TYPE-CERTIFICATE DATA SHEET

No. EASA.A.635

for

Phoenix / Phoebus Sailplanes

Type Certificate Holder

Airbus Defence and Space GmbH

Willy-Messerschmitt-Strasse 1
82024 Taufkirchen
Germany

Models: FS 24 “Phoenix”
FS 24 “Phoenix T0”
FS 24 “Phoenix T”
Phoebus A1
Phoebus A0
Phoebus B1
Phoebus C

Issue 01, 20/09/2016

Table of Content

SECTION A: FS 24 “PHOENIX”

A.I General

1. Type/ Model/ Variant
   - 1.1 Type: FS 24 “Phoenix”
   - 1.2 Model: FS 24 “Phoenix”
2. Airworthiness Category Sailplane
3. Manufacturer

   Akademische Fliegergruppe Stuttgart e.V.
   Abteilung Industrie Entwicklung Stuttgart
   Pfaffenwaldring 35
   70569 Stuttgart
   Deutschland
4. State of Design Authority

   Germany
5. State of Design Authority Type Certificate Date

   LBA Type Certificate Date: 31 January 1959
   Supplemented: 25 July 1962

A.II EASA Certification Basis

1. Reference Date for determining the applicable requirements

   Letter from LBA dated 24 October 1955
2. Airworthiness Requirements

   Bauvorschriften für Segelflugzeuge (BVS)
   Heft 1 bis 3, Issue August 1939,
   In combination with:
   British Civil Airworthiness Requirements (BCAR)
   Section E “Gliders”
   Subsection 2 “Flight”
   „Vorläufige Lufttüchtigkeitsrichtlinien für Schleppflug“, Issue 1955
   „Sondervereinbarungen im Hinblick auf neue Bauweise“, Issue 1955
3. Special Conditions

   None
4. Exemptions

   None
5. Equivalent Safety Findings

   None
6. Environmental Protection

   N/A

A.III Technical Characteristics and Operational Limitations

1. Type Design Definition

   Drawing set FS 24 “Phoenix” dated December 1958

2. Description

   Single-seat midwing cantilever sailplane, laminar airfoil, standard empennage, blown canopy, skid, wing unit, empennage and fuselage produced as sandwich shells with glass fibre reinforced polyester resin top layers.

3. Equipment

   Min. equipment:

   1 Air speed indicator

   1 Altimeter

   1 four-point harness

4. Dimensions

   Span: 16 m

5. Launching Hooks

   Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2

6. Weak Links

   min. 440 kg max. 560 kg

7. Load Factors

   +4 / -2 as defined in BVS

8. Air Speeds

   Maximum permitted speeds:

   For auto-tow and winch launching: 90 km/h

   For aero-tow: 105 km/h

   In rough air: 105 km/h

   In smooth air: 175 km/h

9. Approved Operations Capability

   VFR-Day

10. Maximum Masses

    Max. Mass: 265 kg

    Max. Mass of non-lifting parts: 170 kg

11. Centre of Gravity Range

    Forward limit: 315 mm

    Rearward limit: 390 mm

12. Datum

    wing leading edge

13. Levelling Means

    bottom side of rear fuselage horizontal

14. Control Surface Deflections

    refer to flight and operations manual

15. Minimum Flight Crew

    1

16. Maximum Passenger Seating Capacity

    0

17. Baggage/ Cargo Compartments

    refer to flight and operations manual

18. Lifetime limitations

    refer to flight and operations manual

A.IV Operating and Service Instructions

1. Flight Manual

   Operation Manual FS 24 “Phoenix”, Issue August 1958, DVL-PfL approved

2. Maintenance Manual

   Operation Manual FS 24 “Phoenix”, Issue August 1958, DVL-PfL approved

3. Structural Repair Manual

   N/A

4. Operating Manual for the Launching Hooks

   Manual for the TOST Release, latest approved version

A.V Notes

For all major repair work contact the technical expert and spare parts supplier
Fiberglas-Technik Rudolf Lindner GmbH & Co.KG, Steige 3, D-88487 Walpertshofen, Germany
Certification is limited to serial numbers 1 to 6
Operation is limited to a maximum laminate temperature of 35°C due to the polyester resin system.

