



TYPE-CERTIFICATE DATA SHEET

NO. EASA.A.095

for
LS Sailplanes

Type Certificate Holder
DG Aviation GmbH

Otto-Lilienthal-Weg 2
76646 Bruchsal
Germany

For models:	LS1-0	LS4
	LS1-a	LS4-a
	LS1-b	LS4-b
	LS1-c	LS6
	LS1-d	LS6-a
	LS1-e	LS6-b
	LS1-f	LS6-c
	LS1-f (45)	LS6-c18
	LS3	LS6-18w
	LS3-a	LS7
	LS3-17	LS7-WL



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Section A: LS1-0

A.I General

- | | |
|---|--|
| 1. Model | LS1-0 |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
63329 Egelsbach
Germany

Rolladen-Schneider OHG
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 25. November 1965 |
| 5. Type Certificate Date: | 23. January 1970 |
| 6. This TCDS cancels and replaces LBA TCDS No 262 | |

A.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 4-262/65, dated 10. December 1965 |
| 2. Airworthiness Requirements: | Airworthiness Requirements for Sailplanes (LFS), 1966 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Standards for Structural Substantiation of Glass Fibre Reinforced Plastic Components for Sailplanes, March 1965 |
| 8. Environmental Standards: | --- |

A.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|---|
| 1. Type Design Definition: | Internal Description, issued 21. January 1970 |
| 2. Description: | Single-seat, shoulder-winged sailplane in GRP-composite construction, T-type all flying horizontal tailplane, airbrakes (flap at trailing edge), fixed or retractable landing gear with wheel brake |
| 3. Equipment: | Min. Equipment: <ul style="list-style-type: none">- 1 Air speed indicator (up to 250 km/h)- 1 Altimeter |



- 1 4-Point harness (symmetrical)
- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions: Span: 15,00 m
Wing area: 9,74 m²
Length: 6,93 m
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“ LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 500 daN
- for aero-tow max. 500 daN
7. Air Speeds:
- | | | |
|--------------------------|-----------------|----------|
| Manoeuvring Speed | V _A | 150 km/h |
| Never Exceed Speed | V _{NE} | 220 km/h |
| Maximum permitted speeds | | |
| - in rough air | V _{RA} | 150 km/h |
| - in aero-tow | V _T | 150 km/h |
| - in winch-launch | V _W | 110 km/h |
| - for gear operating | V _{LO} | 220 km/h |
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass: 312 kg
Max. Mass of Non-Lifting Parts: 212 kg
10. Centre of Gravity Range: Forward Limit 210 mm aft of datum point
Rearward Limit 350 mm aft of datum point
11. Datum: wing leading edge at wing root rib
12. Levelling Means: lower side of rear fuselage boom horizontal
13. Control surface deflections: Refer to Flight Manual
14. Minimum Flight Crew: 1



15. Maximum Passenger Seating Capacity: Single seater
16. Baggage/Cargo Compartments: 1 compartment, max. 12 kg
17. Lifetime limitations: Refer to Maintenance Manual

A.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS1, issued May 2011 as amended

Note: In this document the variants LS1-0, LS1-a, LS1-b, LS1-c, LS1-d are combined in one document.

German Language:

Flughandbuch für das Segelflugzeugmuster LS1, Ausgabe vom 16.9.1969 LBA-anerkannt.

Oder

Flughandbuch für das Segelflugzeug LS1, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS1-0, LS1-a, LS1-b, LS1-c, LS1-d in einem Dokument zusammengefasst.

2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS1, issued May 2011 as amended

Note: In this document the variants LS1-0, LS1-a, LS1-b, LS1-c, LS1-d are combined in one document.

German Language:

Als "LS1 Betriebshandbuch" enthalten im Flughandbuch

Oder

Wartungshandbuch für das Segelflugzeug LS1, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS1-0, LS1-a, LS1-b, LS1-c, LS1-d in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

A.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. The type certification is valid from ser. no. 2 on
4. Installation of a nose release is permitted according to TN 58, LBA-approved.



Section B: LS1-a

B.I General

- | | |
|---|--|
| 1. Model | LS1-a |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
63329 Egelsbach
Germany

Rolladen-Schneider OHG
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 25. November 1965 |
| 5. Type Certificate Date: | 23. January 1970 |
| 6. This TCDS cancels and replaces LBA TCDS No 262 | |

B.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 4-262/65, dated 10. December 1965 |
| 2. Airworthiness Requirements: | Airworthiness Requirements for Sailplanes (LFS), 1966 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Standards for Structural Substantiation of Glass Fibre Reinforced Plastic Components for Sailplanes, March 1965 |
| 8. Environmental Standards: | --- |

B.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|--|
| 1. Type Design Definition: | Internal Description, issued 21. January 1970 |
| 2. Description: | Single-seat, shoulder-winged sailplane in GRP-composite construction, T type all flying horizontal tailplane, Schempp-Hirth airbrakes, retractable landing gear with wheel brake |
| 3. Equipment: | Min. Equipment: <ul style="list-style-type: none">- 1 Air speed indicator (up to 250 km/h)- 1 Altimeter |



- 1 4-Point harness (symmetrical)
- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions: Span: 15,00 m
Wing area: 9,74 m²
Length: 6,93 m
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 500 daN
- for aero-tow max. 500 daN
7. Air Speeds:
- | | | |
|--------------------------|-----------------|----------|
| Manoeuvring Speed | V _A | 150 km/h |
| Never Exceed Speed | V _{NE} | 220 km/h |
| Maximum permitted speeds | | |
| - in rough air | V _{RA} | 150 km/h |
| - in aero-tow | V _T | 150 km/h |
| - in winch-launch | V _W | 110 km/h |
| - for gear operating | V _{LO} | 220 km/h |
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass: 312 kg
Max. Mass of Non-Lifting Parts: 212 kg
10. Centre of Gravity Range: Forward Limit 210 mm aft of datum point
Rearward Limit 350 mm aft of datum point
11. Datum: wing leading edge at wing root rib
12. Levelling Means: lower side of rear fuselage boom horizontal
13. Control surface deflections: Refer to Flight Manual
14. Minimum Flight Crew: 1



15. Maximum Passenger Seating Capacity: Single seater
16. Baggage/Cargo Compartments: 1 compartment, max. 12 kg
17. Lifetime limitations: Refer to Maintenance Manual

B.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS1, issued May 2011 as amended

Note: In this document the variants LS1-0, LS1-a, LS1-b, LS1-c, LS1-d are combined in one document.

German Language:

Flughandbuch für das Segelflugzeugmuster LS1, Ausgabe vom 16.09.1969 LBA-anerkannt.

Oder

Flughandbuch für das Segelflugzeug LS1, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS1-0, LS1-a, LS1-b, LS1-c, LS1-d in einem Dokument zusammengefasst.

2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS1, issued May 2011 as amended

Note: In this document the variants LS1-0, LS1-a, LS1-b, LS1-c, LS1-d are combined in one document.

German Language:

Als "LS1 Betriebshandbuch" enthalten im Flughandbuch

Oder

Wartungshandbuch für das Segelflugzeug LS1, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS1-0, LS1-a, LS1-b, LS1-c, LS1-d in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

B.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. The type certification is valid from ser. no. 2 on
4. Installation of a nose release is permitted according to TN 58, LBA-approved.



Section C: LS1-b

C.I General

- | | |
|---|--|
| 1. Model | LS1-b |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
63329 Egelsbach
Germany

Rolladen-Schneider OHG
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 25. November 1965 |
| 5. Type Certificate Date: | 23. January 1970 |
| 6. This TCDS cancels and replaces LBA TCDS No 262 | |

C.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 4-262/65, dated 10. December 1965 |
| 2. Airworthiness Requirements: | Airworthiness Requirements for Sailplanes (LFS), 1966 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Standards for Structural Substantiation of Glass Fibre Reinforced Plastic Components for Sailplanes, March 1965 |
| 8. Environmental Standards: | --- |

C.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|--|
| 1. Type Design Definition: | Internal Description, issued 21. March 1970 |
| 2. Description: | Single-seat, shoulder-winged sailplane in GRP-composite construction, T type all flying horizontal tailplane, airbrakes on upper wing surface, retractable landing gear with wheel brake |
| 3. Equipment: | Min. Equipment: <ul style="list-style-type: none">- 1 Air speed indicator (up to 250 km/h)- 1 Altimeter |



- 1 4-Point harness (symmetrical)
- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions: Span: 15,00 m
Wing area: 9,74 m²
Length: 6,93 m
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 500 daN
- for aero-tow max. 500 daN
7. Air Speeds:
- | | | |
|--------------------------|-----------------|----------|
| Manoeuvring Speed | V _A | 150 km/h |
| Never Exceed Speed | V _{NE} | 220 km/h |
| Maximum permitted speeds | | |
| - in rough air | V _{RA} | 150 km/h |
| - in aero-tow | V _T | 150 km/h |
| - in winch-launch | V _W | 110 km/h |
| - for gear operating | V _{LO} | 220 km/h |
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass: 312 kg
Max. Mass of Non-Lifting Parts: 212 kg
10. Centre of Gravity Range: Forward Limit 210 mm aft of datum point
Rearward Limit 350 mm aft of datum point
11. Datum: wing leading edge at wing root rib
12. Levelling Means: lower side of rear fuselage boom horizontal
13. Control surface deflections: Refer to Flight Manual
14. Minimum Flight Crew: 1



15. Maximum Passenger Seating Capacity: Single seater
16. Baggage/Cargo Compartments: 1 compartment, max. 12 kg
17. Lifetime limitations: Refer to Maintenance Manual

C.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS1, issued May 2011 as amended

Note: In this document the variants LS1-0, LS1-a, LS1-b, LS1-c, LS1-d are combined in one document.

German Language:

Flughandbuch für das Segelflugzeugmuster LS1, Ausgabe vom 16.9.1969 LBA-anerkannt.

Oder

Flughandbuch für das Segelflugzeug LS1, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS1-0, LS1-a, LS1-b, LS1-c, LS1-d in einem Dokument zusammengefasst.

2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS1, issued May 2011 as amended

Note: In this document the variants LS1-0, LS1-a, LS1-b, LS1-c, LS1-d are combined in one document.

German Language:

Als "LS1 Betriebshandbuch" enthalten im Flughandbuch

Oder

Wartungshandbuch für das Segelflugzeug LS1, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS1-0, LS1-a, LS1-b, LS1-c, LS1-d in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

C.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. The type certification is valid from ser. no. 2 on
4. Installation of a nose release is permitted according to TN 58, LBA-approved.



Section D: LS1-c

D.I General

- | | |
|---|--|
| 1. Model | LS1-c |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
63329 Egelsbach
Germany

Rolladen-Schneider OHG
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 25. November 1965 |
| 5. Type Certificate Date: | 23. January 1970 |
| 6. This TCDS cancels and replaces LBA TCDS No 262 | |

D.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 4-262/65, dated 10. December 1965 |
| 2. Airworthiness Requirements: | Airworthiness Requirements for Sailplanes (LFS), 1966 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Standards for Structural Substantiation of Glass Fibre Reinforced Plastic Components for Sailplanes, March 1965 |
| 8. Environmental Standards: | --- |

D.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|--|
| 1. Type Design Definition: | Internal Description, issued 21. March 1970 |
| 2. Description: | Single-seat, shoulder-winged sailplane in GRP-composite construction, T type all flying horizontal tailplane, airbrakes on upper wing surface, retractable landing gear with wheel brake, enlarged Rudder. |
| 3. Equipment: | Min. Equipment:
- 1 Air speed indicator (up to 250 km/h) |



- 1 Altimeter
- 1 4-Point harness (symmetrical)
- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions: Span: 15,00 m
Wing area: 9,74 m²
Length: 7,04 m
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 500 daN
- for aero-tow max. 500 daN
7. Air Speeds:
- | | | |
|--------------------------|-----------------|----------|
| Manoeuvring Speed | V _A | 150 km/h |
| Never Exceed Speed | V _{NE} | 220 km/h |
| Maximum permitted speeds | | |
| - in rough air | V _{RA} | 150 km/h |
| - in aero-tow | V _T | 150 km/h |
| - in winch-launch | V _W | 110 km/h |
| - for gear operating | V _{LO} | 220 km/h |
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass (see D.V.6): 332 kg
Max. Mass of Non-Lifting Parts: 212 kg
10. Centre of Gravity Range: Forward Limit 210 mm aft of datum point
Rearward Limit 350 mm aft of datum point
11. Datum: wing leading edge at wing root rib
12. Levelling Means: lower side of rear fuselage boom horizontal
13. Control surface deflections: Refer to Flight Manual



- | | |
|---|-----------------------------|
| 14. Minimum Flight Crew: | 1 |
| 15. Maximum Passenger Seating Capacity: | Single seater |
| 16. Baggage/Cargo Compartments: | 1 compartment, max. 12 kg |
| 17. Lifetime limitations: | Refer to Maintenance Manual |

D.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS1, issued May 2011 as amended

Note: In this document the variants LS1-0, LS1-a, LS1-b, LS1-c, LS1-d are combined in one document.

