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## **SECTION A1: GENERAL, Glasflügel 304 CZ Type Design**

### **A1. General**

- Data Sheet No.: EASA.A.030                      Issue: 01                      Date: February 4, 2005
1. a) Type:    Glasflügel 304 CZ  
    b) Variant:                                        Glasflügel 304 CZ
  2. Airworthiness Category:                      Utility
  3. Type Certificate Holder:                      HPH, spol.s r.o.  
    Čáslavská 126,  
    P. O. Box 112  
    284 01 Kutná Hora  
    CZECH REPUBLIC
  4. Manufacturer:                                    HPH, spol.s r.o.  
    Čáslavská 126,  
    P. O. Box 112  
    284 01 Kutná Hora  
    CZECH REPUBLIC
  5. Certification Application Date:                March 20, 1996
  6. CAA CZ certification date:                    April 2, 1998
  7. The EASA Type Certificate replaces the Czech Republic Certificate No. 98-03

### **AII. Certification Basis**

1. Reference Date for determining the applicable requirements:                      March 20, 1996
2. Certification Basis:                                As defined by the CAA CZ letter 1941/720-TI/96/Př dated. March 20, 1996
3. Airworthiness Requirements:                      Airworthiness Requirements for Sailplanes and powered Sailplanes (LFSM), Edition October 23, 1975
4. Requirements elected to comply:                      None
5. EASA 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 28, 1995  
    - JAR 22.375 (change 5)
6. EASA Exemptions:                                    None
7. EASA Equivalent Safety Findings:                None

Comment [JP1]: Stránka: 1  
Dopis

### **AIII. Technical Characteristics and Operational Limitations**

1. Type Design Definition: - List of Drawings for Sailplane "Glasflügel 304 B"  
-Amendment of List for "Glasflügel 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	15.0 m
Length	6.45 m
Height	1.15 m
Wing Area	9.88 m <sup>2</sup>
Aspect Ratio:	22,78
5. Launching Hooks: 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. Weak links: Ultimate strength:

- for winch launching	max. 6500 N
- for aerotow	max. 6500 N
7. Air Speeds:

Manoeuvring Speed $V_A$	200 km/h IAS
Never Exceed Speed $V_{NE}$ , flaps 0,-1,-2	
up to 4000 m MSL	250 km/h IAS
from 4000 to 5000 m MSL	240 km/h IAS
from 5000 to 6000 m MSL	226 km/h IAS
from 6000 to 7000 m MSL	214 km/h IAS
from 7000 to 8000 m MSL	202 km/h IAS
from 8000 to 9000 m MSL	191 km/h IAS
from 9000 to 10000 m MSL	179 km/h IAS
from 10000 to 12000 m MSL	159 km/h IAS
Max. permitted $v_{FE}$ , flaps +1, +2	200 km/h IAS
Rough Air Speed $V_{RA}$	200 km/h IAS
Max. Aerotow Speed $V_T$	150 km/h IAS
Max. Winch-launch Speed $V_W$	150 km/h IAS
8. Operational Capability: VFR Day

9. Maximum Weights:  
Maximum weight: 450 kg  
Maximum weight of non lifting parts: 240 kg
10. 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)  
[MAC is 682 mm]
11. Datum: Wing leading edge at root rib
12. Levelling Means: Wedge 100:5,2 on slope of rear top fuselage to be horizontal
13. Minimum Flight Crew: 1 (Pilot)
14. Maximum Passenger Seating Capacity: ---
15. Lifetime limitations: Refer to Maintenance Manual
16. Deflection angles of control surfaces:
- |           |                 |                              |
|-----------|-----------------|------------------------------|
| 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              | $08^{\circ} \pm 1,5^{\circ}$ |
|           | down            | $12^{\circ} \pm 1,5^{\circ}$ |

#### **AIV. Operating and Service Instructions**

Flight Manual (FM): CAA CZ approved Flight Manual "Glasflügel 304 CZ", Issue of January 1998

Maintenance Manual (AMM)  
(Including Airworthiness Limitations): Service manual "Glasflügel 304 CZ" (Maintenance), Issue of January 1998

Operation instruction for the TOST nose tow release mechanism:  
"E72" and "E75", Issue of May 1975, LBA approved.  
"E72" and "E75", Issue of March 1988, LBA approved - for overhauled tow hook only.  
"E85", Issue of March 1989, LBA approved

Operation instruction for the TOST safety tow release mechanism:  
"S72" and "SH72", Issue of May 1975, LBA approved.  
"S72" and "SH72", Issue of July 1989, LBA approved - overhauled tow hook only.

Tost Manual for the launching hook "Europa G 88", Issue of February 1989, LBA approved.

**AV. Notes**

1. Serial numbers affected.: 4,8,10 and all serial numbers formated XX-15
2. Type Certification in Czech Republic: Type Certified on April 2<sup>nd</sup> 1998 by validation of 7<sup>th</sup> Revision of Type Certificate No.: 318, approved by LBA on November 28th 1990, and by Additional Certification.
3. Only industrial production permitted .
4. All external portions exposed to sunlight must be painted white, except of the areas for the registration and anti-collision markings .