SECTION B: FS 24 “PHOENIX T0”

B.I General

1. Type/ Model/ Variant
   - 1.1 Type: FS 24 “Phoenix”
   - 1.2 Model: FS 24 “Phoenix T0”
2. Airworthiness Category Sailplane
3. Manufacturer
   Apparatebau Nabern GmbH, Nabern/Teck
4. State of Design Authority
   Germany
5. State of Design Authority Type Certificate Date
   LBA Type Certificate Date: 30 May 1960
   Supplemented: 25 July 1962

B.II EASA Certification Basis

1. Reference Date for determining the applicable requirements
   Letter from LBA dated 24 October 1955
2. Airworthiness Requirements
   Bauvorschriften für Segelflugzeuge (BVS)
   Heft 1 bis 3, Issue August 1939,
   In combination with:
   British Civil Airworthiness Requirements (BCAR)
   Section E “Gliders”
   Subsection 2 “Flight”
   Vorläufige Lufttüchtigkeitsrichtlinien für Schleppflug, Issue 1955
   „Sondervereinbarungen im Hinblick auf neue Bauweise“, Issue 1955
3. Special Conditions
   None
4. Exemptions
   None
5. Equivalent Safety Findings
   None
6. Environmental Protection
   N/A

B.III Technical Characteristics and Operational Limitations

1. Type Design Definition
   Drawing set FS 24 “Phoenix T0” dated June 1960

2. Description

   Single-seated midwing cantilever sailplane, laminar airfoil, standard empennage, blown canopy, retractable mono-wheel, wing unit, T tail unit and fuselage made of sandwich panel with glass fibre reinforced polyester resin top layers.

3. Equipment

   Min. equipment:

   1 Air speed indicator

   1 Altimeter

   1 four-point harness

4. Dimensions

   Span: 16 m

5. Launching Hooks

   Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2

6. Weak Links

   For winch launching: min. 525kg, max. 685kg

   For aero-tow: min. 300kg, max. 450kg

7. Load Factors

   +4 / -2 as defined in BVS

8. Air Speeds

   Maximum permitted speeds:

   For auto-tow and winch launching: 95 km/h

   For aero-tow: 125 km/h

   In rough air: 125 km/h

   In smooth air: 180 km/h

9. Approved Operations Capability

   VFR-Day

10. Maximum Masses

    Max. Mass: 300kg

    Max. Mass of non-lifting parts: 205kg

11. Centre of Gravity Range

    Forward limit: 320mm

    Rearward limit: 385mm

12. Datum

    wing leading edge

13. Levelling Means

    bottom side of fuselage rearward horizontal

14. Control Surface Deflections

    refer to flight and operations manual

15. Minimum Flight Crew

    1

16. Maximum Passenger Seating Capacity

    0

17. Baggage/ Cargo Compartments
    refer to flight and operations manual
18. Lifetime limitations
    refer to flight and operations manual

B.IV Operating and Service Instructions

1. Flight and Operation Manual
   Flight and Operation Manual FS 24 “Phoenix T0”, Issue June 1960, DVL-PfL approved
   Placard
   Trimming plan
2. Maintenance Manual
   Flight and Operation Manual FS 24 “Phoenix T0”, Issue June 1960, DVL-PfL approved
3. Structural Repair Manual
   N/A
4. Operating Manual for the Launching Hooks
   Manual for the TOST Release, latest approved version

B.V Notes

For all major repair work contact the technical expert and spare parts supplier
Fiberglas-Technik Rudolf Lindner GmbH & Co.KG, Steige 3, D-88487 Walpertshofen, Germany
Certification is limited to serial numbers 402 and 403
Operation is limited to a maximum laminate temperature of 35°C due to the polyester resin system.