German Language:

Flughandbuch für das Segelflugzeugmuster LS1, Ausgabe vom 16.9.1969 LBA-anerkannt.

Oder

Flughandbuch für das Segelflugzeug LS1, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS1-0, LS1-a, LS1-b, LS1-c, LS1-d in einem Dokument zusammengefasst.

2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS1, issued May 2011 as amended

Note: In this document the variants LS1-0, LS1-a, LS1-b, LS1-c, LS1-d are combined in one document.

German Language:

Als "LS1 Betriebshandbuch" enthalten im Flughandbuch

Oder

Wartungshandbuch für das Segelflugzeug LS1, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS1-0, LS1-a, LS1-b, LS1-c, LS1-d in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

D.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. The type certification is valid from ser. no. 2 on



4. Conversion into variant LS1-d is permitted according to TN No. 8 of Rolladen-Schneider.



Section E: LS1-d

E.I General

- | | |
|---|--|
| 1. Model | LS1-d |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
63329 Egelsbach
Germany

Rolladen-Schneider OHG
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 03. January 1972 |
| 5. Type Certificate Date: | 21. June 1972 |
| 6. This TCDS cancels and replaces LBA TCDS No 262 | |

E.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 3-262/72, dated 07. January 1972 |
| 2. Airworthiness Requirements: | Airworthiness Requirements for Sailplanes (LFS), 1966 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Standards for Structural Substantiation of Glass Fibre Reinforced Plastic Components for Sailplanes, March 1965 |
| 8. Environmental Standards: | --- |

E.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|--|
| 1. Type Design Definition: | Internal Description, issued 16. November 1971 |
| 2. Description: | Single-seat, shoulder-winged sailplane in GRP-composite construction, T type all flying horizontal tailplane, airbrakes on upper wing surface, retractable landing gear with wheel brake, enlarged rudder, wingwaterballast (optional) |
| 3. Equipment: | Min. Equipment:
- 1 Air speed indicator (up to 250 km/h) |



- 1 Altimeter
- 1 4-Point harness (symmetrical)
- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions:

Span: 15,00 m
Wing area: 9,74 m²
Length: 7,03 m

5. Launching Hooks:

- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
- 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
- 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
- 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
- 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
- 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1

Note: Hooks 2-6 optional

6. Weak links:

Ultimate Strength:

- for winch and auto-tow launching max. 500 daN
- for aero-tow max. 500 daN

7. Air Speeds:

Manoeuvring Speed	V _A	160 km/h
Never Exceed Speed	V _{NE}	240 km/h
Maximum permitted speeds		
- in rough air	V _{RA}	160 km/h
- in aero-tow	V _T	160 km/h
- in winch-launch	V _W	120 km/h
- for gear operating	V _{LO}	240 km/h

With winglets installed (see Note E.5.5):

Manoeuvring Speed	V _A	150 km/h
Never Exceed Speed	V _{NE}	220 km/h
Maximum permitted speeds		
- in rough air	V _{RA}	150 km/h
- in aero-tow	V _T	150 km/h
- in winch-launch	V _W	110 km/h
- for gear operating	V _{LO}	220 km/h

8. Operations Capability:

Approved for VFR-flying in daytime only.

Cloud flying according to the specifications in the Flight Manual

9. Maximum Weights:

Max. Mass: 341 kg



	Max. Mass with winglets (see note E.5.5):	332 kg
	Max. Mass of Non-Lifting Parts:	212 kg
10. Centre of Gravity Range:	Forward Limit	210 mm aft of datum point
	Rearward Limit	350 mm aft of datum point
11. Datum:	wing leading edge at wing root rib	
12. Levelling Means:	lower side of rear fuselage boom horizontal	
13. Control surface deflections:	Refer to Flight Manual	
14. Minimum Flight Crew:	1	
15. Maximum Passenger Seating Capacity:	Single seater	
16. Baggage/Cargo Compartments:	1 compartment, max. 12 kg	
17. Lifetime limitations:	Refer to Maintenance Manual	

E.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS1, issued May 2011 as amended

Note: In this document the variants LS1-0, LS1-a, LS1-b, LS1-c, LS1-d are combined in one document.

German Language:

Flughandbuch für das Segelflugzeug LS1-d, Ausgabe vom 16.5.1972, LBA-anerkannt.

Oder

Flughandbuch für das Segelflugzeug LS1, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS1-0, LS1-a, LS1-b, LS1-c, LS1-d in einem Dokument zusammengefasst.

2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS1, issued May 2011 as amended

Note: In this document the variants LS1-0, LS1-a, LS1-b, LS1-c, LS1-d are combined in one document.

German Language:

Als "LS1-d Betriebshandbuch" enthalten im Flughandbuch

Oder

Wartungshandbuch für das Segelflugzeug LS1, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS1-0, LS1-a, LS1-b, LS1-c, LS1-d in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks



English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

E.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. Installation of waterballast tanks is permitted according to TN 12, LBA-approved
4. Installation of a nose release is permitted according to TN 58, LBA-approved
5. Installation of winglets at the wing tips and operation with reduced airspeeds V_{NE} , V_{RA} , V_A , V_T , V_{LO} and reduced max. Mass and no waterballast is permitted to TN 64-LS, EASA approved.



Section F: LS1-e

F.I General

1. Model LS1-e
2. Airworthiness Category: Utility "U"
3. Manufacturer: Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
63329 Egelsbach
Germany

Rolladen-Schneider OHG
Mühlstr. 10
6073 Egelsbach
Germany
4. Application Date: 13. February 1973
5. Type Certificate Date: 12. May 1986
6. This TCDS cancels and replaces LBA TCDS No 262

F.II EASA Certification Basis

1. Reference Date for determining the applicable requirements: Defined by LBA letter I 30-262/73, dated 23. February 1973
2. Airworthiness Requirements: Airworthiness Requirements for Sailplanes (LFS), 1966
3. Special Conditions: None
4. Exemptions: None
5. Deviations: None
6. Equivalent Safety Findings: None
7. Requirements elected to comply: Standards for Structural Substantiation of Glass Fibre Reinforced Plastic Components for Sailplanes, March 1965
8. Environmental Standards: - - -

F.III Technical Characteristics and Operational Limitations

1. Type Design Definition: Drawing List, issued 1. April 1986
2. Description: Single-seat, shoulder-winged sailplane in GRP-composite construction, T type horizontal tail plane with fin and elevator, enlarged rudder, airbrakes on upper wing surface, retractable landing gear with wheel brake, wingwaterballast
3. Equipment: Min. Equipment:
 - 1 Air speed indicator (up to 250 km/h)



- 1 Altimeter
- 1 4-Point harness (symmetrical)
- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions: Span: 15,00 m
Wing area: 9,74 m²
Length: 7,03 m
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 500 daN
- for aero-tow max. 500 daN
7. Air Speeds:
- | | | |
|--------------------------|-----------------|----------|
| Manoeuvring Speed | V _A | 160 km/h |
| Never Exceed Speed | V _{NE} | 240 km/h |
| Maximum permitted speeds | | |
| - in rough air | V _{RA} | 160 km/h |
| - in aero-tow | V _T | 160 km/h |
| - in winch-launch | V _W | 120 km/h |
| - for gear operating | V _{LO} | 240 km/h |
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass: 341 kg
Max. Mass of Non-Lifting Parts: 212 kg
10. Centre of Gravity Range: Forward Limit 210 mm aft of datum point
Rearward Limit 400 mm aft of datum point
11. Datum: wing leading edge at wing root rib
12. Levelling Means: lower side of rear fuselage boom horizontal
13. Control surface deflections: Refer to Flight Manual



- | | |
|---|-----------------------------|
| 14. Minimum Flight Crew: | 1 |
| 15. Maximum Passenger Seating Capacity: | Single seater |
| 16. Baggage/Cargo Compartments: | 1 compartment, max. 12 kg |
| 17. Lifetime limitations: | Refer to Maintenance Manual |

F.IV Operating and Service Instructions

1. Flight Manual

Only German Language available:

Flughandbuch für das Segelflugzeug LS1-e, Ausgabe 1. April 1986, LBA-anerkannt

2. Maintenance Manual

Only German Language available:

Betriebshandbuch für das Segelflugzeug LS1-e, Ausgabe Mai 1986

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

F.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. This certification is valid for ser. no. 92 and 155
4. Installation of a nose release is permitted according to TN 58, LBA-approved.



Section G: LS1-f

G.I General

- | | |
|---|--|
| 1. Model | LS1-f |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
63329 Egelsbach
Germany

Rolladen-Schneider OHG
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 01. October 1973 |
| 5. Type Certificate Date: | 30. August 1974 |
| 6. This TCDS cancels and replaces LBA TCDS No 262 | |

G.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 30-262/73, dated 19. October 1973 |
| 2. Airworthiness Requirements: | Airworthiness Requirements for Sailplanes (LFS), 1966 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Standards for Structural Substantiation of Glass Fibre Reinforced Plastic Components for Sailplanes, March 1965 |
| 8. Environmental Standards: | --- |

G.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|--|
| 1. Type Design Definition: | Technical Description by Rolladen-Schneider, issued 25. February 1972 |
| 2. Description: | Single-seat, shoulder-winged sailplane in GRP-composite construction, T type enlarged horizontal tail plane with fin and elevator, airbrakes on upper wing surface, spring mounted retractable landing gear with wheel brake, wingwaterballast |
| 3. Equipment: | Min. Equipment: |



- 1 Air speed indicator (up to 300 km/h)
- 1 Altimeter
- 1 4-Point harness (symmetrical)
- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions: Span: 15,00 m
Wing area: 9,75 m²
Length: 6,60 m
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88 “, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“ LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 500 daN
- for aero-tow max. 500 daN
7. Air Speeds: Manoeuvring Speed V_A 170 km/h
Never Exceed Speed V_{NE} 250 km/h
Maximum permitted speeds
- in rough air V_{RA} 170 km/h
- in aero-tow V_T 170 km/h
- in winch-launch V_W 130 km/h
- for gear operating V_{LO} 250 km/h
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass: 390 kg
Max. Mass of Non-Lifting Parts: 230 kg
Max. Mass of Non-Lifting Parts (see G.V.4): 250 kg
10. Centre of Gravity Range: Forward Limit 220 mm aft of datum point
Rearward Limit 420 mm aft of datum point
11. Datum: wing leading edge at wing root rib
12. Levelling Means: lower side of rear fuselage boom horizontal



- | | |
|---|-----------------------------|
| 13. Control surface deflections: | Refer to Flight Manual |
| 14. Minimum Flight Crew: | 1 |
| 15. Maximum Passenger Seating Capacity: | Single seater |
| 16. Baggage/Cargo Compartments: | 1 compartment, max. 12 kg |
| 17. Lifetime limitations: | Refer to Maintenance Manual |

G.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS1-f, issued July 1974

Or

Flight Manual for the sailplane LS1-f, issued May 2011 as amended

Note: In this document the variants LS1-f, LS1-f (45) are combined in one document.

German Language:

Flughandbuch für das Segelflugzeugmuster LS1-f, Ausgabe 1.7.1974, LBA-anerkannt

Oder

Flughandbuch für das Segelflugzeug LS1-f, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe

2. Maintenance Manual

English Language:

Service Manual LS1-f, Edition 15.9.75

Or

Maintenance Manual for the sailplane LS1-f, issued May 2011 as amended

Note: In this document the variants LS1-f, LS1-f (45) are combined in one document.

