

CIVIL AVIATION AUTHORITY OF THE CZECH REPUBLIC

98-03
Revision 3
HPH spol. s r.o.
Glasflügel 304 CZ
Glasflügel 304 CZ-17
Glasflügel 304 C
15.07.2005

TYPE CERTIFICATE DATA SHEET No. 98-03

This data sheet which is a part of Type Certificate No. 98-03 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 |
|------------------------|-------------------------|---------------------------|
| Glasflügel 304 CZ | 20.03.1996 | 02.04.1998 |
| Glasflügel 304 CZ - 17 | 09.10.2000 | 23.10.2000 |
| Glasflügel 304 C | 15.11.2000 | 25.07.2001 |

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Model Glasflügel 304 CZ

I. General

1. Data Sheet No.: 98-03
2. Model: Glasflügel 304 CZ
3. Airworthiness category: Utility
4. Type Certificate Holder: HPH, spol.s r.o.
Čáslavská 126, P. O. Box 112
284 01 Kutná Hora, Česká republika
5. Manufacturer: HPH, spol.s r.o.
Čáslavská 126, P. O. Box 112
284 01 Kutná Hora, Česká republika
6. Application Date: 20.3.1996
7. Certificate Date: 2.4.1998

II. Certification Basis

1. Certification Basis: Airworthiness Requirements for Sailplanes and powered Sailplanes (LFSM), Edition October 23rd, 1975.
2. Special Conditions:
 - Directions for the stress analysis of components for sailplanes constructed from glass fiber reinforced plastic , Edition March 1965
 - Subpart F and G of Joint Aviation Requirements (JAR 22), change 5 , October 28th 1995
 - JAR 22.375 (change 5)
3. Exemptions: None
4. Equivalent Safety Findings: None

III. Technical Characteristics and Operational Limitations

1. Type Design Definition: List of Drawings for Sailplane " Glasfügel 304 B"
Amendment of List for " Glasfügel 304 CZ", dated March 1998.
2. Description: Single seat mid-wing cantilever sailplane fiber construction, 2-piece wing, trailing edge airbrakes combined with flaps, wing water ballast - polyethylene water ballast tanks, retractable wheel, wheel-brake, tail wheel, T-tail (fixed stabilizer with elevator, fin and rudder), winglets.
3. Equipment: Airspeed indicator up to 270 km/h
Altimeter
4-piece safety harness
Parachute or cushion (thickness approx. 10 cm when compressed)
4. Dimensions: Span: 15 m
Length: 6,45 m
Height: 1,15 m
Wing Area: 9,88 m²
Aspect Ratio: 22,78
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 "SH 72", LBA approved -
No.:60.230/3
or
Safety C.G. tow hook " Europa G 88", LBA approved -
No.:60.230/2.
6. Air Speeds:

| | |
|--|----------|
| Max. permitted v_{NE} ,flaps 0,-1,-2 | |
| up to 4000 m MSL | 250 km/h |
| from 4000 to 5000 m MSL | 240 km/h |
| from 5000 to 6000 m MSL | 226 km/h |
| from 6000 to 7000 m MSL | 214 km/h |
| from 7000 to 8000 m MSL | 202 km/h |
| from 8000 to 9000 m MSL | 191 km/h |
| from 9000 to 10000 m MSL | 179 km/h |
| from 10000 to 12000 m MSL | 159 km/h |
| Max. permitted v_{FE} , flaps +1, +2 | 200 km/h |
| Manoeuvring v_A | 200 km/h |
| Rough Air v_{RA} | 200 km/h |
| Aerotow v_T | 150 km/h |
| Winch launching v_w | 150 km/h |

7. Load factors: +5,3 / -2,65 at 200 km/h
+4 / -1,5 at 250 km/h
+ 3,5 airbrakes extended
8. Weights: Maximum weight 450 kg
Maximum weight of non lifting parts 240 kg
9. Centre of Gravity Range: Max. forward c/g position aft of datum: 7.87 in. (200 mm)
Max. rearward c/g position aft of datum: 14.17 in.(325 mm)
10. Datum: Wing leading edge at root rib
11. Mean Aerodynamic Cord (MAC): 0,682 m
12. Leveling Means: Wedge 100:5,2 on slope of rear top fuselage to be horizontal
13. Weak links: Ultimate strength for winch launching and aerotow max. 6,5 kN
14. Minimum Flight Crew: 1
15. Number of seats 1
16. Control surface deflections: Elevator: up and down $17^\circ \pm 2^\circ$
Rudder: right and left: $25^\circ \pm 2^\circ$
Aileron: up $23^\circ \pm 2^\circ$
down $10^\circ \pm 2^\circ$
Flap: up $8^\circ \pm 1,5^\circ$
down $12^\circ \pm 1,5^\circ$
17. Wheels and Tyres:: Main wheel: 5,00-5
Tail wheel: 210x65
18. Other Limitations: – Life limited parts refer to the Maintenance Manual
– Only industrial production permitted .
– All external portions exposed to sunlight must be painted white, except of the areas for the registration and anti-collision markings .
– Approved for VFR flying only.