SECTION C: FS 24 “PHOENIX T”

C.I General

1. Type/ Model/ Variant
   - 1.1 Type: FS 24 “Phoenix”
   - 1.2 Model: FS 24 “Phoenix T”
2. Airworthiness Category Sailplane
3. Manufacturer
   Apparatebau Nabern GmbH, Nabern/Teck
4. State of Design Authority
   Germany
5. State of Design Authority Type Certificate Date
   LBA Type Certificate Date: 12 April 1961
   Supplemented: 25 July 1962

C.II EASA Certification Basis

1. Reference Date for determining the applicable requirements
   Letter from LBA dated 24 October 1955
2. Airworthiness Requirements
   Bauvorschriften für Segelflugzeuge (BVS)
   Heft 1 bis 3, Issue August 1939,
   In combination with:
   British Civil Airworthiness Requirements (BCAR)
   Section E “Gliders”
   Subsection 2 “Flight”
   „Vorläufige Lufttüchtigkeitsrichtlinien für Schleppflug“, Issue 1955
   „Sondervereinbarungen im Hinblick auf neue Bauweise“, Issue 1955
3. Special Conditions
   None
4. Exemptions
   None
5. Equivalent Safety Findings
   None
6. Environmental Protection
   N/A

C.III Technical Characteristics and Operational Limitations

1. Type Design Definition

   Drawing set FS 24 “Phoenix T” dated April 1961

2. Description

   Single-seated midwing cantilever sailplane, laminar airfoil, standard empennage, blown canopy, retractable mono-wheel, wing unit, T tail unit and fuselage made of sandwich panel with glass fibre reinforced polyester resin top layers.

3. Equipment

   Min. equipment:

   1 Air speed indicator

   1 Altimeter

   1 four-point harness

4. Dimensions

   Span: 16 m

5. Launching Hooks

   Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2

6. Weak Links

   For winch launching: min. 580kg, max. 685kg

   For aero-tow: min. 330kg, max. 495kg

7. Load Factors

   +4 / -2 as defined in BVS

8. Air Speeds

   Maximum permitted speeds:

   For auto-tow and winch launching: 95 km/h

   For aero-tow: 125 km/h

   In rough air: 125 km/h

   In smooth air: 180 km/h

9. Approved Operations Capability

   VFR-Day

10. Maximum Masses

    Max. Mass: 330kg

    Max. Mass of non-lifting parts: 205kg

11. Centre of Gravity Range

    Forward limit: 320mm

    Rearward limit: 440mm

12. Datum

    wing leading edge

13. Levelling Means

    bottom side of fuselage rearward horizontal

14. Control Surface Deflections

    refer to flight and operations manual

15. Minimum Flight Crew

    1

16. Maximum Passenger Seating Capacity

    0

17. Baggage/ Cargo Compartments

    refer to flight and operations manual

18. Lifetime limitations

    refer to flight and operations manual

C.IV Operating and Service Instructions

1. Flight Manual

   Flight and Operation Manual “FS 24 Phoenix T”, Issue March 1961, DVL-PfL approved

2. Maintenance Manual

   Flight and Operation Manual “FS 24 Phoenix T”, Issue March 1961, DVL-PfL approved

3. Structural Repair Manual

   N/A

4. Operating Manual for the Launching Hooks

   Manual for the TOST Release, latest approved version

C.V Notes

For all major repair work contact the technical expert and spare parts supplier
Fiberglas-Technik Rudolf Lindner GmbH & Co.KG, Steige 3, D-88487 Walpertshofen, Germany
Certification is limited to serial numbers 404 to 416
Operation is limited to a maximum laminate temperature of 35°C due to the polyester resin system.