German Language:

Betriebshandbuch LS1-f, Ausgabe 1.7.1974

Oder

Wartungshandbuch für das Segelflugzeug LS1-f, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

G.V Notes

1. Manufacturing is confined to industrial production.



2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. Installation of a nose release is permitted according to TN 59, LBA-approved.
4. Installation of winglets at the wing tips, increase of max. Mass of the non-lifting parts, improved wing-fuselage junctions and aileron end plates are permitted to TN 63-LS, EASA approved.



Section H: LS1-f (45)

H.I General

- | | |
|---|--|
| 1. Model | LS1-f (45) |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
63329 Egelsbach
Germany

Rolladen-Schneider OHG
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 17. March 1976 |
| 5. Type Certificate Date: | 21. May 1976 |
| 6. This TCDS cancels and replaces LBA TCDS No 262 | |

H.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 311-262/76, dated 29. March 1976 |
| 2. Airworthiness Requirements: | Airworthiness Requirements for Sailplanes (LFS), 1966 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Standards for Structural Substantiation of Glass Fibre Reinforced Plastic Components for Sailplanes, March 1965 |
| 8. Environmental Standards: | --- |

H.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|---|
| 1. Type Design Definition: | Technical Description by Rolladen-Schneider, issued 16. March 1976 |
| 2. Description: | Single-seat, shoulder-winged sailplane in GRP-composite construction, T type enlarged horizontal tail plane with fin and elevator, airbrakes on upper wing surface, spring mounted retractable landing gear with wheel brake, larger wingwaterballast |
| 3. Equipment: | Min. Equipment: |



- 1 Air speed indicator (up to 300 km/h)
- 1 Altimeter
- 1 4-Point harness (symmetrical)
- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions: Span: 15,00 m
Wing area: 9,75 m²
Length: 6,60 m
5. Launching Hooks:
1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
Note: Hooks 2-3 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 500 daN
- for aero-tow max. 500 daN
7. Air Speeds:
Manoeuvring Speed V_A 170 km/h
Never Exceed Speed V_{NE} 270 km/h
Maximum permitted speeds
- in rough air V_{RA} 170 km/h
- in aero-tow V_T 170 km/h
- in winch-launch V_W 130 km/h
- for gear operating V_{LO} 270 km/h

With winglets installed (see note H.V.4):
Never Exceed Speed V_{NE} 250 km/h
Maximum permitted speeds
- for gear operating V_{LO} 250 km/h
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
With winglets installed (see note H.V.4):
Cloud flying prohibited
9. Maximum Weights: Max. Mass: 439 kg
Max. Mass of Non-Lifting Parts: 230 kg
Max. Mass of Non-Lifting Parts (see H.V.4): 250 kg
10. Centre of Gravity Range: Forward Limit 220 mm aft of datum point
Rearward Limit 420 mm aft of datum point
11. Datum: wing leading edge at wing root rib



12. Levelling Means:	lower side of rear fuselage boom horizontal
13. Control surface deflections:	Refer to Flight Manual / Operating Manual
14. Minimum Flight Crew:	1
15. Maximum Passenger Seating Capacity:	Single seater
16. Baggage/Cargo Compartments:	1 compartment, max. 12 kg
17. Lifetime limitations:	Refer to Maintenance Manual

H.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS1-f, issued May 2011 as amended

Note: In this document the variants LS1-f, LS1-f (45) are combined in one document.

German Language:

Flughandbuch für das Segelflugzeug LS1-f (45), Ausgabe Juli 1974, LBA-anerkannt

Oder

Flughandbuch für das Segelflugzeug LS1-f, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe

2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS1-f, issued May 2011 as amended

Note: In this document the variants LS1-f, LS1-f (45) are combined in one document.

German Language:

Betriebshandbuch LS1-f, Ausgabe 1.7.1974

Oder

Wartungshandbuch für das Segelflugzeug LS1-f, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

H.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. This certification is valid for serial numbers 432 and 443.



4. Installation of winglets at the wing tips, increase of max. Mass of the non-lifting parts, improved wing-fuselage junctions and aileron end plates are permitted to TN 63-LS, EASA approved.



Section I: LS3

I.I General

- | | |
|---|--|
| 1. Model | LS3 |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider OHG
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 15. October 1975 |
| 5. Type Certificate Date: | 28. January 1977 |
| 6. This TCDS cancels and replaces LBA TCDS No 317 | |

I.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 3-317/75, dated 28. November 1975 |
| 2. Airworthiness Requirements: | Airworthiness Requirements for Sailplanes and powered Sailplanes (LFSM), issue 1975 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Standards for Structural Substantiation of Glass Fibre Reinforced Plastic Components for Sailplanes, March 1965 |
| 8. Environmental Standards: | - - - |

I.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|---|
| 1. Type Design Definition: | Drawing List, issued 3. December 1976 |
| 2. Description: | Single-seat, midwing sailplane in GRP- composite construction, T type horizontal tailplane with fin and elevator, airbrakes on upper wing surface, spring mounted retractable landing gear with wheel brake, flaperons, waterballast in the wings |
| 3. Equipment: | Min. Equipment: <ul style="list-style-type: none">- 1 Air speed indicator (up to 300 km/h)- 1 Altimeter- 1 4-Point harness (symmetrical)- 1 Parachute or back cushion (thickness compressed ~10cm/4in) |



Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions: Span: 15,00 m
Wing area: 10,50 m²
Length: 6,75 m
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 600 daN
- for aero-tow max. 600 daN
7. Air Speeds:
- | | | |
|-----------------------------|-----------------|----------|
| Manoeuvring Speed | V _A | 190 km/h |
| Never Exceed Speed | V _{NE} | 270 km/h |
| Maximum permitted speeds | | |
| - in rough air | V _{RA} | 190 km/h |
| - with flaps at -0° and -7° | V _{FE} | 270 km/h |
| - with flaps at +10° | V _{FE} | 190 km/h |
| - in aero-tow | V _T | 190 km/h |
| - in winch-launch | V _W | 130 km/h |
| - for gear operating | V _{LO} | 270 km/h |
- If equipped with neo Winglets according to TN 3056:
- | | | |
|-----------------------------|-----------------|----------|
| Never Exceed Speed | V _{NE} | 260 km/h |
| Maximum permitted speeds | | |
| - with flaps at -0° and -7° | V _{FE} | 260 km/h |
| - for gear operating | V _{LO} | 260 km/h |
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass: 472 kg
Max. Mass of Non-Lifting Parts: 240 kg
If equipped with neo Winglets according to TN 3056:



	Max. Mass:	450 kg
10. Centre of Gravity Range:	Forward Limit	250 mm aft of datum point
	Rearward Limit	400 mm aft of datum point
11. Datum:	wing leading edge at wing root rib	
12. Levelling Means:	lower side of rear fuselage boom horizontal	
13. Control surface deflections:	Refer to Maintenance Manual	
14. Minimum Flight Crew:	1	
15. Maximum Passenger Seating Capacity:	Single seater	
16. Baggage/Cargo Compartments:	1 compartment, max. 5 kg	
17. Lifetime limitations:	Refer to Maintenance Manual	

I.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS3, issued Dec. 3 1976, LBA-approved

German Language:

Flughandbuch für das Segelflugzeug LS3 Ausgabe Dezember 1976, LBA-anerkannt

2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS3, issued Dec. 3, 1976

Or

Maintenance Manual for the sailplane LS3, issued December 2009 as amended

Note: In this document the models LS3, LS3-a, LS3-17 are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS3, Ausgabe Dezember 1976

Oder

Wartungshandbuch für das Segelflugzeug LS3, Ausgabe Dezember 2009, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS3, LS3-a, LS3-17 in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe



I.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. Installation of a nose release is permitted according to TN 3052, LBA-approved.
4. For ser. no. 454 different limits and operating and service instructions are valid:

Air Speeds: Manoeuvring speed V_A 180 km/h

Maximum permitted speeds:

- In rough air: V_{RA} 180 km/h

- In aero tow: V_T 180 km/h

Operating and service instructions:

Only German language available:

Flughandbuch für das Segelflugzeug LS3/V1, Ausgabe 1.2.1978

Wartungshandbuch für das Segelflugzeug LS3/V1, Ausgabe 1.2.1978

5. According to the technical bulletin TN-No. 3056 of DG Flugzeugbau, a retrofit of neo winglets is possible. For sailplane modified by TN-No 3056 the certification basis is amended as follows:
JAR 22.73 and 22.375 at Change 5



Section J: LS3-a

J.I General

1. Model LS3-a
2. Airworthiness Category: Utility "U"
3. Manufacturer: Rolladen-Schneider OHG
Mühlstr. 10
6073 Egelsbach
Germany
4. Application Date: 02. November 1977
5. Type Certificate Date: 14. April 1978
6. This TCDS cancels and replaces LBA TCDS No 317

J.II EASA Certification Basis

1. Reference Date for determining the applicable requirements: Defined by LBA letter I 3-317/77, dated 21. November 1977
2. Airworthiness Requirements: Airworthiness Requirements for Sailplanes and powered Sailplanes (LFSM), issue 1975
3. Special Conditions: None
4. Exemptions: None
5. Deviations: None
6. Equivalent Safety Findings: None
7. Requirements elected to comply: Standards for Structural Substantiation of Glass Fibre Reinforced Plastic Components for Sailplanes, March 1965
8. Environmental Standards: - - -

J.III Technical Characteristics and Operational Limitations

1. Type Design Definition: Drawing List, issued 7. April 1978
2. Description: Single-seat, midwing sailplane in GRP- composite construction, T type horizontal tailplane with fin and elevator, airbrakes on upper wing surface, spring mounted retractable landing gear with wheel brake, separate flaps and ailerons, waterballast in the wings
3. Equipment: Min. Equipment:
 - 1 Air speed indicator (up to 300 km/h)
 - 1 Altimeter
 - 1 4-Point harness (symmetrical)
 - 1 Parachute or back cushion (thickness compressed ~10cm/4in)



Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions:

Span: 15,00 m
Wing area: 10,50 m²
Length: 6,86 m

5. Launching Hooks:

- 1) Safety hook „Europa G 72“,
LBA Datasheet No. 60.230/2
- 2)) Safety hook „Europa G 73“,
LBA Datasheet No. 60.230/2
- 3) Safety hook „Europa G 88“,
LBA Datasheet No. 60.230/2
- 4) Nose tow hook „E 85“,
LBA Datasheet No. 60.230/1
- 5) Nose tow hook „E 75“,
LBA Datasheet No. 60.230/1
- 6) Nose tow hook „E 72“,
LBA Datasheet No. 60.230/1

Note: Hooks 2-6 optional

6. Weak links:

Ultimate Strength:

- for winch and auto-tow launching max. 600 daN
- for aero-tow max. 600 daN

7. Air Speeds:

Manoeuvring Speed V_A 190 km/h

Never Exceed Speed V_{NE} 270 km/h

Maximum permitted speeds

- in rough air V_{RA} 190 km/h

- with flaps at -0°, -7° V_{FE} 270 km/h

- with flaps at +5°, +10° V_{FE} 190 km/h

- with flaps at +20° V_{FE} 160 km/h

- in aero-tow V_T 190 km/h

- in winch-launch V_W 130 km/h

- for gear operating V_{LO} 270 km/h

If equipped with neo Winglets according to TN 3056:

Never Exceed Speed V_{NE} 260 km/h

Maximum permitted speeds

- with flaps at -0° and -7° V_{FE} 260 km/h

- for gear operating V_{LO} 260 km/h

8. Operations Capability:

Approved for VFR-flying in daytime only.

