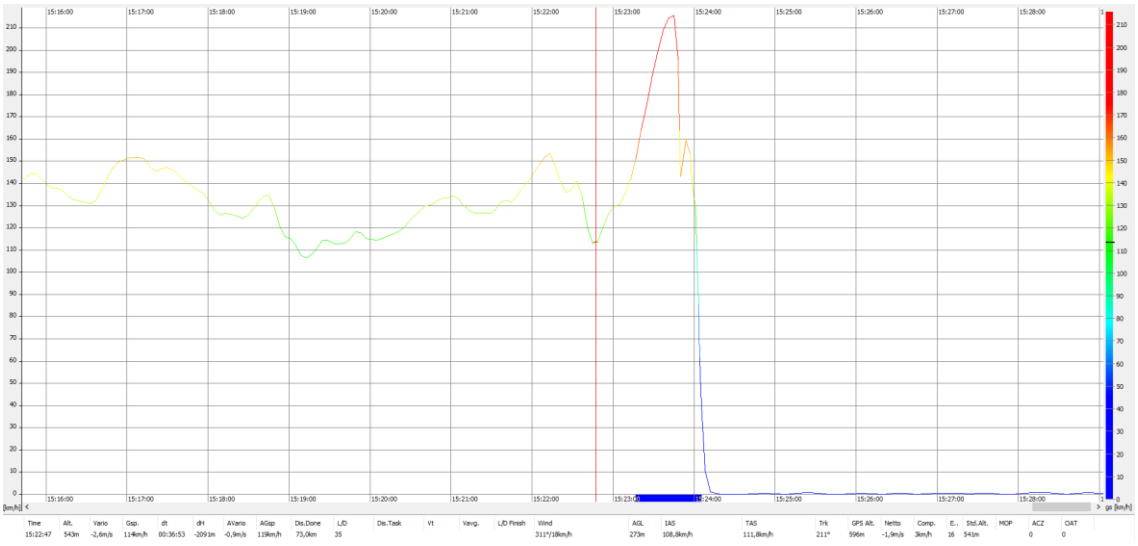
At 11:29 he took off with the glider from LZPE.

There were no problems during the flight itself.

After 3 hours and 50 minutes of thermal flying, at 15:20, the pilot decided to perform approach and landing with a right-hand circuit on VPD22 at LZPE.

When entering the ATZ of LZPE, the pilot did not respond to the local parachute operations, did not report joining the circuit or landing.

At 15:22:47, at an altitude of 273 m AGL, 2.6 km from the threshold of VPD22, after levelling out the turn for the final approach, the pilot started increasing his landing speed.



In his testimony the pilot states that 1 km from the threshold of VPD22 he saw a parachutist above LZPE at an altitude of 150 m AGL and decided to land at the above-stated airport as soon as possible and with the shortest possible track in order to avoid collision with the parachutist by increasing his landing speed again.

Approximately 50 m before the threshold of VPD22, at an altitude of 20 m, the pilot´s landing speed was 214 km/h.

Then the glider made a hard touchdown on VPD22 at high speed without its speed brakes extended.

Its first contact with VPD22 was at the speed of 196 km/h and it was followed by a 20-metre-high bounce.

Then the glider made several bounces in the direction of VPD22, while during every touchdown the wing tips overswung and touched the ground.

After the last bounce of the glider which was approximately 5 metres high and its subsequent touchdown on VPD22 with wings overswung, the right wing tip got caught on the ground with such force that the glider started rotating around its vertical axis, made a 360° turn, overturned to the front and hit the ground with its front part. As a result of the impact and rotation, the front part was destroyed, the fuselage broke approximately 70 cm before the keel and the winglets were damaged.

The accident was reported to the Aviation and Maritime Investigation Authority by the airport operator by telephone on 22 April 2018.

Time of day: Day

Flight rules: VFR

1.2 Injuries of persons

Injury	Crew	Passengers	Other persons
Fatal	-	-	-
Serious	-	-	-
Minor	-	-	-
None	1	-	

1.3 Damage to the glider

The glider was destroyed in the accident:

- the fuselage was broken;

- the entire wing was damaged;

- the cabin part was destroyed.