SECTION D: PHOEBUS A1

D.I General

1. Type/ Model/ Variant
   - 1.1 Type: Phoebus A1
   - 1.2 Model: Phoebus A1
2. Airworthiness Category Sailplane
3. Manufacturer

   Firma Waggon- und Maschinenbau AG
   Donauwörth, Werk Laupheim
   Formerly: Bölkow Apparatebau GmbH, Nabern/Teck, Werk Laupheim
   Firma Fiberglas-Technik Rudolf Lindner
   7959 Walpertshofen
4. State of Design Authority

   Germany
5. State of Design Authority Type Certificate Date

   LBA Type Certificate Date: 17 February 1966

D.II EASA Certification Basis

1. Reference Date for determining the applicable requirements

   Letter from LBA dated 5 October 1963
2. Airworthiness Requirements

   Bauvorschriften für Segelflugzeuge (BVS)
   Heft 1 bis 3, Issue August 1939,
   In combination with:
   British Civil Airworthiness Requirements (BCAR)
   Section E “Gliders”
   Subsection 2 “Flight”
   Vorläufige Lufttüchtigkeitsrichtlinien für Schleppflug, Issue 1955
   „Richtlinien zur Führung des Festigkeitsnachweises für Bauteile aus glasfaserverstärkten Kunststoffen von Segelflugzeugen“, Issue March 1965
3. Special Conditions

   None
4. Exemptions

   None
5. Equivalent Safety Findings

   None
6. Environmental Protection

   N/A

D.III Technical Characteristics and Operational Limitations

1. Type Design Definition

   Drawing set Phoebus A1 dated February 1966

2. Description

   Single-seated midwing cantilever sailplane in CRP-balsa design, T-type all flying horizontal tailplane, dive brakes, fuselage with fixed wheel with wheel brake

3. Equipment

   Min. equipment:

   1 Air speed indicator (up to 250 km/h)

   1 Altimeter

   1 four-point harness (4-part-safety belt with scissor-type lock)

   1 cushion for back rest or parachute (Back pad if no parachute is used)

4. Dimensions

   Span: 15 m

5. Launching Hooks

   Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2

6. Weak Links

   For winch launching min. 613 kp, max. 1000kp

   For aero-tow min. 350 kp, max. 525 kp

7. Load Factors

   +4 / -2 as defined in BVS

8. Air Speeds

   Maximum permitted speeds:

   For auto-tow and winch launching: 120 km/h

   For aero-tow: 180 km/h

   In rough air: 200 km/h

   In smooth air: 200 km/h

9. Approved Operations Capability

   VFR-Day

10. Maximum Masses

    Max. Mass: 350 kg

    Max. Mass of non-lifting parts: 230 kg

11. Centre of Gravity Range

    Forward limit: 2230 mm (aft of datum point)

    Rearward limit: 2440 mm (aft of datum point)

12. Datum

    2000 mm before wing leading edge

13. Levelling Means

    Trapezoidal template on top of fuselage horizontal (refer to Flight and Operations Manual)

14. Control Surface Deflections

Aileron: 140 ± 15 mm up
70 ± 10 mm down
Datum point from aileron axis: 209 mm

Rudder: 340 ± 20 mm right and left
Datum point from rudder axis: 550 mm

Elevator: 80 ± 10 mm up and down
Datum point from elevator axis: 394 mm

15. Minimum Flight Crew

1

16. Maximum Passenger Seating Capacity

0

17. Baggage/ Cargo Compartments

refer to flight and operations manual

18. Lifetime limitations

refer to flight and operations manual

D.IV Operating and Service Instructions

1. Flight Manual

Flight and Maintenance Manual “Phoebus”, Issue January 1966, DVL-PfL approved

2. Maintenance Manual

Flight and Maintenance Manual “Phoebus”, Issue January 1966, DVL-PfL approved

3. Structural Repair Manual

Flight and Maintenance Manual “Phoebus”, Issue January 1966, DVL-PfL approved

4. Operating Manual for the Launching Hooks

Manual for the TOST Release, latest approved version

D.V Notes

1. Manufacturing is confined to industrial production
2. All parts of the airframe, exposed to sun radiation – except the areas for markings and registration as specified by the manufacturer – must have a white colour surface