Cloud flying according to the specifications in the Flight Manual

9. Maximum Weights:

Max. Mass: 472 kg

Max. Mass of Non-Lifting Parts: 230 kg



		If equipped with neo Winglets according to TN 3056:	
	Max. Mass:		450 kg
10. Centre of Gravity Range:	Forward Limit	250 mm aft of datum point	
	Rearward Limit	400 mm aft of datum point	
11. Datum:	wing leading edge at wing root rib		
12. Levelling Means:	lower side of rear fuselage boom horizontal		
13. Control surface deflections:	Refer to Maintenance Manual		
14. Minimum Flight Crew:	1		
15. Maximum Passenger Seating Capacity:	Single seater		
16. Baggage/Cargo Compartments:	1 compartment, max. 5 kg		
17. Lifetime limitations:	Refer to Maintenance Manual		

J.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS3-a, issue 1.6.1978, LBA-approved

German Language:

Flughandbuch für das Segelflugzeug LS3-a Ausgabe März 1978, LBA-anerkannt

2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS3-a, issue 1.6.1978

Or

Maintenance Manual for the sailplane LS3, issued December 2009 as amended

Note: In this document the models LS3, LS3-a, LS3-17 are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS3-a, Ausgabe März 1978

Oder

Wartungshandbuch für das Segelflugzeug LS3, Ausgabe Dezember 2009, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS3, LS3-a, LS3-17 in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version



German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

J.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. Installation of a nose release is permitted according to TN 3052, LBA-approved.
4. For ser. no. 3400 the following different description, limits, operating and service instructions are valid:

J.I General

5. *Type Certificate Date* 27. May, 1982

J.II EASA Certification Basis

1. *Reference Date for determining the applicable requirements:* Defined by LBA letter I 3-317/79, dated 11. January 1979

J.III Technical Characteristics and Operational Limitations

1. *Type Design Definition:* „Bauzeichnungen LS3-a, Werk-Nr. 3400“, vom 1.4.1079, LBA-anerkannt

2. *Description:* Single-seat, midwing sailplane in GRP- composite construction, T type horizontal tailplane with fin and elevator, airbrakes on upper wing surface, spring mounted retractable landing gear with wheel brake, fixed wing profile, reduced aileron span, waterballast in the wings, modified fuselage and control system.

9. *Maximum Weights:* Max. Mass of Non-Lifting Parts: 210 kg

13. *Control surface deflections:*
- | | | |
|--|-------------|-------------|
| <i>Aileron</i> | <i>up</i> | 56 +/- 7 mm |
| | <i>down</i> | 27 +/- 5 mm |
| <i>Survey point from the centerline of the control surface</i> | | 130 mm |

- | | | |
|--|-------------|-------------|
| <i>Elevator</i> | <i>up</i> | 56 +/- 5 mm |
| | <i>down</i> | 56 +/- 5 mm |
| <i>Survey point from the centerline of the control surface</i> | | 130 mm |

- | | | |
|---------------|----------------------|---------------|
| <i>Rudder</i> | <i>to both sides</i> | 185 +/- 10 mm |
|---------------|----------------------|---------------|

- | | | |
|--|--|--------|
| <i>Survey point from the centerline of the control surface</i> | | 362 mm |
|--|--|--------|

J.IV Operating and Service Instructions:

1. *Flight Manual:*



Only German Language available:

Flughandbuch für das Segelflugzeug LS3-a, Werk-Nr. 3400, Ausgabe April 1979, LBA-anerkannt

2. Maintenance Manual:

Only German Language available:

Wartungshandbuch für das Segelflugzeug LS3-a, Werk-Nr. 3400, Ausgabe Januar 1982

5. According to the technical bulletin TN-No. 3056 of DG Flugzeugbau, a retrofit of neo winglets is possible. For sailplane modified by TN-No 3056 the certification basis is amended as follows: JAR 22.73 and 22.375 at Change 5



Section K: LS3-17

K.I General

1. Model LS3-17
2. Airworthiness Category: Utility "U"
3. Manufacturer: Rolladen-Schneider OHG
Mühlstr. 10
6073 Egelsbach
Germany
4. Application Date: 02. November 1977
5. Type Certificate Date: 11. May 1979
6. This TCDS cancels and replaces LBA TCDS No 317

K.II EASA Certification Basis

1. Reference Date for determining the applicable requirements: Defined by LBA letter I 3-317/77, dated 21. November 1977
2. Airworthiness Requirements: Airworthiness Requirements for Sailplanes and powered Sailplanes (LFSM), issue 1975
3. Special Conditions: None
4. Exemptions: None
5. Deviations: None
6. Equivalent Safety Findings: None
7. Requirements elected to comply: Standards for Structural Substantiation of Glass Fibre Reinforced Plastic Components for Sailplanes, March 1965
8. Environmental Standards: - - -

K.III Technical Characteristics and Operational Limitations

1. Type Design Definition: Overall document list, including LS3-17 Drawing List, issued 1. March 1979
2. Description: Single-seat, midwing sailplane in GRP- composite construction, T type horizontal tailplane with fin and elevator, airbrakes on upper wing surface, spring mounted retractable landing gear with wheel brake, separate flaps and ailerons, waterballast in the wings, wing tip extensions
3. Equipment: Min. Equipment:
 - 1 Air speed indicator (up to 300 km/h)
 - 1 Altimeter
 - 1 4-Point harness (symmetrical)



- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions:	Span:	15,00 m	17,00 m
	Wing area:	10,50 m ²	11,22 m ²
	Length:	6,86 m	

5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1

Note: Hooks 2-6 optional

6. Weak links:
- Ultimate Strength:
- for winch and auto-tow launching max. 600 daN
 - for aero-tow max. 600 daN

7. Air Speeds:

With 15,00 m wing span:

Manoeuvring Speed	V _A	190 km/h
Never Exceed Speed	V _{NE}	270 km/h
Maximum permitted speeds		
- in rough air	V _{RA}	190 km/h
- with flaps at -0°, -7°	V _{FE}	270 km/h
- with flaps at +5°, +10°	V _{FE}	190 km/h
- with flaps at +20°	V _{FE}	160 km/h
- in aero-tow	V _T	190 km/h
- in winch-launch	V _W	130 km/h
- for gear operating	V _{LO}	270 km/h

With 17,00 m wing span:

Manoeuvring Speed	V _A	160 km/h
Never Exceed Speed	V _{NE}	250 km/h
Maximum permitted speeds		
- in rough air	V _{RA}	160 km/h
- with flaps at -0°	V _{FE}	250 km/h
- with flaps at +10°	V _{FE}	160 km/h
- in aero-tow	V _T	160 km/h
- in winch-launch	V _W	130 km/h
- for gear operating	V _{LO}	250 km/h



8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: With 15,00 m wing span:
Max. Mass: 472 kg
Max. Mass of Non-Lifting Parts: 230 kg
- With 17,00 m wing span (see note K.V.3):
Max. Mass: 370 kg
Max. Mass of Non-Lifting Parts: 230 kg
10. Centre of Gravity Range: Forward Limit 250 mm aft of datum point
Rearward Limit 400 mm aft of datum point
11. Datum: wing leading edge at wing root rib
12. Levelling Means: lower side of rear fuselage boom horizontal
13. Control surface deflections: Refer to Maintenance Manual
14. Minimum Flight Crew: 1
15. Maximum Passenger Seating Capacity: Single seater
16. Baggage/Cargo Compartments: 1 compartment, max. 5 kg
17. Lifetime limitations: Refer to Maintenance Manual

K.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS3-17, issued Dec. 1, 1979, LBA-approved

German Language:

Flughandbuch für das Segelflugzeug LS3-17 Ausgabe März 1979, LBA-anerkannt

2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS3-17, issued Dec. 1, 1979

Or

Maintenance Manual for the sailplane LS3, issued December 2009 as amended

Note: In this document the models LS3, LS3-a, LS3-17 are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS3-17, Ausgabe März 1979

Oder

Wartungshandbuch für das Segelflugzeug LS3, Ausgabe Dezember 2009, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS3, LS3-a, LS3-17 in einem Dokument zusammengefasst.



3. Structural Repair Manual
Included in maintenance manual

4. Operating Manual for the Launching Hooks
English language: Operating Instructions for the Tost release, latest approved version
German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

K.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. Usage of waterballast is not permitted with 17,00 m wing span
4. Installation of a nose release is permitted according to TN 3052, LBA-approved.



Section L: LS4

L.I General

1. Model LS4
2. Airworthiness Category: Utility "U"
3. Manufacturer: Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
6073 Egelsbach
Germany
4. Application Date: 09. January 1980
5. Type Certificate Date: 17. December 1980
6. This TCDS cancels and replaces LBA TCDS No 345

L.II EASA Certification Basis

1. Reference Date for determining the applicable requirements: Defined by LBA letter I 3-345/80, dated 18. January 1980
2. Airworthiness Requirements: Airworthiness Requirements for Sailplanes and powered Sailplanes (LFSM), issue 1975
3. Special Conditions: None
4. Exemptions: None
5. Deviations: None
6. Equivalent Safety Findings: None
7. Requirements elected to comply: Standards for Structural Substantiation of Glass Fibre Reinforced Plastic Components for Sailplanes, March 1965
8. Environmental Standards: - - -

L.III Technical Characteristics and Operational Limitations

1. Type Design Definition: Master drawing list LS4, issued 01. October 1980, LBA approved
2. Description: Single-seat, shoulder-winged sailplane in GRP-composite construction, T-type horizontal tail plane with fin and elevator, Schempp-Hirth airbrakes on upper wing surface, water ballast tanks in wings, spring mounted retractable landing gear
3. Equipment: Min. Equipment:
 - 1 Air speed indicator (up to 300 km/h)
 - 1 Altimeter
 - 1 4-Point harness (symmetrical)



- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions:

Span: 15,00 m
Wing area: 10,50 m²
Length: 6,66 m

5. Launching Hooks:

- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
- 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
- 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
- 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
- 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
- 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1

Note: Hooks 2-6 optional

6. Weak links:

Ultimate Strength:

- for winch and auto-tow launching max. 600 daN
- for aero-tow max. 600 daN

7. Air Speeds:

Manoeuvring Speed V_A 180 km/h
Never Exceed Speed V_{NE} 270 km/h
Maximum permitted speeds
- in rough air V_{RA} 180 km/h
- in aero-tow V_T 180 km/h
- in winch-launch V_W 130 km/h
- for gear operating V_{LO} 270 km/h

8. Operations Capability:

Approved for VFR-flying in daytime only.

Cloud flying according to the specifications in the Flight Manual

9. Maximum Weights:

Max. Mass: 472 kg
Max. Mass of Non-Lifting Parts: 230 kg
Note: Max. mass of Non-Lifting Parts may be higher, refer to Flight Manual, page 1-6 and Maintenance Manual, section2.

If TN 4049 (neo-winglets) has been performed:

Max. Mass of Non-Lifting Parts: 250 kg

10. Centre of Gravity Range:

Forward Limit 225 mm aft of datum point
Rearward Limit 375 mm aft of datum point
If TN LS-S-01 is performed:
Rearward Limit 400 mm aft of datum point



- | | |
|---|---|
| 11. Datum: | wing leading edge at wing root rib |
| 12. Levelling Means: | lower side of rear fuselage boom horizontal |
| 13. Control surface deflections: | Refer to Maintenance Manual |
| 14. Minimum Flight Crew: | 1 |
| 15. Maximum Passenger Seating Capacity: | Single seater |
| 16. Baggage/Cargo Compartments: | 1 compartment, max. 5 kg |
| 17. Lifetime limitations: | Refer to Maintenance Manual |

L.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS4, Edition 1.1.1981, LBA-approved

German Language:

Flughandbuch für das Segelflugzeug LS4, Ausgabe 1. Nov 1980, LBA-anerkannt

2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS4, Edition 15.12.1981

Or

Maintenance Manual for the sailplane LS4, issued May 2011 as amended

Note: In this document the models LS4, LS4-a, LS4-b are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS4, Ausgabe 1.10.1980

Oder

Wartungshandbuch für das Segelflugzeug LS4, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS4, LS4-a, LS4-b in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

L.V Notes

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



3. According to the technical bulletin TB-No. 4030 of Rolladen-Schneider it is possible to modify the glider optionally with a nose tow hook "E 85" and/or a winch tow hook "G 88".
4. According to the technical bulletin TB-No. 4041 of Rolladen-Schneider it is possible to retrofit the glider optionally with a nose tow hook.
5. According to the technical bulletin TB-No. 4018 of Rolladen-Schneider a conversion of the glider into variant LS4-a is allowed.
6. According to the technical bulletin TB-No. 4047 of Rolladen-Schneider it is possible to increase the max. mass of non-lifting parts in order to allow full maximum cockpit load of 110 kg.