**SECTION A2: Reserved**

**SECTION B1: GENERAL, Glasflügel 304 CZ-17 Type Design**

**B1. General**

Data Sheet No.: EASA.A.030	Issue: 01	Date: February 4, 2005
1. a) Type:	Glasflügel 304 CZ	
b) Variant:	Glasflügel 304 CZ-17	
2. Airworthiness Category:	Utility	
3. Type Certificate Holder:	HPH, spol.s r.o. Čáslavská 126, P. O. Box 112 284 01 Kutná Hora CZECH REPUBLIC	
4. Manufacturer:	HPH, spol.s r.o. Čáslavská 126, P. O. Box 112 284 01 Kutná Hora CZECH REPUBLIC	
5. Certification Application Date:	October 9, 2000	
6. CAA CZ Certification Date:	October 23, 2000	
7. The EASA Type Certificate replaces Czech Republic Type Certificate No. 98-03		

**BII. Certification Basis**

1. Reference Date for determining the applicable requirements:	March 20, 1996
2. Certification Basis:	As defined by the CAA CZ letter 1941/720-TI/96/Př dated. March 20, 1996
3. Airworthiness Requirements:	Airworthiness Requirements for Sailplanes and powered Sailplanes (LFSM), Edition October 23, 1975
4. Requirements elected to comply:	None
5. EASA 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 28, 1995 - JAR 22.375 (change 5)
6. EASA Exemptions:	None
7. EASA Equivalent Safety Findings:	None

**BIII. Technical Characteristics and Operational Limitations**



1. Type Design Definition:
  - List of Drawings for Sailplane " Glasflügel 304 B"
  - Amendment of List for " Glasflügel 304 CZ", dated March 1998.
  - Amendment of Drawings for Wing Extensions.
  
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 extensions 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	15.0 m	optionally	17,43 m
Length	6.45 m		
Height	1.15 m		
Wing Area	9.88 m <sup>2</sup>	optionally	10,68 m <sup>2</sup>
Aspect Ratio:	22,78 or 28,44		
  
5. Launching Hooks:
  - 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. Weak links:
 

Ultimate strength for winch launching and aerotow max. 6500 N
  
7. Air Speeds:
 

Manoeuvring Speed $V_A$	180 km/h IAS
Never Exceed Speed $V_{NE}$ , flaps 0,-1,-2	
up to 4000 m MSL	250 km/h IAS
from 4000 to 5000 m MSL	240 km/h IAS
from 5000 to 6000 m MSL	226 km/h IAS
from 6000 to 7000 m MSL	214 km/h IAS
from 7000 to 8000 m MSL	202 km/h IAS
from 8000 to 9000 m MSL	191 km/h IAS
from 9000 to 10000 m MSL	179 km/h IAS
from 10000 to 12000 m MSL	159 km/h IAS
Max. permitted $v_{FE}$ , flaps +1, +2	180 km/h IAS
Rough Air Speed $V_{RA}$	180 km/h IAS
Max. Aerotow Speed $V_T$	150 km/h IAS
Max. Winch-launch Speed $V_W$	150 km/h IAS

8. Operational Capability: VFR Day
9. Maximum Weights:  
Maximum weight 450 kg  
Maximum weight of non lifting parts 240 kg
10. Centre of Gravity Range: Max. forward c/g position aft of datum: 200 mm  
Max. rearward c/g position aft of datum: 318  
[MAC is 682 mm or 625 mm]
11. Datum: Wing leading edge at root rib
12. Levelling Means: Wedge 100:5,2 on slope of rear top fuselage to be horizontal
13. Minimum Flight Crew: 1 (Pilot)
14. Maximum Passenger Seating Capacity: ---
15. Lifetime limitations: Refer to Maintenance Manual
16. Deflection angles of control surfaces:
- |           |                 |                              |
|-----------|-----------------|------------------------------|
| 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              | $08^{\circ} \pm 1,5^{\circ}$ |
|           | down            | $12^{\circ} \pm 1,5^{\circ}$ |

#### **BIV. Operating and Service Instructions**

Flight Manual (FM): CAA CZ approved Flight Manual "Glasflügel 304 CZ-17", Issue of March 2000

Maintenance Manual (AMM)  
(Including Airworthiness Limitations): Service manual "Glasflügel 304 CZ-17" (Maintenance), Issue of March 2000

Operation instruction for the TOST nose tow release mechanism:  
"E72" and "E75", Issue of May 1975, LBA approved.  
"E72" and "E75", Issue of March 1988, LBA approved - for overhauled tow hook only.  
"E85", Issue of March 1989, LBA approved

Operation instruction for the TOST safety tow release mechanism:  
"S72" and "SH72", Issue of May 1975, LBA approved.  
"S72" and "SH72", Issue of July 1989, LBA approved - overhauled tow hook only.

Tost Manual for the launching hook "Europa G 88", Issue of February 1989, LBA approved.

**BV.** **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 28<sup>th</sup> 1995 for 17.43 m configuration
3. Only industrial production permitted.
4. All external portions exposed to sunlight must be painted white, except of the areas for the registration and anti-collision markings.