SECTION E: PHOEBUS A0

E.I General

1. Type/ Model/ Variant
   - 1.1 Type: Phoebus A1
   - 1.2 Model: Phoebus A0
2. Airworthiness Category Sailplane
3. Manufacturer

   Firma Waggon- und Maschinenbau AG
   Donauwörth, Werk Laupheim
   Formerly: Bölkow Apparatebau GmbH, Nabern/Teck, Werk Laupheim
   Firma Fiberglas-Technik Rudolf Lindner
   7959 Walpertshofen
4. State of Design Authority

   Germany
5. State of Design Authority Type Certificate Date

   LBA Type Certificate Date: 23 May 1966

E.II EASA Certification Basis

1. Reference Date for determining the applicable requirements

   Letter from LBA dated 23 May 1966
2. Airworthiness Requirements

   Bauvorschriften für Segelflugzeuge (BVS)
   Heft 1 bis 3, Issue August 1939,
   In combination with:
   British Civil Airworthiness Requirements (BCAR)
   Section E “Gliders”
   Subsection 2 “Flight”
   Vorläufige Lufttüchtigkeitsrichtlinien für Schleppflug, Issue 1955
   „Richtlinien zur Führung des Festigkeitsnachweises für Bauteile aus glasfaserverstärkten Kunststoffen von Segelflugzeugen, Issue March 1965
3. Special Conditions

   None
4. Exemptions

   None
5. Equivalent Safety Findings

   None
6. Environmental Protection

   N/A

E.III Technical Characteristics and Operational Limitations

1. Type Design Definition

   Drawing set Phoebus A0 dated May 1966

2. Description

   Single-seated midwing cantilever sailplane in CRP-balsa design, T-type all flying horizontal tailplane, dive brakes, fuselage with fixed wheel with wheel brake

3. Equipment

   Min. equipment:

   1 Air speed indicator (up to 250 km/h)

   1 Altimeter

   1 four-point harness

   1 cushion for back rest or parachute

4. Dimensions

   Span: 15 m

5. Launching Hooks

   Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2

6. Weak Links

   For winch launching min. 613 kp, max. 1000kp

   For aero-tow min. 350 kp, max. 525 kp

7. Load Factors

   +4 / -2 as defined in BVS

8. Air Speeds

   Maximum permitted speeds:

   For auto-tow and winch launching: 120 km/h

   For aero-tow: 180 km/h

   In rough air: 200 km/h

   In smooth air: 200 km/h

9. Approved Operations Capability

   VFR-Day

10. Maximum Masses

    Max. Mass: 350 kp

    Max. Mass of non-lifting parts: 230 kp

11. Centre of Gravity Range

    Forward limit: 2230 mm (aft of datum point)

    Rearward limit: 2440 mm (aft of datum point)

12. Datum

    2000 mm before wing leading edge

13. Levelling Means

    Trapezoidal template on top of fuselage horizontal (refer to Flight and Operations Manual)

14. Control Surface Deflections

Aileron: 140 ± 15 mm up
70 ± 10 mm down
Datum point from aileron axis: 209 mm
Rudder: 340 ± 20 mm right and left
Datum point from rudder axis: 550 mm
Elevator: 80 ± 10 mm up and down
Datum point from elevator axis: 394 mm

15. Minimum Flight Crew

1

16. Maximum Passenger Seating Capacity

0

17. Baggage/ Cargo Compartments

refer to flight and operations manual

18. Lifetime limitations

refer to flight and operations manual

E.IV Operating and Service Instructions

1. Flight Manual

Flight and Maintenance Manual “Phoebus A0”, Issue May 1966, DVL-PfL approved

2. Maintenance Manual

Flight and Maintenance Manual “Phoebus A0”, Issue May 1966, DVL-PfL approved

3. Structural Repair Manual

Flight and Maintenance Manual “Phoebus A0”, Issue May 1966, DVL-PfL approved

4. Operating Manual for the Launching Hooks

Manual for the TOST Release, latest approved version

E.V Notes

1. Manufacturing is confined to industrial production
2. All parts of the airframe, exposed to sun radiation – except the areas for markings and registration as specified by the manufacturer – must have a white colour surface