Section M: LS4-a

M.I General

- | | |
|---|---|
| 1. Model | LS4-a |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 14. January 1983 |
| 5. Type Certificate Date: | 31. May 1983 |
| 6. This TCDS cancels and replaces LBA TCDS No 345 | |

M.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 3-345/83, dated 24. January 1983 |
| 2. Airworthiness Requirements: | Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22), Change 2, September 1982 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Standards for Structural Substantiation of Glass and Carbon Fibre Reinforced Plastic Components for Sailplanes and Powered Sailplanes, January 1981 |
| 8. Environmental Standards: | - - - |

M.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|--|
| 1. Type Design Definition: | Master drawing list LS4, issued 01. October 1980, amended 26 May 1983, LBA approved |
| 2. Description: | Single-seat, shoulder-winged sailplane in GRP-composite construction, T-type horizontal tail plane with fin and elevator, Schempp-Hirth airbrakes on upper wing surface, water ballast tanks in wings, spring mounted retractable landing gear |
| 3. Equipment: | Min. Equipment: <ul style="list-style-type: none">- 1 Air speed indicator (up to 300 km/h)- 1 Altimeter |



- 1 4-Point harness (symmetrical)
- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions: Span: 15,00 m
Wing area: 10,50 m²
Length: 6,66 m
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“ LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 600 daN
- for aero-tow max. 600 daN
7. Air Speeds:
- | | | |
|--------------------------|-----------------|----------|
| Manoeuvring Speed | V _A | 190 km/h |
| Never Exceed Speed | V _{NE} | 280 km/h |
| Maximum permitted speeds | | |
| - in rough air | V _{RA} | 190 km/h |
| - in aero-tow | V _T | 190 km/h |
| - in winch-launch | V _W | 140 km/h |
| - for gear operating | V _{LO} | 280 km/h |
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass: 525 kg
Max. Mass of Non-Lifting Parts: 230 kg
Note: Max. mass of Non-Lifting Parts may be higher, refer to Flight Manual, page 1-6 and Maintenance Manual, section2.
If TN 4049 (neo-winglets) has been performed:
Max. Mass: 505 kg
Max. Mass of Non-Lifting Parts: 250 kg
10. Centre of Gravity Range: Forward Limit 225 mm aft of datum point
Rearward Limit 400 mm aft of datum point



- | | |
|---|---|
| 11. Datum: | wing leading edge at wing root rib |
| 12. Levelling Means: | lower side of rear fuselage boom horizontal |
| 13. Control surface deflections: | Refer to Maintenance Manual |
| 14. Minimum Flight Crew: | 1 |
| 15. Maximum Passenger Seating Capacity: | Single seater |
| 16. Baggage/Cargo Compartments: | 1 compartment, max. 5 kg |
| 17. Lifetime limitations: | Refer to Maintenance Manual |

M.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS4-a, issued Jan. 5, 1984, LBA-approved

German Language:

Flughandbuch für das Segelflugzeug LS4-a, Ausgabe April 1983, LBA-anerkannt

2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS4-a, issued November 1983

Or

Maintenance Manual for the sailplane LS4, issued May 2011 as amended

Note: In this document the models LS4, LS4-a, LS4-b are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS4-a, Ausgabe April 1983

Oder

Wartungshandbuch für das Segelflugzeug LS4, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS4, LS4-a, LS4-b in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

M.V Notes

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



3. According to the technical bulletin TB-No. 4030 of Rolladen-Schneider it is possible to modify the glider optionally with a nose tow hook "E 85" and/or a winch tow hook "G 88".
4. According to the technical bulletin TB-No. 4041 of Rolladen-Schneider it is possible to retrofit the glider optionally with a nose tow hook.
5. According to the technical bulletin TB-No. 4018 of Rolladen-Schneider a conversion of the glider LS4 into model LS4-a is allowed.
6. According to the technical bulletin TB-No. 4047 of Rolladen-Schneider it is possible to increase the max. mass of non-lifting parts in order to allow full maximum cockpit load of 110 kg.



Section N: LS4-b

N.I General

1. Model LS4-b
2. Airworthiness Category: Utility "U"
3. Manufacturer: for LS4-b from serial No. 4830 to 41056:
Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
6073 Egelsbach
Germany

AMS-Flight d.o.o.
Kavčičeva 4
1000 Ljubljana
Slovenia
4. Application Date: 28. May 1991
5. Type Certificate Date: 31. August 1992
6. This TCDS cancels and replaces LBA TCDS No 345

N.II EASA Certification Basis

1. Reference Date for determining the applicable requirements: Defined by LBA letter I414-345/91, dated 31. May 1991
2. Airworthiness Requirements: Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22), Change 3, issue December 1982
3. Special Conditions: None
4. Exemptions: None
5. Deviations: None
6. Equivalent Safety Findings: None
7. Requirements elected to comply: Standards for Structural Substantiation of Glass and Carbon Fibre Reinforced Plastic Components for Sailplanes and Powered Sailplanes, May 1986

Additional requirements for the installation of a water ballast system into the fin (for compensating the nose heavy moment of the pilot mass). LBA-Ref.:I 4-I 413/89, dated October 25th 1989

Additional requirements for the installation of a water ballast system into the fin (for compensating the nose heavy moment of water ballast in wing tanks). LBA-Ref.:I 4-I 413/89, dated October 25th 1989.



8. Environmental Standards: - - -

N.III Technical Characteristics and Operational Limitations

1. Type Design Definition: Master drawing list LS4-b, issued June 26th 1992, amended 28th April 1995, LBA approved
2. Description: Single-seat, shoulder-winged sailplane in GRP-composite construction, T-type horizontal tail plane with fin and elevator, Schempp-Hirth airbrakes on upper wing surface, automatic control hook-ups, water ballast tanks in wings and optional in tail fin, spring mounted retractable landing gear
3. Equipment: Min. Equipment:
 - 1 Air speed indicator (up to 300 km/h)
 - 1 Altimeter
 - 1 4-Point harness (symmetrical)
 - 1 Parachute or back cushion (thickness compressed ~10cm/4in)Additionally, if tail water ballast system is fitted:
 - 1 Thermometer
 - 1 Feilling tube for tail tankAdditional Equipment refer to Flight and Maintenance Manual
4. Dimensions: Span: 15,00 m
Wing area: 10,50 m²
Length: 6,66 m
5. Launching Hooks:
 - 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“ LBA Datasheet No. 60.230/1Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
 - for winch and auto-tow launching max. 670 daN
 - for aero-tow max. 670 daN
7. Air Speeds: Manoeuvring Speed V_A 190 km/h
Never Exceed Speed V_{NE} 280 km/h
Maximum permitted speeds



- | | | | |
|---|---|----------|---------------------------|
| | - in rough air | V_{RA} | 190 km/h |
| | - in aero-tow | V_T | 190 km/h |
| | - in winch-launch | V_W | 140 km/h |
| | - for gear operating | V_{LO} | 280 km/h |
| 8. Operations Capability: | Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual | | |
| 9. Maximum Weights: | Max. Mass: | | 525 kg |
| | Max. Mass of Non-Lifting Parts: | | 230 kg |
| | Note: Max. mass of Non-Lifting Parts may be higher, refer to Flight Manual, Maintenance Manual and below mentioned SBs. | | |
| | If TN 4046 and TN 4047 (modification of the waterballast system) has been performed: | | |
| | Max. Mass of Non-Lifting Parts: | | 267 kg |
| | If TN 4049 (neo-winglets) has been performed: | | |
| | Max. Mass: | | 505 kg |
| | Max. Mass of Non-Lifting Parts: | | 250 kg |
| 10. Centre of Gravity Range: | Forward Limit | | 225 mm aft of datum point |
| | Rearward Limit | | 400 mm aft of datum point |
| 11. Datum: | wing leading edge at wing root rib | | |
| 12. Levelling Means: | lower side of rear fuselage boom horizontal | | |
| 13. Control surface deflections: | Refer to Maintenance Manual | | |
| 14. Minimum Flight Crew: | 1 | | |
| 15. Maximum Passenger Seating Capacity: | Single seater | | |
| 16. Baggage/Cargo Compartments: | 1 compartment, max. 5 kg | | |
| 17. Lifetime limitations: | Refer to Maintenance Manual | | |

N.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the sailplane LS4-b, issued Mar. 18 1992, LBA-approved

In combination with TN 4034 (installed waterballast system in the vertical fin):

Flight Manual for the sailplane LS4-b, issued January 1995

German Language:

Flughandbuch für das Segelflugzeug LS4-b, Ausgabe Februar 1992, LBA-anerkannt

In Kombination mit TM 4034 (Installation eines Wasserballastsystems in der Seitenflosse):

Flughandbuch für das Segelflugzeug LS-4b, Ausgabe Januar 1995



2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS4-b, issued April 1992

In combination with TN 4034 (installed waterballast system in the vertical fin):

Maintenance Manual for the sailplane LS4-b, issued Januar 1995

Or

Maintenance Manual for the sailplane LS4, issued May 2011 as amended

Note: In this document the models LS4, LS4-a, LS4-b (LS4-b with and without the water ballast system in the vertical fin) are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS4-b, Ausgabe Februar 1992

In Kombination mit TM 4034 (Installation eines Wasserballastsystems in der Seitenflosse):

Wartungshandbuch für das Segelflugzeug LS-4b, Ausgabe Januar 1995

Oder

Wartungshandbuch für das Segelflugzeug LS4, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS4, LS4-a, LS4-b (LS4-b mit und ohne Seitenflossentank) in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

N.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. According to the technical bulletin TB-No. 4034 of Rolladen-Schneider it is possible to modify the glider optionally with a tail water ballast system (tail tank).
Related Operating and Service Instructions see: N.IV.1. and N.IV.2.
4. According to the technical bulletin TB-No. 4041 of Rolladen-Schneider it is possible to retrofit the glider optionally with a nose tow hook.
5. According to the technical bulletin TB-No. 4047 of Rolladen-Schneider it is possible to increase the max. mass of non-lifting parts in order to allow full maximum cockpit load of 110 kg.



Section O: LS6

O.I General

- | | |
|---|---|
| 1. Model | LS6 |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 19. November 1981 |
| 5. Type Certificate Date: | 15. May 1985 |
| 6. This TCDS cancels and replaces LBA TCDS No 357 | |

O.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 3-357/81, dated 25. November 1981 |
| 2. Airworthiness Requirements: | Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22), Change 3, issue January 1983 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Preliminary Standards for Structural Substantiation of Glass and Carbon Fibre Reinforced Plastic Components for Sailplanes and Powered Sailplanes, January 1981 |
| 8. Environmental Standards: | - - - |

O.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|--|
| 1. Type Design Definition: | Master drawing list LS6, issued 15. May 1985, LBA approved |
| 2. Description: | Single-seat, shoulder-winged sailplane in GRP-CRP composite construction, T type horizontal tail plane with fin and elevator, Schempp-Hirth airbrakes on upper wing surface, water ballast tanks in wings, spring mounted retractable landing gear |
| 3. Equipment: | Min. Equipment: <ul style="list-style-type: none">- 1 Air speed indicator (up to 300 km/h)- 1 Altimeter- 1 4-Point harness (symmetrical) |



- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions: Span: 15,00 m
Wing area: 10,50 m²
Length: 6,66 m
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 800 daN
- for aero-tow max. 500 daN
7. Air Speeds:
- | | | |
|----------------------------|-----------------|----------|
| Manoeuvring Speed | V _A | 200 km/h |
| Never Exceed Speed | V _{NE} | 270 km/h |
| Maximum permitted speeds | | |
| - with flaps at -5 | V _{FE} | 270 km/h |
| - with flaps at +5 and +10 | V _{FE} | 200 km/h |
| - with flaps at L | V _{FE} | 160 km/h |
| - in rough air | V _{RA} | 200 km/h |
| - in aero-tow | V _T | 200 km/h |
| - in winch-launch | V _W | 140 km/h |
| - for gear operating | V _{LO} | 270 km/h |
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass: 525 kg
Max. Mass of Non-Lifting Parts: 230 kg
Note: Max. mass of Non-Lifting Parts may be higher, refer to Flight Manual page 1-5 and Maintenance Manual, section 2.
10. Centre of Gravity Range: Forward Limit 250 mm aft of datum point
Rearward Limit 400 mm aft of datum point
11. Datum: wing leading edge at wing root rib



- | | |
|---|---|
| 12. Levelling Means: | lower side of rear fuselage boom horizontal |
| 13. Control surface deflections: | Refer to Maintenance Manual |
| 14. Minimum Flight Crew: | 1 |
| 15. Maximum Passenger Seating Capacity: | Single seater |
| 16. Baggage/Cargo Compartments: | 1 compartment, max. 5 kg |
| 17. Lifetime limitations: | Refer to Maintenance Manual |

O.IV Operating and Service Instructions

1. Flight Manual

English Language:

FLIGHT MANUAL LS6, published 15. Mai 1985, LBA-approved

German Language:

Flughandbuch für das Segelflugzeugmuster LS6, Ausgabe Mai 1985, LBA-anerkannt

2. Maintenance Manual

English Language:

Maintenance Manual for the sailplane LS6, issued November 1985

Or

Maintenance Manual for the sailplane LS6, issued May 2011 as amended

Note: In this document the models LS6, LS6-a, LS6-b, LS6-c, LS6-c18, LS6-18w are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS6, Ausgabe Sept. 1984

Oder

Wartungshandbuch für das Segelflugzeug LS6, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS6, LS6-a, LS6-b, LS6-c, LS6-c18, LS6-18w in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

O.V Notes

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



3. According to the technical bulletin TB-No. 6005 of Rolladen-Schneider it is allowed to modify the glider into the variant LS6-a optionally. The bulletin TB-No. 6005 of Rolladen-Schneider is LBA-approved.
4. According to the technical bulletin TB-No. 6018 Rev. 1 of DG Flugzeugbau it is possible to retrofit the glider optionally with a nose tow hook or optionally with a tail wheel.