1.4 Other damage

No circumstances have been reported to the Aviation and Maritime Investigation Authority which might lead to any other claims for compensation for damage against a third party.

1.5 Personnel information

Pilot:
citizen of the Federal Republic of Germany, aged 66;

holder of the SPL glider pilot license issued by the Ministry of Energy, Infrastructure and Development of the Federal Republic of Germany on 16 September 1969.

Medical certificate class 2 with marked validity until 1 April 2019.

Qualifications:	aerobatic	no validity limitation
	winch	no validity limitation
	aero tow	no validity limitation
Flight experience:	total flight hours: 1,221 hrs. 22 min.; total number of flights: 3,735	

1.6 Information about the glider

Type:	Ventus bT
Serial number:	30
Year of manufacture:	2009
Manufacturer:	Shempp-Hirth Flugzeugbau GmbH
Total flight hours flown:	1,357 hours

Airworthiness Certificate No. 1017-2017, issued by Luftsport Service-Center Ost GmbH Alte Landebahn 27 06846 Dessau-Rosslau, with marked validity until 8 October 2018.

Mandatory insurance: Allianz Global & Speciality SE, D-81724 Műnchen of 7 August 2017, with marked validity until 7 August 2018.

1.7 Meteorological information

Wind 311°, 18 km/h; visibility over 10 km.

1.8 Aids to navigation

N/A.

1.9 Communications

The aircraft was equipped with a radio communication device that enabled two-way radio communication at any moment of the flight with all aeronautical stations.

1.10 Aerodrome information

LZPE is a public international airport located at an altitude of 260 m (853 ft), with grass VPD 04/22 sized 940 m x 115 m.

At the time of the occurrence it was suitable for landing of the above-mentioned type of glider.

1.11 Flight recorders

The glider was equipped with a calibrated electronic flight recorder
GNSS-FR (Global navigation satellite system flight recorder).

The IGC data file from the recorder was evaluated. Naviter SeeYou was used for calculation and visual display of the flight.

1.12 Wreckage and impact information

Coordinates of the accident site: N 48° 45´ 49´´, E 18° 34´ 58´´

1.13 Medical and pathological information

The pilot was transported to the hospital with polyclinic in Prievidza where he underwent medical examination in the Traumatology Ward with the result: no traumatological changes.

1.14 Fire

None.

1.15 Survival aspects

It was not necessary to perform any investigation and rescue by SAR equipment.

1.16 Tests and research

N/A.

1.17 Organizational and management information

Parachute operations were carried out at the airport; information about the operations was provided on the frequency 122.60 MHz.

1.18 Additional information

N/A.

1.19 Useful or effective investigation techniques

Common investigation methods were applied.

2. ANALYSIS

When landing on VPD22 with light cross wind, the glider pilot spotted a parachutist and to avoid a collision with him, he increased his speed. In this stressful situation, the pilot was not paying sufficient attention to the speed of approach for landing and he did not use the speed brakes.

Before the touchdown itself the glider was flying at 210 km/h. The stall speed of such type during ideal conditions is 58 km/h.

The landing at high speed had the result that before the contact with VPD22 the glider was not extended correctly, made a hard touchdown with several bounces the height of which ranged from 0.5 to 20 metres and which the pilot did not handle and did not manage to make correct remedy for landing.

After the last bounce the right wing touched the ground and then the glider started turning around its vertical axis (the so-called "clock") in the direction of landing until it stopped.

3. CONCLUSIONS / Causes of the air accident

3.1 **Findings**

- the pilot had valid qualifications to perform the flight in question;
- the glider had valid documentation and did not demonstrate any malfunction before the accident;
- prior to the critical flight, the glider complied with the airworthiness conditions.

3.2 **Causes of the air accident**

- non-standard approach and landing;
- hard landing at high speed without the speed brakes extended.

4. SAFETY RECOMMENDATIONS

The Final Report on safety investigation of an air accident does not contain any recommendations.

In Bratislava, 15 August 2018