SECTION F: PHOEBUS B1

F.I General

1. Type/ Model/ Variant
   - 1.1 Type: Phoebus A1
   - 1.2 Model: Phoebus B1
2. Airworthiness Category Sailplane
3. Manufacturer

   Firma Waggon- und Maschinenbau AG

   Donauwörth, Werk Laupheim

   Formerly: Bölkow Apparatebau GmbH, Nabern/Teck, Werk Laupheim

   Firma Fiberglas-Technik Rudolf Lindner

   7959 Walpertshofen
4. State of Design Authority

   Germany
5. State of Design Authority Type Certificate Date

   LBA Type Certificate Date: 11 October 1966

F.II EASA Certification Basis

1. Reference Date for determining the applicable requirements

   Letter from LBA dated 23 May 1966
2. Airworthiness Requirements

   Bauvorschriften für Segelflugzeuge (BVS)

   Heft 1 bis 3, Issue August 1939,

   In combination with:

   British Civil Airworthiness Requirements (BCAR)

   Section E “Gliders”

   Subsection 2 “Flight”

   Vorläufige Lufttüchtigkeitsrichtlinien für Schleppflug, Issue 1955

   „Richtlinien zur Führung des Festigkeitsnachweises für Bauteile aus glasfaserverstärkten Kunststoffen von Segelflugzeugen, Issue March 1965

   Lufttüchtigkeitsforderungen für Segelflugzeuge (LFS), Issue 1966
3. Special Conditions

   None
4. Exemptions

   None
5. Equivalent Safety Findings

   None
6. Environmental Protection

   N/A

F.III Technical Characteristics and Operational Limitations

1. Type Design Definition

   Drawing set Phoebus B1 dated October 1966

2. Description

   Single-seated midwing cantilever sailplane in CRP-balsa design, T-type all flying horizontal tailplane, dive brakes, fuselage with retractable wheel with wheel brake, water tanks in the wings (optional), brake parachute in the rudder (optional)

3. Equipment

   Min. equipment:

   1 Air speed indicator (up to 250 km/h)

   1 Altimeter

   1 four-point harness

   1 cushion for back rest or parachute

4. Dimensions

   Span: 15 m

5. Launching Hooks

   Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2

6. Weak Links

   With water ballast:

   For winch launching min. 759 kp, max. 1000kp

   For aero-tow min. 434 kp, max. 651 kp

   Without water ballast:

   For winch launching min. 613 kp, max. 1000kp

   For aero-tow min. 350 kp, max. 525 kp

7. Load Factors

   +4 / -2 as defined in BVS

8. Air Speeds

   Maximum permitted speeds:

   For auto-tow and winch launching: 120 km/h

   For aero-tow: 180 km/h

   In rough air: 200 km/h

   In smooth air: 200 km/h

9. Approved Operations Capability

   VFR-Day

10. Maximum Masses

    Max. Mass with water ballast: 434 kg

    Max. Mass without water ballast: 350 kg

    Max. Mass of non-lifting parts: 230 kg

11. Centre of Gravity Range

    Forward limit: 2230 mm (aft of datum point)

    Rearward limit: 2440 mm (aft of datum point)

12. Datum

    2000 mm before wing leading edge

13. Levelling Means

    Trapezoidal template on top of fuselage horizontal (refer to Flight and Operations Manual)

14. Control Surface Deflections

    Aileron: 140 ± 15 mm up

    70 ± 10 mm down

    Datum point from aileron axis: 209 mm

    Rudder: 340 ± 20 mm right and left

    Datum point from rudder axis: 550 mm

    Elevator: 80 ± 10 mm up and down

    Datum point from elevator axis: 394 mm

15. Minimum Flight Crew

    1

16. Maximum Passenger Seating Capacity

    0

17. Baggage/ Cargo Compartments

    refer to flight and operations manual

18. Lifetime limitations

    refer to flight and operations manual

F.IV Operating and Service Instructions

1. Flight Manual

   Flight and Maintenance Manual “Phoebus B1”, Issue June 1966, DVL-PfL approved

   If water tanks are installed:

   Flight and Operation Manual “Phoebus B1”, Issue June 1970, LBA approved

2. Maintenance Manual

   Flight and Maintenance Manual “Phoebus B1”

   If water tanks are installed:

   Flight and Operation Manual “Phoebus B1” with supplement for water tank system

3. Structural Repair Manual

   Flight and Maintenance Manual “Phoebus B1”

   If water tanks are installed:

   Flight and Operation Manual “Phoebus B1” with supplement for water tank system

4. Operating Manual for the Launching Hooks

   Manual for the TOST Release, latest approved version

F.V Notes

1. Installation of a brake parachute according to Technical Note No. 252-1, dated 30 November 1968, is permissible. Installation must be accomplished by the manufacturer or by an approved repair shop authorized by the manufacturer.
2. Operation with water ballast is permissible provided a brake parachtue according to Technical Note No. 252-1 is installed.
3. Manufacturing is confined to industrial production
4. All parts of the airframe, exposed to sun radiation – except the areas for markings and registration as specified by the manufacturer – must have a white colour surface

SECTION G: PHOEBUS C

G.I General

1. Type/ Model/ Variant
   - 1.1 Type: Phoebus A1
   - 1.2 Model: Phoebus C
2. Airworthiness Category Sailplane
3. Manufacturer

   Firma Waggon- und Maschinenbau AG

   Donauwörth, Werk Laupheim

   Formerly: Bölkow Apparatebau GmbH, Nabern/Teck, Werk Laupheim

   Firma Fiberglas-Technik Rudolf Lindner

   7959 Walpertshofen
4. State of Design Authority

   Germany
5. State of Design Authority Type Certificate Date

   LBA Type Certificate Date: 8 February 1968

G.II EASA Certification Basis

1. Reference Date for determining the applicable requirements

   Letter from LBA dated 10 April 1967
2. Airworthiness Requirements

   Bauvorschriften für Segelflugzeuge (BVS)

   Heft 1, Issue August 1939,

   In combination with:

   Lufttüchtigkeitsforderungen für Segelflugzeuge (LFS), Issue 1966

   „Richtlinien zur Führung des Festigkeitsnachweises für Bauteile aus glasfaserverstärkten Kunststoffen von Segelflugzeugen, Issue March 1965
3. Special Conditions

   None
4. Exemptions

   None
5. Equivalent Safety Findings

   None
6. Environmental Protection

   N/A

G.III Technical Characteristics and Operational Limitations

1. Type Design Definition

   Drawing set Phoebus C dated January 1967

2. Description

   Single-seated midwing cantilever sailplane in CRP-balsa design, T-type all flying horizontal tailplane, dive brakes, fuselage with retractable wheel with wheel brake, water tanks in the wings (optional), brake parachute in the rudder (optional)

3. Equipment

   Min. equipment:

   1 Air speed indicator (up to 250 km/h)

   1 Altimeter

   1 four-point harness

   1 cushion for back rest or parachute

4. Dimensions

   Span: 17 m

5. Launching Hooks

   Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2

6. Weak Links

   With water ballast:

   For winch launching min. 803 kp, max. 1000kp

   For aero-tow min. 459 kp, max. 689 kp

   Without water ballast:

   For winch launching min. 656 kp, max. 1000kp

   For aero-tow min. 375 kp, max. 562 kp

7. Load Factors

   +4 / -2 as defined in BVS

8. Air Speeds

   Maximum permitted speeds:

   For auto-tow and winch launching: 120 km/h

   For aero-tow: 180 km/h

   In rough air: 200 km/h

   In smooth air: 200 km/h

9. Approved Operations Capability

   VFR-Day

10. Maximum Masses

    Max. Mass with water ballast: 459 kg

    Max. Mass without water ballast: 375 kg

    Max. Mass of non-lifting parts: 230 kg

11. Centre of Gravity Range

    Forward limit: 2250 mm (aft of datum point)

