ÚŘAD PRO CIVILNÍ LETECTVÍ
CIVIL AVIATION AUTHORITY

ČESKÁ REPUBLIKA **CZECH REPUBLIC**

TYPOVÉ OSVĚDČENÍ

TYPE CERTIFICATE

Č. / No: **90-01**

Tímto dokumentem se osvědčuje, že uvedený typ letadla, leteckého motoru nebo vrtule, pokud je udržován a provozován podle příslušných předpisů s příslušnými provozními omezeními uvedenými v Příloze k tomuto osvědčení, je uznán letově způsobilým.
This document certifies that the type of the mentioned aircraft, aircraft engine or propeller when maintained and operated in accordance with the pertinent regulations and operating limitations, specified in the Type Certificate Data Sheet, is recognised as airworthy.

Výrobek Product	**Sailplane Discus CS**
Žadatel Applicant	**Schempp-Hirth výroba letadel spol. s r.o.** **Pardubická 638** **565 01 Choceň**
Použitý předpis Certification Basis	**JAR-22**
Datum podání žádosti Date of Application	-

Toto osvědčení a jeho Příloha zůstávají v platnosti, dokud se jich žadatel nevzdá nebo dokud jejich platnost Úřad pro civilní letectví České republiky nepozastaví, nezruší či nestanoví ukončení platnosti jinak.

This Type Certificate and the Type Certificate Data Sheet shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Civil Aviation Authority of the Czech Republic.

23-04-2004
Datum vydání - Date of issue
(dd-mm-rrrr) - (dd-mm-yyyy)

ÚŘAD PRO CIVILNÍ LETECTVÍ -1- ČESKÁ REPUBLIKA

Podpis -Signature

CIVIL AVIATION AUTHORITY
OF THE CZECH REPUBLIC

90-01
Change 3
Schempp-Hirth výroba letadel
spol. s r. o.
Discus CS
23.04.2004

TYPE CERTIFICATE DATA SHEET No. 90-01

This data sheet which is a part of Type Certificate No. 90-01 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Czech Republic.

Model	Application Date	Certification Date
Discus CS	-	19.08.1990

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Model Discus CS

I. General

1. Data Sheet No.:	90-01
2. Model:	Discus CS
3. Airworthiness category:	Utility
4. Type Certificate Holder:	Schempp-Hirth výroba letadel spol. s r.o. Pardubická 638 565 01 Choceň
5. Manufacturer:	S/N 001 CS through 008 CS Orličan n.p. Choceň S/N 008 CS through 224 CS Orličan a.s Choceň S/N 225 CS and up Schempp-Hirth výroba letadel spol. s r.o. Choceň
6. Application Date:	-
7. Certificate Date:	19.08.1990

II. Certification Basis

1. Certification Basis:	Joint Aviation Requirements JAR 22, Change 3, 13.9.1982
2. Special Conditions:	Preliminary Directives for Strength Analysis of Components for Sailplanes and Powered Sailplane constructed from Glass and Carbon Fiber Reinforced Plastic, edition of January 1981.
3. Exemptions:	None
4. Equivalent Safety Findings:	None

III. Technical Characteristics and Operational Limitations

1. Type Design Definition:	List of drawings for the Discus CS sailplane, type data sheet No. L-360, state to date of May 1990.
2. Description:	Single-seat mid-wing sailplane from glass and carbon composite, two-piece wing, airbrakes on the upper surface, water tanks in wing and fin. Glass composite fuselage with retractable main wheel with damping and brake. T-tail empennage with stabiliser and elevator.
3. Equipment:	Minimum equipment: 1 Airspeed indicator, range up to 300 km/h. 1 Altimeter 1 Four-point safety harnesses (symmetrical) 1 Back cushions (thickness approx. 8 cm compressed) unless parachute used.
4. Dimensions:	Span: 15,0 m Length: 6,58 m Height: 1,0 m Wing Area: 10,58 m2 Aspect Ratio: 21,3
5. Tow hook:	Nose tow hook "E72", LBA approved - No.:60.230/1 or Nose tow hook " E75", LBA approved - No.:60.230/1 or Nose tow hook " E85", LBA approved - No.:60.230/1 Safety C.G. tow hook " Europa G 72", LBA approved - No.:60.230/2 or Safety C.G. tow hook " Europa G 73", LBA approved - No.:60.230/2. or Safety C.G. tow hook " Europa G 88", LBA approved - No.:60.230/2.
6. Air Speeds:	Never exceed speed V_{NE} 250 km/h Manoeuvring speed V_A 200 km/h Maximum speed on aerotow V_T 180 km/h Maximum winch launch speed V_W 150 km/h Rough air speed V_{RA} 200 km/h
7. Load factors:	At V_A = 200 km/h n = +5,3 n = –2,65 At V_{NE} = 250 km/h n = +4,0 n = –1,5

8. Weights:	Maximum permitted take-off mass		525 kg
	Maximum permitted mass of all non-lifting parts		240 kg
	Empty mass		233 kg
9. Centre of Gravity Range:	From 260 to 400 mm behind the datum.		
10. Datum:	Leading edge of the wing root rib.		
11. Mean Aerodynamic Cord (MAC):	0,762 m with origin 63 mm behind datum.		
12. Leveling Means:	Wedge 100:4 on the rear top fuselage, horizontal.		
13. Weak links:	Winch launch an aerotow max.		680 daN
14. Minimum Flight Crew:	1		
15. Number of seats	1		
16. Control surface deflections:	Aileron	up	65 mm ± 5 mm
		down	35 mm ± 5 mm
	Measuring point distance from aileron axis of rotation		162 mm
	Elevator	up	47 mm ± 4 mm
		down	47 mm ± 4 mm
	Measuring point distance from elevator axis of rotation		157 mm
	Rudder	to both sides	160 mm ± 20 mm
	Measuring point distance from rudder axis of rotation		340 mm
17. Wheels and Tyres::	4" braked wheel Kobold 103-Tech. spec. No. 32.240/5TS Tyre 4.00-4		

18. Other Limitations:

- Fabrication permitted at Schempp-Hirth výroba letadel spol. s r.o., Choceň.
- All sailplanes outside surfaces exposed to sunlight must be white painted apart from registration Number and anti-collision marking.
- The sailplane is approved for Day VFR flight.

IV. Operating and Service Instructions

1. Letová příručka, vydání červen 1990, schváleno SLI.
2. Flight manual, Issue June 1990
3. Flughandbuch für das Segelflugzeug Discus CS, Ausgabe 1990
4. Příručka pro údržbu, vydání červen 1990.
5. Maintenance manual, Issue 1990
6. Wartungshandbuch für das Segelflugzeug Discus CS, Ausgabe 1990
7. Betriebshandbuch für die Schleppkuplung, Baureihe: Bugkupplung E85, Ausgabe März 1989, Revision 4 März 2001
8. Betriebshandbuch für die Schleppkuplung/Sicherheitskupplung, Baureihe: Sicherheitskupplung Evropa G 88, Ausgabe Februar 1989, Revision 3 März 2001

V. Notes

1. The Discus CS is a license production of the German sailplane Discus b. The developing company and holder of the design is Schempp-Hirth Flugzeugbau GmbH, Krebenstraße 25, D-73230 Kirchheim/Teck, Germany