Section P: LS6-a

P.I General

- | | |
|---|---|
| 1. Model | LS6-a |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 12. June 1986 |
| 5. Type Certificate Date: | 04. September 1986 |
| 6. This TCDS cancels and replaces LBA TCDS No 357 | |

P.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 3-357/86, dated 19. June 1986 |
| 2. Airworthiness Requirements: | Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22), Change 3, issue January 1983 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Preliminary Standards for Structural Substantiation of Glass and Carbon Fibre Reinforced Plastic Components for Sailplanes and Powered Sailplanes, January 1981 |
| 8. Environmental Standards: | - - - |

P.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|---|
| 1. Type Design Definition: | Master drawing list LS6-a, issued 04. September 1986, LBA approved |
| 2. Description: | Single-seat, shoulder-winged sailplane in GRP-CRP composite construction, T type horizontal tail plane with fin and elevator, Schempp-Hirth airbrakes on upper wing surface, water ballast tanks in wings and optionally in the tail fin, spring mounted retractable landing gear |
| 3. Equipment: | Min. Equipment: <ul style="list-style-type: none">- 1 Air speed indicator (up to 300 km/h)- 1 Altimeter |



- 1 4-Point harness (symmetrical)
- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions: Span: 15,00 m
Wing area: 10,50 m²
Length: 6,66 m
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 800 daN
- for aero-tow max. 500 daN
7. Air Speeds:
- | | | |
|----------------------------|-----------------|----------|
| Manoeuvring Speed | V _A | 200 km/h |
| Never Exceed Speed | V _{NE} | 270 km/h |
| Maximum permitted speeds | | |
| - with flaps at -5 | V _{FE} | 270 km/h |
| - with flaps at +5 and +10 | V _{FE} | 200 km/h |
| - with flaps at L | V _{FE} | 160 km/h |
| - in rough air | V _{RA} | 200 km/h |
| - in aero-tow | V _T | 200 km/h |
| - in winch-launch | V _W | 140 km/h |
| - for gear operating | V _{LO} | 270 km/h |
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass: 525 kg
Max. Mass of Non-Lifting Parts: 230 kg
Note: Max. mass of Non-Lifting Parts may be higher, refer to Flight Manual page 1-5 and Maintenance Manual, section 2.
10. Centre of Gravity Range: Forward Limit 250 mm aft of datum point
Rearward Limit 400 mm aft of datum point



- | | |
|---|---|
| 11. Datum: | wing leading edge at wing root rib |
| 12. Levelling Means: | lower side of rear fuselage boom horizontal |
| 13. Control surface deflections: | Refer to Maintenance Manual |
| 14. Minimum Flight Crew: | 1 |
| 15. Maximum Passenger Seating Capacity: | Single seater |
| 16. Baggage/Cargo Compartments: | 1 compartment, max. 5 kg |
| 17. Lifetime limitations: | Refer to Maintenance Manual |

P.IV Operating and Service Instructions

1. Flight Manual

English Language:

FLIGHT MANUAL LS6-a, published 7. Oct 1986, LBA-approved

German Language:

Flughandbuch für das Segelflugzeug LS6-a, Ausgabe April 1986, LBA-anerkannt

2. Maintenance Manual

English Language:

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS LS6-a, Published 10. Jan. 1987 (Translation of German manual only)

Or

Maintenance Manual for the sailplane LS6, issued May 2011 as amended

Note: In this document the models LS6, LS6-a, LS6-b, LS6-c, LS6-c18, LS6-18w are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS6-a, Ausgabe April 1986

Oder

Wartungshandbuch für das Segelflugzeug LS6, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS6, LS6-a, LS6-b, LS6-c, LS6-c18, LS6-18w in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

P.V Notes

1. Manufacturing is confined to industrial production.



2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. According to the technical bulletin TB-No. 6005 of Rolladen-Schneider it is allowed to modify the model LS6 into the model LS6-a optionally. The bulletin TB-No. 6005 of Rolladen-Schneider is LBA-approved.
4. According to the technical bulletin TB-No. 6018 of DG Flugzeugbau it is possible to retrofit the glider optionally with a nose tow hook or optionally with a tail wheel.



Section Q: LS6-b

Q.I General

- | | |
|---|---|
| 1. Model | LS6-b |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 29. September 1986 |
| 5. Type Certificate Date: | 23. September 1987 |
| 6. This TCDS cancels and replaces LBA TCDS No 357 | |

Q.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 3-357/86, dated 02. October 1986 |
| 2. Airworthiness Requirements: | Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22), Change 3, issue January 1983 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Preliminary Standards for Structural Substantiation of Glass and Carbon Fibre Reinforced Plastic Components for Sailplanes and Powered Sailplanes, January 1981 |
| 8. Environmental Standards: | - - - |

Q.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|---|
| 1. Type Design Definition: | Master drawing list LS6-b, issued 23. September 1987, LBA approved |
| 2. Description: | Single-seat, shoulder-winged sailplane in GRP-CRP composite construction, T type horizontal tail plane with fin and elevator, Schempp-Hirth airbrakes on upper wing surface, water ballast tanks in wings and optionally in the tail fin, spring mounted retractable landing gear |
| 3. Equipment: | Min. Equipment: <ul style="list-style-type: none">- 1 Air speed indicator (up to 300 km/h)- 1 Altimeter |



- 1 4-Point harness (symmetrical)
- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions: Span: 15,00 m
Wing area: 10,50 m²
Length: 6,66 m
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 800 daN
- for aero-tow max. 500 daN
7. Air Speeds:
- | | | |
|----------------------------|-----------------|----------|
| Manoeuvring Speed | V _A | 200 km/h |
| Never Exceed Speed | V _{NE} | 270 km/h |
| Maximum permitted speeds | | |
| - with flaps at -5 | V _{FE} | 270 km/h |
| - with flaps at +5 and +10 | V _{FE} | 200 km/h |
| - with flaps at L | V _{FE} | 160 km/h |
| - in rough air | V _{RA} | 200 km/h |
| - in aero-tow | V _T | 200 km/h |
| - in winch-launch | V _W | 140 km/h |
| - for gear operating | V _{LO} | 270 km/h |
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass: 525 kg
Max. Mass of Non-Lifting Parts: 240 kg
Note: Max. mass of Non-Lifting Parts may be higher, refer to Flight Manual page 2-4 and Maintenance Manual, section 2, but not more than 255 kg.
10. Centre of Gravity Range: Forward Limit 250 mm aft of datum point
Rearward Limit 400 mm aft of datum point



- | | |
|---|---|
| 11. Datum: | wing leading edge at wing root rib |
| 12. Levelling Means: | lower side of rear fuselage boom horizontal |
| 13. Control surface deflections: | Refer to Maintenance Manual |
| 14. Minimum Flight Crew: | 1 |
| 15. Maximum Passenger Seating Capacity: | Single seater |
| 16. Baggage/Cargo Compartments: | 1 compartment, max. 5 kg |
| 17. Lifetime limitations: | Refer to Maintenance Manual |

Q.IV Operating and Service Instructions

1. Flight Manual

English Language:

FLIGHT MANUAL LS6-b, Published 30 Okt. 1987 (translation of German manual only)

German Language:

Flughandbuch für das Segelflugzeug LS6-b, Ausgabe Mai 1987, LBA-anerkannt

2. Maintenance Manual

English Language:

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS LS6-b Published: 30. Okt. 1987 (translation of German manual only)

Or

Maintenance Manual for the sailplane LS6, issued May 2011 as amended

Note: In this document the models LS6, LS6-a, LS6-b, LS6-c, LS6-c18, LS6-18w are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS6-b, Ausgabe Mai 1987

Oder

Wartungshandbuch für das Segelflugzeug LS6, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS6, LS6-a, LS6-b, LS6-c, LS6-c18, LS6-18w in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

Q.V Notes

1. Manufacturing is confined to industrial production.



2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. According to the technical bulletin TB-No. 6018 of DG Flugzeugbau it is possible to retrofit the glider optionally with a nose tow hook.
4. According to the technical bulletin TB-No. 6043 of DG Flugzeugbau it is possible to retrofit the glider optionally with winglets. For sailplanes modified by TN-No 6043 the certification basis is amended as follows:
JAR 22.49, 22.147, 22.177, 22.201, 22.203, 22.207, 22.221, 22.223, 22.251, 22.375, 22.601, 22.629 at Change 5.



Section R: LS6-c

R.I General

1. Model LS6-c
2. Airworthiness Category: Utility "U"
3. Manufacturer: Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
6073 Egelsbach
Germany
4. Application Date: 04. January 1990
5. Type Certificate Date: 12. September 1991
6. This TCDS cancels and replaces LBA TCDS No 357

R.II EASA Certification Basis

1. Reference Date for determining the applicable requirements: Defined by LBA letter I 412-357/90, dated 10. January 1990
2. Airworthiness Requirements: Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22), Change 4, issue June 1989
3. Special Conditions: None
4. Exemptions: None
5. Deviations: None
6. Equivalent Safety Findings: None
7. Requirements elected to comply: Preliminary Standards for Structural Substantiation of Glass and Carbon Fibre Reinforced Plastic Components for Sailplanes and Powered Sailplanes, May 1986

Additional requirements for the installation of a water ballast system into the fin (for compensating the nose heavy moment of water ballast in wing tanks). LBA-Ref.: I 4-I 413/89, dated 25 October 1989
8. Environmental Standards: - - -

R.III Technical Characteristics and Operational Limitations

1. Type Design Definition: Master drawing list LS6-c, issued 20. June 1991, LBA approved
2. Description: Single-seat, shoulder-winged sailplane in GRP-CRP composite construction, T type horizontal tail plane with fin and elevator, Schempp-Hirth airbrakes on upper wing surface, water ballast tanks in wings



and optionally in the tail fin, wing span variable by use of different wing tips, spring mounted retractable landing gear.

3. Equipment:

Min. Equipment:

- 1 Air speed indicator (up to 300 km/h)
- 1 Altimeter
- 1 4-Point harness (symmetrical)
- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additionally, if tail water ballast system is fitted:

- 1 Thermometer
- 1 Filling tube for tail tank

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions:

Span:	15,00 m	17,60 m
Wing area:	10,50 m ²	11,31 m ²
Length:	6,80 m	

5. Launching Hooks:

- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
- 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
- 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
- 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
- 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
- 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1

Note: Hooks 2-6 optional

6. Weak links:

Ultimate Strength:

- for winch and auto-tow launching max. 825 daN
- for aero-tow max. 670 daN

7. Air Speeds:

Manoeuvring Speed	V _A	200 km/h
Never Exceed Speed	V _{NE}	270 km/h
Maximum permitted speeds		
- with flaps at -5	V _{FE}	270 km/h
- with flaps at +5 and +10	V _{FE}	200 km/h
- with flaps at L	V _{FE}	160 km/h
- in rough air	V _{RA}	200 km/h
- in aero-tow	V _T	200 km/h
- in winch-launch	V _W	140 km/h
- for gear operating	V _{LO}	270 km/h

8. Operations Capability:

Approved for VFR-flying in daytime only.



