

## (Super Kasper Akrobat, Kasper Akrobat, Beskid-1, Krosno 66, Beskid-2)

### Aerobatic training and training aircraft. Czechoslovakia.



Zlin Z-26 "Trainer" training and training aircraft in the collection of the Polish Aviation Museum in Krakow. (Source: Copyright Tomek Spólnicki- "[Military Travel](#)").

The **Zlin Z-26 "Trainer"** aircraft was intended for pilot training and training. It was designed at the **Czechoslovakian Aviation Works Moravan-Otrokovice** (formerly **Zlin**) in Otrokovice in 1946 as part of a competition announced for the construction of a training and training aircraft. Developed by a team of designers under the direction of **Karel Tomas**. This aircraft successfully completed flight tests and tests and in 1947 took first place in the competition.

It was directed to mass production. In the years 1949-1951 113 (according to [4] - 163) serial Z-26 were built, equipped with wooden structure wings. All subsequent versions of Zlin aircraft are already equipped with metal wings.

They were used in Czechoslovakia, Poland and Romania.

The **Zlin Z-26** aircraft belongs to the famous Zlin family and has lived up to many years of development practically to the limit of the possibilities of the system and structure used. These were the following aircraft: **Zlin Z-126 "Trainer 2" (C-105)**, **Zlin Z-226**, [Zlin Z-326](#), [Zlin Z-526](#) and **Zlin Z-726**.

#### In Poland.

In the autumn of 1951 (according to other sources - at the beginning of 1952) as part of the supplement and modernization of flying equipment, the Aero Club of the Polish People's Republic with the considerable assistance of the then Air League, Air Force Command and Ministry of Communication bought 38 (according to [4] - 36) aircraft **Zlin Z-26**. The first of them was registered in the Civil Aircraft Inspectorate (IKCSP) on February 6, 1952 under the marks SP-ARE.

The aircraft were used in the Aero Club for training and training pilots and were used as sport aircraft participating in events and air shows. For many years, the Polish aerobatics championship was played on the **Z-26** aircraft. When their wings were excessively worn after 6 years of use, in the years 1958-1959 [Lotnicze Zakłady Techniczne APRL](#) in Krosno made 30 sets of new wings for them, at the same time conducting a general overhaul of the aircraft. They were used until 1969, and the last 7 aircraft were deleted in the spring of 1974.

The Krakow Aviation Museum has the only surviving **Zlin Z-26 "Trainer"** handed over in July 1974 to the collection by the last user - the Krakow Aero Club.

Stanisław Kasperk, a multiple Polish champion in aerobatics, came up with the concept of **converting Zlin Z-26** into a single-seat aerobatic version called **Kasper Akrobat**. In 1963, engineers: **J. Supryn**, [Stanisław Bienia](#) and **W. Jaworska** from the Świdnicki Aero Club (employees of the [Prototype Design Office WSK-Świdnik](#)) developed the technical design of this aircraft under the name **Super Kasper Akrobat**. The front cabin was removed here, which required a redesign of the cabin cover and extension of the upper hull cover up to the second cabin. The fuel system was rebuilt, the trunk, engine and flap drive mechanism were removed, which, when locked in the closed position, were sealed with canvas. To reduce aerodynamic drag, the wheels were covered with fairings. All these changes significantly improved the aircraft's performance. The conversion was

carried out on the SP-ASG aircraft at the Aeroklub in Świdnik with the help of the WSK-Świdnik plant. On this plane, in July 1963, S. Kasperek took part in the World Aerobatic Championships in Moscow, taking the 3rd place.

In autumn 1963, [the Design Office of the Aero Club of the Polish People's Republic](#) in Krakow under the supervision of M. Sc. [Jan Czerwiński](#) has developed a workshop documentation for converting Z-26 aircraft to **Super Kasper Akrobat**. According to this documentation, APRL Aviation Repair Works in Krosno converted three planes in the first half of 1964. The first Super Kasper Akrobat made in Krosno SP-ART was flown on May 6, 1964. The next two are SP-ASM and SP-ASG, in which supplementary changes were made according to Krakow documentation. Because the aircraft received a good reputation in the aeroclubs and the interest in acrobatics increased, APRL ordered the conversion of a further 13 **Z-26** in **LZN-Krosno**. They were converted into Super Kasper Akrobata in 1964-1965. A total of 16 aircraft were processed. In September 1965, Stanisław Kasperek on the Super Kasper Akrobat took 3rd place in the International Aerobatic Competition of Socialist States. The aircraft were used in aeroclubs until mid-1969, later they became unused and were canceled in 1972-1974.

In the spring of 1965, the Super Kasper Akrobat SP-APW Walter "Minor WM-6-III" engine with 118 kW (160 HP) was installed on the Super Kasper Akrobat Repair Plant in Krosno. The aircraft was flown on June 6, 1965. 3.9 m / s (Super Kasper Akrobata) to 5.7 m / s. However, in order to allow the aircraft to perform aerobatics it was necessary to strengthen its structure due to the increase in engine power and total weight. Later the aircraft was considered a prototype of the **Beskid** aircraft. the aircraft received the original engine, becoming the Super Kasper Acrobat again.