**SECTION B2: Reserved**

## **SECTION C1: GENERAL, Glasflügel 304 C Type Design**

### **C1. General**

Data Sheet No.: EASA.A.030	Issue: 01	Date: February 4, 2005
1. a) Type:	Glasflügel 304 CZ	
b) Variant:	Glasflügel 304 C	
2. Airworthiness Category:	Utility	
3. Type Certificate Holder:	HPH, spol.s r.o. Čáslavská 126, P. O. Box 112 284 01 Kutná Hora CZECH REPUBLIC	
4. Manufacturer:	HPH, spol.s r.o. Čáslavská 126, P. O. Box 112 284 01 Kutná Hora CZECH REPUBLIC	
5. Certification Application Date:	November 15, 2000	
6. CAA CZ Certification Date:	July 25, 2001	
7. The EASA Type Certificate replaces Czech Republic Type Certificate No. 98-03		

### **CII. Certification Basis**

1. Reference Date for determining the applicable requirements:	March 20, 1996
2. Certification Basis:	As defined by the CAA CZ letter 15511/4081-TI/00/Sh dated 1. March 2000
3. Airworthiness Requirements:	Airworthiness Requirements for Sailplanes and powered Sailplanes (LFSM), Edition October 23, 1975
4. Requirements elected to comply:	None
5. EASA 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 28, 1995 - JAR 22.375 (change 5)
6. EASA Exemptions:	None
7. EASA Equivalent Safety Findings:	None

Comment [JP2]: Stránka: 1  
Dopis

### **CIII. Technical Characteristics and Operational Limitations**

1. Type Design Definition: -List of Drawings for Sailplane " Glasflügel 304 B"  
-Amendment of List for " Glasflügel 304 CZ", dated March 1998.  
-Amendment of List for "Glasflügel 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	15.0 m
Length	6.45 m
Height	1.15 m
Wing Area	9.88 m <sup>2</sup>
Aspect Ratio:	22,78
5. Launching Hooks: 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. Weak links: Ultimate strength for winch launching and aerotow max. 6500 N
7. Air Speeds:

Manoeuvring Speed $V_A$ , flaps +1, +2	200 km/h IAS
Never Exceed Speed $V_{NE}$ , flaps 0,-1,-2	
up to 4000 m MSL	250 km/h IAS
from 4000 to 5000 m MSL	240 km/h IAS
from 5000 to 6000 m MSL	226 km/h IAS
from 6000 to 7000 m MSL	214 km/h IAS
from 7000 to 8000 m MSL	202 km/h IAS
from 8000 to 9000 m MSL	191 km/h IAS
from 9000 to 10000 m MSL	179 km/h IAS
from 10000 to 12000 m MSL	159 km/h IAS
Rough Air Speed $V_{RA}$	200 km/h IAS
Max. Aerotow Speed $V_T$	150 km/h IAS
Max. Winch-launch Speed $V_W$	150 km/h IAS
8. Operational Capability: VFR Day

9. Maximum Weights:  
Maximum weight 450 kg  
Maximum weight of non lifting parts 240 kg
10. Centre of Gravity Range: Max. forward c/g position aft of datum: 200 mm  
Max. rearward c/g position aft of datum: 325 mm  
[MAC is 682 mm]
11. Datum: Wing leading edge at root rib
12. Levelling Means: Wedge 100:5,2 on slope of rear top fuselage to be horizontal
13. Minimum Flight Crew: 1 (Pilot)
14. Maximum Passenger Seating Capacity: ---
15. Lifetime limitations: Refer to Maintenance Manual
16. Deflection angles of control surfaces:
- |           |                 |                            |
|-----------|-----------------|----------------------------|
| 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            | $10^{\circ} \pm 2^{\circ}$ |

#### **CIV. Operating and Service Instructions**

Flight Manual (FM): CAA CZ approved Flight Manual "Glasflügel 304 C", Issue of April 2001

Maintenance Manual (AMM)  
(Including Airworthiness Limitations): Service manual "Glasflügel 304 C" (Maintenance), Issue of April 2001

Operation instruction for the TOST nose tow release mechanism:  
"E72" and "E75", Issue of May 1975, LBA approved.  
"E72" and "E75", Issue of March 1988, LBA approved - for overhauled tow hook only.  
"E85", Issue of March 1989, LBA approved

Operation instruction for the TOST safety tow release mechanism:  
"S72" and "SH72", Issue of May 1975, LBA approved.  
"S72" and "SH72", Issue of July 1989, LBA approved - overhauled tow hook only.

Tost Manual for the launching hook "Europa G 88", Issue of February 1989, LBA approved.

**CV. Notes**

1. Serial numbers affected are formatted XX-C.
2. Sailplane has been approved in compliance with Subpart B of Joint Aviation Requirements (JAR 22), change 5, October 28<sup>th</sup> 1995 for 17.43 m configuration
3. Only industrial production permitted.
4. All external portions exposed to sunlight must be painted white, except of the areas for the registration and anti-collision markings.



**SECTION C2: Reserved**