Cloud flying according to the specifications in the Flight Manual

9. Maximum Weights: Max. Mass: 525 kg
Max. Mass of Non-Lifting Parts: 240 kg
Note: Max. mass of Non-Lifting Parts may be higher, refer to Flight Manual page 2-4 and Maintenance Manual, chapter 2, but not more than 255 kg.
10. Centre of Gravity Range: Forward Limit 250 mm aft of datum point
Rearward Limit 400 mm aft of datum point
11. Datum: wing leading edge at wing root rib
12. Levelling Means: lower side of rear fuselage boom horizontal
13. Control surface deflections: Refer to Maintenance Manual
14. Minimum Flight Crew: 1
15. Maximum Passenger Seating Capacity: Single seater
16. Baggage/Cargo Compartments: 1 compartment, max. 5 kg
17. Lifetime limitations: Refer to Maintenance Manual

R.IV Operating and Service Instructions

1. Flight Manual

English Language:

FLIGHT MANUAL FOR THE LS6-c SAILPLANE Published: Nov. 30, 1990, LBA-approved

German Language:

Flughandbuch für das Segelflugzeug LS6-c, Ausgabe November 1990, LBA-anerkannt

2. Maintenance Manual

English Language:

MAINTENANCE MANUAL LS6-c, Title for USA: Instructions for Continued Airworthiness, Published: Nov. 30, 1990

Or

Maintenance Manual for the sailplane LS6, issued May 2011 as amended

Note: In this document the models LS6, LS6-a, LS6-b, LS6-c, LS6-c18, LS6-18w are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS6-c, Ausgabe November 1990

Oder

Wartungshandbuch für das Segelflugzeug LS6, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS6, LS6-a, LS6-b, LS6-c, LS6-c18, LS6-18w in einem Dokument zusammengefasst.



3. Structural Repair Manual
Included in maintenance manual
4. Operating Manual for the Launching Hooks
English language: Operating Instructions for the Tost release, latest approved version
German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

R.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. According to the technical bulletin TB-No. 6040 of Rolladen-Schneider it is possible to retrofit the glider optionally with a nose tow hook.
4. According to the technical bulletin TB-No. 6031 of Rolladen-Schneider a conversion of the model LS6-c into model LS6-c18 is possible.
5. According to the technical bulletin TB-No. 6032 of Rolladen-Schneider a conversion of the model LS6-c into model LS6-18w is possible.



Section S: **LS6-c18**

S.I **General**

1. Model LS6-c18
2. Airworthiness Category: Utility "U"
3. Manufacturer: Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
6073 Egelsbach
Germany
4. Application Date: 10. September 1993
5. Type Certificate Date: 31. January 1995
6. This TCDS cancels and replaces LBA TCDS No 357

S.II **EASA Certification Basis**

1. Reference Date for determining the applicable requirements: Defined by LBA letter I 414-357/93, dated 20. September 1993
2. Airworthiness Requirements: Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22), Change 4, issue June 1989

Additionally:
Requirement JAR22.375 Winglets from JAR 22 Amendment 22/90/1, issued June 1990
3. Special Conditions: None
4. Exemptions: None
5. Deviations: None
6. Equivalent Safety Findings: None
7. Requirements elected to comply: Standards for Structural Substantiation of Glass and Carbon Fibre Reinforced Plastic Components for Sailplanes and Powered Sailplanes, May 1986

Additional requirements for the installation of a water ballast system into the fin (for compensating the nose heavy moment of the pilot and water ballast in wing tanks). LBA-Ref.:I 4-I 413/89, dated 25 October 1989
8. Environmental Standards: - - -

S.III **Technical Characteristics and Operational Limitations**

1. Type Design Definition: Master drawing list LS6-c18, issued 05. January 1995, LBA approved.



2. Description: Single-seat, shoulder-winged sailplane in GRP-CRP composite construction, T type horizontal tail plane with fin and elevator, Schempp-Hirth airbrakes on upper wing surface, water ballast tanks in wings and optionally in the tail fin, wing span variable by use of different wing tips (15m tips without and 18m tips with winglets), spring mounted retractable landing gear.
3. Equipment: Min. Equipment:
- 1 Air speed indicator (up to 300 km/h)
 - 1 Altimeter
 - 1 4-Point harness (symmetrical)
 - 1 Parachute or back cushion (thickness compressed ~10cm/4in)
- Additionally, if tail water ballast system is fitted:
- 1 Thermometer
 - 1 Filling tube for tail tank
- Additional Equipment refer to Flight and Maintenance Manual
4. Dimensions:
- | | | |
|------------|----------------------|-----------------------|
| Span: | 15,00 m | 18,00 m |
| Wing area: | 10,50 m ² | 11,417 m ² |
| Length: | 6,80 m | |
| Height: | 1,43 m | |
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 825 daN
 - for aero-tow max. 670 daN
7. Air Speeds:
- | | | |
|----------------------------|-----------------|----------|
| Manoeuvring Speed | V _A | 190 km/h |
| Never Exceed Speed | V _{NE} | 280 km/h |
| Maximum permitted speeds | | |
| - with flaps at -5 | V _{FE} | 280 km/h |
| - with flaps at +5 and +10 | V _{FE} | 190 km/h |
| - with flaps at L | V _{FE} | 150 km/h |



- | | | | |
|--|----------------------|----------|----------|
| | - in rough air | V_{RA} | 190 km/h |
| | - in aero-tow | V_T | 190 km/h |
| | - in winch-launch | V_W | 140 km/h |
| | - for gear operating | V_{LO} | 280 km/h |
8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass: 525 kg
Max. Mass of Non-Lifting Parts: 235 kg
Note: Max. mass of Non-Lifting Parts may be higher, refer to Flight Manual page 2-4 and Maintenance Manual, chapter 2, but not more than 251 kg.
10. Centre of Gravity Range: Forward Limit 250 mm aft of datum point
Rearward Limit 400 mm aft of datum point
11. Datum: wing leading edge at wing root rib
12. Levelling Means: lower side of rear fuselage boom horizontal
13. Control surface deflections: Refer to Maintenance Manual
14. Minimum Flight Crew: 1
15. Maximum Passenger Seating Capacity: Single seater
16. Baggage/Cargo Compartments: 1 compartment, max. 5 kg
17. Lifetime limitations: Refer to Maintenance Manual

S.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the LS6-c18 Sailplane, Published: Mar. 30, 1994 (translation of German manual only)

German Language:

Flughandbuch für das Segelflugzeug LS6-c18, Ausgabe März 1994, LBA-anerkannt

2. Maintenance Manual

English Language:

Maintenance Manual for the LS6-c18 Sailplane, Title for USA: Instructions for Continued Airworthiness, Published: Nov. 30, 1990 (translation of German manual only)

Or

Maintenance Manual for the sailplane LS6, issued May 2011 as amended

Note: In this document the models LS6, LS6-a, LS6-b, LS6-c, LS6-c18, LS6-18w are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS6-c18, Ausgabe März 1994

Oder



Wartungshandbuch für das Segelflugzeug LS6, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS6, LS6-a, LS6-b, LS6-c, LS6-c18, LS6-18w in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

S.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. According to the technical bulletin TB-No. 6040 of Rolladen-Schneider it is possible to retrofit the glider optionally with a nose tow hook.
4. According to the technical bulletin TB-No. 6031 of Rolladen-Schneider a conversion of the variant LS6-c into variant LS6-c18 is possible.



Section T: LS6-18w

T.I General

- | | |
|---|--|
| 1. Model | LS6-18w |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Up to serial number 6384:
Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
6073 Egelsbach
Germany

AMS-Flight d.o.o.
Kavčičeva 4
1000 Ljubljana
Slovenia |
| 4. Application Date: | 16. November 1993 |
| 5. Type Certificate Date: | 31. January 1995 |
| 6. This TCDS cancels and replaces LBA TCDS No 357 | |

T.II EASA Certification Basis

- | | |
|--|--|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 414-357/93, dated 23. November 1993 |
| 2. Airworthiness Requirements: | Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22), Change 4, issue June 1989

Additionally:
Requirement JAR22.375 Winglets from JAR 22 Amendment 22/90/1, issued June 1990 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Standards for Structural Substantiation of Glass and Carbon Fibre Reinforced Plastic Components for Sailplanes and Powered Sailplanes, May 1986

Additional requirements for the installation of a water ballast system into the fin (for compensating the nose heavy moment of the pilot and water ballast in wing tanks). LBA-Ref.:I 4-I 413/89, dated 25 October 1989 |
| 8. Environmental Standards: | - - - |



T.III Technical Characteristics and Operational Limitations

1. Type Design Definition: Master drawing list LS6-c18w, issued 05. January 1995, LBA approved.
2. Description: Single-seat, shoulder-winged sailplane in GRP-CRP composite construction, T type horizontal tail plane with fin and elevator, Schempp-Hirth airbrakes on upper wing surface, water ballast tanks in wings and optionally in the tail fin, wing span variable by use of different wing tips (with winglets for 15m and 18m wing span), spring mounted retractable landing gear.
3. Equipment: Min. Equipment:
- 1 Air speed indicator (up to 300 km/h)
 - 1 Altimeter
 - 1 4-Point harness (symmetrical)
 - 1 Parachute or back cushion (thickness compressed ~10cm/4in)
- Additionally, if tail water ballast system is fitted:
- 1 Thermometer
 - 1 Filling tube for tail tank
- Additional Equipment refer to Flight and Maintenance Manual
4. Dimensions:
- | | | |
|------------|----------------------|-----------------------|
| Span: | 15,00 m | 18,00 m |
| Wing area: | 10,50 m ² | 11,417 m ² |
| Length: | 6,80 m | |
| Height: | 1,43 m | |
5. Launching Hooks:
- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
 - 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
 - 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
 - 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
 - 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
 - 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1
- Note: Hooks 2-6 optional
6. Weak links: Ultimate Strength:
- for winch and auto-tow launching max. 825 daN
 - for aero-tow max. 670 daN
7. Air Speeds:
- | | | |
|--------------------|-----------------|----------|
| Manoeuvring Speed | V _A | 190 km/h |
| Never Exceed Speed | V _{NE} | 280 km/h |



Maximum permitted speeds		
- with flaps at -5	V _{FE}	280 km/h
- with flaps at +5 and +10	V _{FE}	190 km/h
- with flaps at L	V _{FE}	150 km/h
- in rough air	V _{RA}	190 km/h
- in aero-tow	V _T	190 km/h
- in winch-launch	V _W	140 km/h
- for gear operating	V _{LO}	280 km/h

8. Operations Capability: Approved for VFR-flying in daytime only.
Cloud flying according to the specifications in the Flight Manual
9. Maximum Weights: Max. Mass: 525 kg
Max. Mass of Non-Lifting Parts: 240 kg
Note: Max. mass of Non-Lifting Parts may be higher, refer to Flight Manual page 2-4 and Maintenance Manual, chapter 2, but not more than 256 kg.
10. Centre of Gravity Range: Forward Limit 250 mm aft of datum point
Rearward Limit 400 mm aft of datum point
11. Datum: wing leading edge at wing root rib
12. Levelling Means: lower side of rear fuselage boom horizontal
13. Control surface deflections: Refer to Maintenance Manual
14. Minimum Flight Crew: 1
15. Maximum Passenger Seating Capacity: Single seater
16. Baggage/Cargo Compartments: 1 compartment, max. 5 kg
17. Lifetime limitations: Refer to Maintenance Manual

T.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the LS6-18w sailplane, Published: Mar. 30, 1994 (translation of German manual only)

German Language:

Flughandbuch für das Segelflugzeug LS6-18w, Ausgabe März 1994, LBA-anerkannt

2. Maintenance Manual

English Language:

Maintenance Manual for the LS6-18w Sailplane Title for USA: Instructions for Continued Airworthiness Published: Mar. 30, 1994 (translation of German manual only)

Or



Maintenance Manual for the sailplane LS6, issued May 2011 as amended

Note: In this document the models LS6, LS6-a, LS6-b, LS6-c, LS6-c18, LS6-18w are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS6-18w, Ausgabe März 1994

Oder

Wartungshandbuch für das Segelflugzeug LS6, Ausgabe Mai 2011, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS6, LS6-a, LS6-b, LS6-c, LS6-c18, LS6-18w in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

T.V Notes

1. Manufacturing is confined to industrial production.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. According to the technical bulletin TB-No. 6040 of Rolladen-Schneider it is possible to retrofit the glider optionally with a nose tow hook.
4. According to the technical bulletin TB-No. 6032 of Rolladen-Schneider a conversion of the variant LS6-c into variant LS6-18w is possible.