IV. Operating and Service Instructions

1. CAA CZ approved Flight Manual "Glasfögel 304 CZ", Issue of January 1998
2. Service manual "Glasfögel 304 CZ" (Maintenance), Issue of January 1998
3. Operation instruction for the TOST nose tow release mechanism "E72" and "E75", Issue of May 1975, LBA approved.
4. Operation instruction for the TOST nose tow release mechanism "E72" and "E75", Issue of March 1988, LBA approved - for overhauled tow hook only.
5. Operation instruction for the TOST nose tow release mechanism "E85", Issue of March 1989, LBA approved.
6. Operation instruction for the TOST safety tow release mechanism "S72" and "SH72", Issue of May 1975, LBA approved.
7. Operation instruction for the TOST safety tow release mechanism "S72" and "SH72", Issue of July 1989, LBA approved - overhauled tow hook only.
8. Operation and maintenance instruction for tow hook Sonderkuplung "Europa G88", Issue of February 1989, LBA approved.

V. Notes

1. Serial numbers affected.: 4,8,10 and all serial numbers formatted XX-15
2. Type Certification in Czech Republic : Type Certified on April 2nd 1998 by validation of 7th Revision of Type Certificate No.:318 , approved by LBA on November 28th 1990, and by Additional Certification.
3. **EASA TC No. EASA.A.030 has been issued for type Glasflögel 304 CZ Sailplane on February 4, 2005.**

Model Glasflügel 304 CZ-17

I. General

1. Data Sheet No.: 98-03
2. Model: Glasflügel 304 CZ
3. Airworthiness category: Utility
4. Type Certificate Holder: HPH, spol.s r.o.
Čáslavská 126, P. O. Box 112
284 01 Kutná Hora, Česká republika
5. Manufacturer: HPH, spol.s r.o.
Čáslavská 126, P. O. Box 112
284 01 Kutná Hora, Česká republika
6. Application Date: 09.10.2000
7. Certificate Date: 23.10.2000

II. Certification Basis

1. Certification Basis: Airworthiness Requirements for Sailplanes and powered Sailplanes (LFSM), Edition October 23rd, 1975.
2. Special Conditions:
 - Directions for the stress analysis of components for sailplanes constructed from glass fiber reinforced plastic , Edition March 1965
 - Subpart F and G of Joint Aviation Requirements (JAR 22), change 5 , October 28th 1995
 - JAR 22.375 (change 5)
3. Exemptions: None
4. Equivalent Safety Findings: None

III. Technical Characteristics and Operational Limitations

1. Type Design Definition: List of Drawings for Sailplane " Glasfügel 304 B"
Amendment of List for " Glasfügel 304 CZ", dated March 1998.
Amendment of Drawings for Wing Extentions.
2. Description: Single seat mid-wing cantilever sailplane fiber construction, 2-piece wing, trailing edge airbrakes combined with flaps, wing water ballast - polyethylene water ballast tanks, retractable wheel, wheel-brake, tail wheel, T-tail (fixed stabilizer with elevator, fin and rudder), interchangeable winglets and wing extentions for wing span 17,43 m.
3. Equipment: Airspeed indicator up to 270 km/h
Altimeter
4-piece safety harness
Parachute or cushion (thickness approx. 10 cm when compressed)
4. Dimensions: Span: 15 m or 17,43 m
Length: 6,45 m
Height: 1,15 m
Wing Area: 9,88 m² or 10,68 m²
Aspect Ratio: 22,78 or 28,44
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 "SH 72", LBA approved -
No.:60.230/3
or
Safety C.G. tow hook " Europa G 88", LBA approved -
No.:60.230/2.
6. Air Speeds:

| | |
|---|----------|
| Max. permitted V_{NE} , flaps 0,-1,-2 | |
| up to 4000 m MSL | 250 km/h |
| from 4000 to 5000 m MSL | 240 km/h |
| from 5000 to 6000 m MSL | 226 km/h |
| from 6000 to 7000 m MSL | 214 km/h |
| from 7000 to 8000 m MSL | 202 km/h |
| from 8000 to 9000 m MSL | 191 km/h |
| from 9000 to 10000 m MSL | 179 km/h |
| from 10000 to 12000 m MSL | 159 km/h |
| Max. permitted v_{FE} , flaps +1, +2 | 180 km/h |
| Manoeuvring v_A | 180 km/h |
| Rough Air v_{RA} | |

| | | |
|----------------------------------|--|----------|
| | 180 km/h | |
| | Aerotow v_T | 150 km/h |
| | Winch launching v_W | 150 km/h |
| 7. Load factors: | +5,3 / -2,65 at 180 km/h +4 / -1,5 at 250 km/h + 3, airbrakes extended | |
| 8. Weights: | Maximum weight 450 kg Maximum weight of non lifting parts 240 kg | |
| 9. Centre of Gravity Range: | Max. forward c/g position aft of datum: 200 mm Max. rearward c/g position aft of datum: 318 | |
| 10. Datum: | Wing leading edge at root rib | |
| 11. Mean Aerodynamic Cord (MAC): | 0,682 m or 0,625 | |
| 12. Leveling Means: | Wedge 100:5,2 on slope of rear top fuselage to be horizontal | |
| 13. Weak links: | Ultimate strength for winch launching and aerotow max. 6,5 kN | |
| 14. Minimum Flight Crew: | 1 | |
| 15. Number of seats | 1 | |
| 16. Control surface deflections: | Elevator: up and down $17^\circ \pm 2^\circ$ Rudder: right and left: $25^\circ \pm 2^\circ$ Aileron: up $23^\circ \pm 2^\circ$ down $10^\circ \pm 2^\circ$ Flap: up $8^\circ \pm 1,5^\circ$ down $12^\circ \pm 1,5^\circ$ | |
| 17. Wheels and Tyres:: | Main wheel: 5,00-5 Tail wheel: 210x65 | |
| 18. Other Limitations: | <ul style="list-style-type: none"> - Life limited parts refer to the Maintenance Manual - Only industrial production permitted . - All external portions exposed to sunlight must be painted white, except of the areas for the registration and anti-collision markings . - Approved for VFR flying only. | |

IV. Operating and Service Instructions

1. CAA CZ approved Flight Manual "Glasflügel 304 CZ-17", Issue of March 2000
2. Service manual "Glasflügel 304 CZ-17" (Maintenance), Issue of March 2000
3. Operation instruction for the TOST nose tow release mechanism "E72" and "E75", Issue of May 1975, LBA approved.
4. Operation instruction for the TOST nose tow release mechanism "E72" and "E75", Issue of March 1988, LBA approved - for overhauled tow hook only.
5. Operation instruction for the TOST nose tow release mechanism "E85", Issue of March 1989, LBA approved.
6. Operation instruction for the TOST safety tow release mechanism "S72" and "SH72", Issue of May 1975, LBA approved.
7. Operation instruction for the TOST safety tow release mechanism "S72" and "SH72", Issue of July 1989, LBA approved - overhauled tow hook only.
8. Operation and maintenance instruction for tow hook Sonderkupplung "Europa G88", Issue of February 1989, LBA approved.

V. Notes

1. Serial numbers affected 1,2,3,5,6,7,9,11,12,14,15,16,17 and all serial numbers formatted XX-17.
2. Sailplane has been approved in compliance with Subpart B of Joint Aviation Requirements (JAR 22), change 5, October 28th 1995 for 17.43 m configuration.
3. **EASA TC No. EASA.A.030 has been issued for type Glasflügel 304 CZ Sailplane on February 4, 2005.**

Model Glasflügel 304 C

I. General

1. Data Sheet No.: 98-03
2. Model: Glasflügel 304 C
3. Airworthiness category: Utility
4. Type Certificate Holder: HPH, spol.s r.o.
Čáslavská 126, P. O. Box 112
284 01 Kutná Hora, Česká republika
5. Manufacturer: HPH, spol.s r.o.
Čáslavská 126, P. O. Box 112
284 01 Kutná Hora, Česká republika
6. Application Date: 15.11.2000
7. Certificate Date: 25.07.2001

II. Certification basis

1. Certification Basis: Airworthiness Requirements for Sailplanes and powered Sailplanes (LFSM), Edition October 23rd, 1975.
2. Special Conditions:
 - Directions for the stress analysis of components for sailplanes constructed from glass fiber reinforced plastic , Edition March 1965
 - Subpart F and G of Joint Aviation Requirements (JAR 22), change 5 , October 28th 1995
 - JAR 22.375 (change 5)
3. Exemptions: None
4. Equivalent Safety Findings: None