    Rearward limit: 2420 mm (aft of datum point)

12. Datum

    2000 mm before wing leading edge

13. Levelling Means

    Trapezoidal template on top of fuselage horizontal (refer to Flight and Operations Manual)

14. Control Surface Deflections

    Aileron: 133 ± 15 mm up

    68 ± 10 mm down

    Datum point from aileron axis: 200 mm

    Rudder: 340 ± 20 mm right and left

    Datum point from rudder axis: 550 mm

    Elevator: 80 ± 10 mm up and down

    Datum point from elevator axis: 394 mm

15. Minimum Flight Crew

    1

16. Maximum Passenger Seating Capacity

    0

17. Baggage/ Cargo Compartments

    refer to flight and operations manual

18. Lifetime limitations

    refer to flight and operations manual

G.IV <u>Operating and Service Instructions</u>

1. Flight Manual

   Flight Manual “Phoebus C”, Issue January 1968,

   If water tanks are installed:

   Flight Manual “Phoebus C”, Issue June 1970, LBA approved

2. Maintenance Manual

   Operations Manual “Phoebus C”

   If water tanks are installed:

   Operations Manual “Phoebus C with supplement for water tank system

3. Structural Repair Manual

   Flight Manual “Phoebus C”, Issue January 1968,

   If water tanks are installed:

   Flight Manual “Phoebus C”, Issue June 1970, LBA approved

4. Operating Manual for the Launching Hooks

   Manual for the TOST Release, latest approved version

G.V Notes

1. Installation of a brake parachute according to Technical Note No. 252-1, dated 30 November 1968, is permissible. Installation must be accomplished by the manufacturer or by an approved repair shop authorized by the manufacturer.
2. Operation with water ballast is permissible provided a brake parachtue according to Technical Note No. 252-1 is installed.
3. Manufacturing is confined to industrial production
4. All parts of the airframe, exposed to sun radiation – except the areas for markings and registration as specified by the manufacturer – must have a white colour surface

SECTION H: ADMINISTRATIVE SECTION

H.I Acronyms & Abbreviations

CAR Civil Aviation Regulations
DVL/PfL Deutsche Versuchsanstalt für Luftfahrt / Prüfstelle für Luftfahrtgerät
LBA Luftfahrt-Bundesamt
N/A Not available
TCDS Type Certificate Data Sheet

H.II Type Certificate Holder Record

Legal entities Bölkow – Airbus Defence And Space

Day of Entry	Company name
No entry	**Contract between Akademische Fliegergruppe Stuttgart and Bölkow Entwicklungen KG regarding the production of Phoenix aircraft**
No entry	**Entwicklungsgemeinschaft Sport- und Segelflug Lindenstrasse 4 8012 Ottobrunn**
31.01.1959	**Akademische Fliegergruppe Stuttgart e.V. Pfaffenwaldring 35 70569 Stuttgart**
13.10.1964	**Contract between Entwicklungsgemeinschaft Sport- und Segelflugand Bölkow Apparatebau GmbH regarding the production of 50 Phoebus aircraft**
25.06.1962	**Bölkow Entwicklungen KG / Bölkow GmbH, Ottobrunn**
14.10.1966	**Bölkow GmbH / Bölkow Apparatebau GmbH / Waggon- und Maschinenbau AG, Donauwörth**
29.06.1972	**Messerschmitt-Bölkow-Blohm GmbH**
01.04.1992	**Messerschmitt-Bölkow-Blohm AG**
30.09.1992	**Deutsche Aerospace AG**
02.01.1995	**Daimler-Benz Aerospace AG**
17.11.1998	**Daimler Chrysler Aerospace AG**

10.07.2000 EADS Deutschland GmbH

01.07.2014 Airbus Defence and Space GmbH

H.III Change Record

Issue	Date	Changes
Issue 01	20/09/2016	Initial Issue

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