In the spring of 1966, MSc. **Jerzy Lamparski** and mgr inż. **Jerzy Borzyszkowski** prepared a construction design of Walter "Minor WM-6-III" engine. The aircraft was reconstructed by **Lotnicze Zakłady Pomoczcze** in Krosno in the first half of 1966. The aircraft was flown in the first days of June 1966. The aircraft (SP-AST) initially received the name **Krosno 66**, changed to **Beskid-1**. Then LZN-Krosno converted two more Z-26s into Beskid-1 planes. In the International Aviation Acrobatics Competition in Magdeburg in August 1967, S. Kasperek, F. Kawała and E. Mikołajczyk took the Beskid-1 6 aircraft, and 8th place, gaining the second place as a team. The operation of Beskid-1 aircraft has shown that there are possibilities to further improve the aircraft.

At the end of 1967, MSc. **J. Lamparski** and mgr inż. **J. Borzyszkowski** began work on the project of the improved **Beskid-2** aircraft. At the beginning of 1968, the documentation was ready. LZN in Krosno were to begin the reconstruction of the Z-26 into the Beskid-2. Unfortunately, on January 17, 1968, on the Beskid-1 aircraft (SP-AST), the wing crashed and the pilot died. Antoni Kozłowski. Then in 1969 the wing on the Super Kasper Akrobat was broken, this time the pilot saved. The tests showed fatigue cracking of the hull part of the wing girder. Then, on APRL's order, the documentation of the new reinforced fuselage truss was designed in 1969 by a team of employees of the [Faculty of Power and Aeronautical Engineering of the Warsaw University of Technology](#) under the guidance of prof. Eng. [Leszek Duleba](#) and MSc. [Edward Margański](#). The Aviation Repair Plant in Krosno was to start building new hulls in 1970. However, in 1971 APRL obtained the opportunity to purchase new [Zlin Z-526F "Trainer"](#) aircraft, which was considered a better solution than the reconstruction of old Zlin-26. In May 1972, the other two Beskids-1 were deleted.

#### Construction :

Two-seat self-supporting low wing aircraft of mixed construction. In **Super Kasper** version **Akrobat** and **Beskid-1** - one-seater. Self-supporting bipartite. Single-girder wooden wings with an auxiliary girder (acc. To [5] - double-girder), covered with plywood next to the girder. Equipped with ailerons and flaps. Truss hull, welded from steel pipes, covered with canvas on metal and wooden slats. Front and top of the hull covered with dural sheet. Covered cab. Wooden structure, vertical stabilizer covered with plywood, covered with canvas. Classic solid chassis.

**Equipment** - pilot-navigation double, including a set of basic on-board instruments in the first and second cabin. Electrical installations.

#### Engine :

- **Zlin Z-26**, **Super Kasper Akrobat** - in-line Walter "Minor 4-III" with 78 kW (105 HP),  
- **Beskid-1**, **Beskid-2** - Walter "Minor WM-6-III" with 118 kW (160 HP).

#### Technical data Zlin Z-26 (according to [1]):

Span - 10.26 m, length - 7.49 m, height - 2.08 m, bearing surface - 14.6 (according to [4] - 14.8) m<sup>2</sup>.  
Curb weight - 505 kg, payload - 245 kg, total weight - 750 kg.  
Max speed - 205 km / h, minimum speed - (according to [4] - 74) km / h, climb - 3.3 m / s, altitude - 4800 m, range - 600 km.

#### Technical data Super Kasper Akrobat (according to [4]):

Span - 10.26 m, length - 7.49 m, height - 2.08 m, carrying surface - 14.8 m<sup>2</sup>.  
Curb weight - 471 kg, payload - 151 kg, total weight - 622 kg.  
Permitted diving speed - 300 km / h, minimum speed - 66 km / h, climb - 3.9-4.2 m / s.

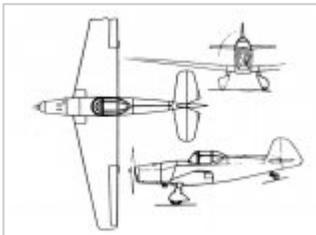
#### Technical data Beskid-1 (according to [4]):

Span - 10.26 m, length - 7.49 m, height - 2.08 m, carrying surface - 14.8 m<sup>2</sup>.  
Curb weight - 540 kg, payload - 148 kg, total weight - 685 kg.  
Permissible diving speed - 300 km / h, minimum speed - 60 km / h, climb - 5.7-6 m / s.

#### Technical specifications Beskid-2 (according to [4]):

Span - 10.26 m, length - 7.49 m, height - 2.08 m, carrying surface - 14.8 m<sup>2</sup>.  
Curb weight - 550 kg, payload - 115 kg, total weight - 665 kg.  
Permitted diving speed - 300 km / h, minimum speed - 60 km / h, climb - 6 m / s.

## gallery



#### Source:

- [1] Krzyżan M. "Planes in Polish museums". Communication and Communication Publisher. Warsaw 1983.
- [2] Morgała A. "The Last Bartel BM-7". Aviation with checkerboard No. 20.
- [3] Collective work "Aviation Constructions of People's Poland". Communication and Communication Publisher. Warsaw 1965.
- [4] "Problems of development of Polish aerobatic planes". Polish Aviation Technology. Historical Materials No. 30 (3/2007).
- [5] Kaczkowski R. "Z-26, Z-326 training and training aircraft". Winged Poland No. 43/1964.
- [6] Chwalczyk T. "Super Kasper Akrobat". Winged Poland No. 11/1964.