III. Technical Characteristics and Operational Limitations

1. Type Design Definition: List of Drawings for Sailplane " Glasfügel 304 B"
Amendment of List for " Glasfügel 304 CZ", dated March 1998.
Amendment of List for "Glasfügel 304 C"
2. Description: Single seat mid-wing cantilever sailplane fiber construction, 2-piece wing, S-H airbrakes, wing water ballast - polyethylene water ballast tanks, retractable wheel, wheel-brake, tail wheel, T-tail (fixed stabilizer with elevator, fin and rudder) , interchangeable winglets.
3. Equipment: Airspeed indicator up to 270 km/h
Altimeter
4-piece safety harness
Parachute or cushion (thickness approx. 10 cm when compressed)
4. Dimensions: Span: 15 m
Length: 6,45 m
Height: 1,15 m
Wing Area: 9,88 m²
Aspect Ratio: 22,78
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 "SH 72", LBA approved -
No.:60.230/3
or
Safety C.G. tow hook " Europa G 88", LBA approved -
No.:60.230/2.
6. Air Speeds:
Max. permitted V_{NE}

| | |
|---------------------------|----------|
| up to 4000 m MSL | 250 km/h |
| from 4000 to 5000 m MSL | 240 km/h |
| from 5000 to 6000 m MSL | 226 km/h |
| from 6000 to 7000 m MSL | 214 km/h |
| from 7000 to 8000 m MSL | 202 km/h |
| from 8000 to 9000 m MSL | 191 km/h |
| from 9000 to 10000 m MSL | 179 km/h |
| from 10000 to 12000 m MSL | 159 km/h |

Manoeuvring v_A 200 km/h
Rough Air v_{RA} 200 km/h
Aerotow v_T 150 km/h
Winch launching v_W 150 km/h

7. Load factors: +5,3 / -2,65 at 200 km/h
+4 / -1,5 at 250 km/h
+ 3,5 airbrakes extended
8. Weights: Maximum weight 450 kg
Maximum weight of non lifting parts 240 kg
9. Centre of Gravity Range: Max. forward c/g position aft of datum: 200 mm
Max. rearward c/g position aft of datum: 325 mm
10. Datum: Wing leading edge at root rib
11. Mean Aerodynamic Cord (MAC): 0,682 m
12. Leveling Means: Wedge 100:5,2 on slope of rear top fuselage to be horizontal
13. Weak links: Ultimate strength for winch launching and aerotow max. 6,5 kN
14. Minimum Flight Crew: 1
15. Number of seats 1
16. Control surface deflections: Elevator: up and down $17^\circ \pm 2^\circ$
Rudder: right and left: $25^\circ \pm 2^\circ$
Aileron: up $23^\circ \pm 2^\circ$
down $10^\circ \pm 2^\circ$
17. Wheels and Tyres:: Main wheel: 5,00-5
Tail wheel: 210x65
18. Other Limitations:
- Life limited parts refer to the Maintenance Manual
 - Only industrial production permitted .
 - All external portions exposed to sunlight must be painted white, except of the areas for the registration and anti-collision markings .
 - Approved for VFR flying only.

IV. Operating and Service Instructions

1. CAA CZ approved Flight Manual "Glasflügel 304 C", Issue of April 2001
2. Service manual "Glasflügel 304 C"(Maintenance), Issue of April 2001
3. Operation instruction for the TOST nose tow release mechanism "E72" and "E75", Issue of May 1975, LBA approved.
4. Operation instruction for the TOST nose tow release mechanism "E72" and "E75", Issue of March 1988, LBA approved - for overhauled tow hook only.
5. Operation instruction for the TOST nose tow release mechanism "E85", Issue of March 1989, LBA approved.
6. Operation instruction for the TOST safety tow release mechanism "S72" and "SH72", Issue of May 1975, LBA approved.
7. Operation instruction for the TOST safety tow release mechanism "S72" and "SH72", Issue of July 1989, LBA approved - overhauled tow hook only.
8. Operation and maintenance instruction for tow hook Sonderkupplung "Europa G88", Issue of February 1989, LBA approved.

V. Notes

1. Serial numbers affected formatted XX-C.
2. Sailplane has been approved in compliance with Subpart B of Joint Aviation Requirements (JAR 22), change 5 , October 28th 1995 for 17.43 m configuration.
3. **EASA TC No. EASA.A.030 has been issued for type Glasflügel 304 CZ Sailplane on February 4, 2005.**