Section U: LS7

U.I General

- | | |
|---|---|
| 1. Model | LS7 |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 11. November 1987 |
| 5. Type Certificate Date: | 07. February 1989 |
| 6. This TCDS cancels and replaces LBA TCDS No 375 | |

U.II EASA Certification Basis

- | | |
|--|---|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 4-375/87, dated 19. November 1987 |
| 2. Airworthiness Requirements: | Joint airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22), Change 3, September 1982 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Standards for Structural Substantiation of Glass and Carbon Fibre Reinforced Plastic Components for Sailplanes and Powered Sailplanes, May 1986 |
| 8. Environmental Standards: | --- |

U.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|---|
| 1. Type Design Definition: | Master drawing list LS7, issued 1. November 1988, LBA approved |
| 2. Description: | Single-seat, midwing sailplane in GRP-CRP- AFRP-composite construction, T type horizontal tail plane with fin and elevator, airbrakes on upper wing surface, water ballast tanks in wings and optional in tail fin, spring mounted retractable landing gear |
| 3. Equipment: | Min. Equipment: <ul style="list-style-type: none">- 1 Air speed indicator (up to 300 km/h)- 1 Altimeter- 1 4-Point harness (symmetrical) |



- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additionally, if tail water ballast system is fitted:

- 1 Thermometer
- 1 Filling tube for tail tank

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions:

Span: 15,00 m
Wing area: 9,73 m²
Length: 6,66 m

5. Launching Hooks:

- 1) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
- 2)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
- 3) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
- 4) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
- 5) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
- 6) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1

Note: Hooks 2-6 optional

6. Weak links:

Ultimate Strength:

- for winch and auto-tow launching max. 825 daN
- for aero-tow max. 550 daN

7. Air Speeds:

Manoeuvring Speed V_A 190 km/h
Never Exceed Speed V_{NE} 270 km/h
Maximum permitted speeds
- in rough air V_{RA} 190 km/h
- in aero-tow V_T 190 km/h
- in winch-launch V_W 140 km/h
- for gear operating V_{LO} 270 km/h

8. Operations Capability:

Approved for VFR-flying in daytime only.

Cloud flying according to the specifications in the Flight Manual

9. Maximum Weights:

Max. Mass: 486 kg

Max. Mass of Non-Lifting Parts: 235 kg

Note: Max. mass of Non-Lifting Parts may be higher, refer to Flight Manual page 2-4 and Maintenance Manual, chapter 2, but not more than 249 kg.

10. Centre of Gravity Range:

Forward Limit 250 mm aft of datum point

Rearward Limit 400 mm aft of datum point



- | | |
|---|---|
| 11. Datum: | wing leading edge at wing root rib |
| 12. Levelling Means: | lower side of rear fuselage boom horizontal |
| 13. Control surface deflections: | Refer to Maintenance Manual |
| 14. Minimum Flight Crew: | 1 |
| 15. Maximum Passenger Seating Capacity: | Single seater |
| 16. Baggage/Cargo Compartments: | 1 compartment, max. 5 kg |
| 17. Lifetime limitations: | Refer to Maintenance Manual |

U.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the LS7 Sailplane, Published: Apr. 15, 1989 (translation of German manual only)

German Language:

Flughandbuch für das Segelflugzeug LS7, Ausgabe November 1988, LBA-anerkannt

2. Maintenance Manual

English Language:

Maintenance Manual for the LS7 Sailplane, Title for USA: Instructions for Continued Airworthiness, Published: Apr. 15, 1989 (translation of German manual only)

Or

Maintenance Manual for the sailplane LS7, issued December 2009 as amended

Note: In this document the models LS7 and LS7-WL are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS7, Ausgabe November 1988

Oder

Wartungshandbuch für das Segelflugzeug LS7, Ausgabe Dezember 2009, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS7 und LS7-WL in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

U.V Notes

1. Manufacturing is confined to industrial production.



2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. According to the technical bulletin TB-No. 7008 of Rolladen-Schneider a conversion of the variant LS7 into variant LS7-WL is possible.
4. According to the technical bulletin TN-No. 7018 of DG Flugzeugbau, a retrofit of neo winglets is possible. For sailplane modified by TN-No 7018 the certification basis is amended as follows: JAR 22.49, 22.147, 22.177, 22.201, 22.203, 22.207, 22.221, 22.223, 22.251, 22.375, 22.601, 22.629 at Change 5



Section V: LS7-WL

V.I General

- | | |
|---|---|
| 1. Model | LS7-WL |
| 2. Airworthiness Category: | Utility "U" |
| 3. Manufacturer: | Rolladen-Schneider Flugzeugbau GmbH
Mühlstr. 10
6073 Egelsbach
Germany |
| 4. Application Date: | 02. March 1992 |
| 5. Type Certificate Date: | 22. December 1992 |
| 6. This TCDS cancels and replaces LBA TCDS No 375 | |

V.II EASA Certification Basis

- | | |
|--|--|
| 1. Reference Date for determining the applicable requirements: | Defined by LBA letter I 414-375/92, dated 04. March 1992 |
| 2. Airworthiness Requirements: | Joint airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22), Change 4, June 1989, incl. Amendment 22/90/1 |
| 3. Special Conditions: | None |
| 4. Exemptions: | None |
| 5. Deviations: | None |
| 6. Equivalent Safety Findings: | None |
| 7. Requirements elected to comply: | Standards for Structural Substantiation of Glass and Carbon Fibre Reinforced Plastic Components for Sailplanes and Powered Sailplanes, July 1991 |
| 8. Environmental Standards: | --- |

V.III Technical Characteristics and Operational Limitations

- | | |
|----------------------------|---|
| 1. Type Design Definition: | Master drawing list LS7 with amendment (wl), issued 16. November 1992, LBA approved |
| 2. Description: | Single-seat, midwing sailplane in GRP-CRP- AFRP-composite construction, T type horizontal tail plane with fin and elevator, airbrakes on upper wing surface, water ballast tanks in wings and optional in tail fin, winglets, spring mounted retractable landing gear |
| 3. Equipment: | Min. Equipment: <ul style="list-style-type: none">- 1 Air speed indicator (up to 300 km/h)- 1 Altimeter- 1 4-Point harness (symmetrical) |



- 1 Parachute or back cushion (thickness compressed ~10cm/4in)

Additionally, if tail water ballast system is fitted:

- 1 Thermometer
- 1 Filling tube for tail tank

Additional Equipment refer to Flight and Maintenance Manual

4. Dimensions:

Span: 15,00 m
Wing area: 9,73 m²
Length: 6,66 m

5. Launching Hooks:

- 7) Safety hook „Europa G 72“, LBA Datasheet No. 60.230/2
- 8)) Safety hook „Europa G 73“, LBA Datasheet No. 60.230/2
- 9) Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2
- 10) Nose tow hook „E 85“, LBA Datasheet No. 60.230/1
- 11) Nose tow hook „E 75“, LBA Datasheet No. 60.230/1
- 12) Nose tow hook „E 72“, LBA Datasheet No. 60.230/1

Note: Hooks 2-6 optional

6. Weak links:

Ultimate Strength:

- for winch and auto-tow launching max. 825 daN
- for aero-tow max. 550 daN

7. Air Speeds:

Manoeuvring Speed V_A 190 km/h
Never Exceed Speed V_{NE} 270 km/h
Maximum permitted speeds
- in rough air V_{RA} 190 km/h
- in aero-tow V_T 190 km/h
- in winch-launch V_W 140 km/h
- for gear operating V_{LO} 270 km/h

8. Operations Capability:

Approved for VFR-flying in daytime only.

Cloud flying according to the specifications in the Flight Manual

9. Maximum Weights:

Max. Mass: 486 kg

Max. Mass of Non-Lifting Parts: 235 kg

Note: Max. mass of Non-Lifting Parts may be higher, refer to Flight Manual page 2-4 and Maintenance Manual, chapter 2, but not more than 249 kg.

10. Centre of Gravity Range:

Forward Limit 250 mm aft of datum point

Rearward Limit 400 mm aft of datum point



- | | |
|---|---|
| 11. Datum: | wing leading edge at wing root rib |
| 12. Levelling Means: | lower side of rear fuselage boom horizontal |
| 13. Control surface deflections: | Refer to Maintenance Manual |
| 14. Minimum Flight Crew: | 1 |
| 15. Maximum Passenger Seating Capacity: | Single seater |
| 16. Baggage/Cargo Compartments: | 1 compartment, max. 5 kg |
| 17. Lifetime limitations: | Refer to Maintenance Manual |

V.IV Operating and Service Instructions

1. Flight Manual

English Language:

Flight Manual for the LS7-WL Sailplane Published: Oct. 15, 1992 (translation of German manual only)

German Language:

Flughandbuch für das Segelflugzeug LS7-WL, Ausgabe Oktober 1992, LBA-anerkannt

2. Maintenance Manual

English Language:

Maintenance Manual for the LS7-WL Sailplane, Title for USA: Instructions for Continued Airworthiness Published: Oct. 15, 1992 (translation of German manual only)

Or

Maintenance Manual for the sailplane LS7, issued December 2009 as amended

Note: In this document the models LS7 and LS7-WL are combined in one document.

German Language:

Wartungshandbuch für das Segelflugzeug LS7-WL, Ausgabe Oktober 1992

Oder

Wartungshandbuch für das Segelflugzeug LS7-WL, Ausgabe Dezember 2009, in der jeweils gültigen Ausgabe.

Anmerkung: In diesem Dokument sind die Baureihen LS7 und LS7-WL in einem Dokument zusammengefasst.

3. Structural Repair Manual

Included in maintenance manual

4. Operating Manual for the Launching Hooks

English language: Operating Instructions for the Tost release, latest approved version

German language: Betriebshandbuch für die TOST Schleppkupplung, in der jeweils gültigen Ausgabe

V.V Notes

1. Manufacturing is confined to industrial production.



2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
3. According to the technical bulletin TB-No. 7008 of Rolladen-Schneider a conversion of the variant LS7 into variant LS7-WL is possible.
4. According to the technical bulletin TB-No. 7012 of Rolladen-Schneider it is possible to retrofit the glider optionally with a nose tow hook.
5. According to the technical bulletin TN-No. 7018 of DG Flugzeugbau, a retrofit of neo winglets is possible. For sailplane modified by TN-No 7018 the certification basis is amended as follows: JAR 22.49, 22.147, 22.177, 22.201, 22.203, 22.207, 22.221, 22.223, 22.251, 22.375, 22.601, 22.629 at Change 5



Section W: **Administrative Section**

W.I Acronyms & Abbreviations

n/a

W.II Type Certificate Holder Record

TC Holder	Period
Rolladen-Schneider Flugzeugbau GmbH	Until 2003
AMS-Flight d.o.o.	For LS4 and LS6 after Rolladen-Schneider insolvency 2004-2006
DG-Flugzeugbau GmbH	Since 2004 after Rolladen-Schneider insolvency for the models of the LS1 series, LS3 series and LS7 series Since 2010 for all models
DG Aviation GmbH	As of 24 March 2022

W.III Change Record

Issue	Date	Changes	TC Issue No. & Date
01	18 July 2006	Transfer from LBA TCDS No. 345 Issue 5 to the EASA Type Design Change of TC-Holder	18 July 2006
02	30 August 2010	Transfer from LBA TCDS No 262, 317, 375 and EASA TCDS A.094 to this TCDS A.095, Type designation changed to LSsailplanes, Change of TC-Holder. Maintenance Manuals of different Variants combined in one document, issued December 2009	
03	16 September 2010	Designation changes to ease searches in electronic databases (space between LS and the number). Correction to the reference to TCDS A.096 to A.094 in the change record. Correction to designation '7-wl' which now reads '7-WL'.	
04	30 September 2011	Corrections of typing errors. Maintenance Manuals of different Variants combined in one document (LS1 (except LS1-e), LS4, LS6) issued May 2011. Inclusion of LS3-a S/N 3400	
05	08 October 2012	Amended towing hooks for aerotowing for the variants LS6, LS6-a and LS6-b according to TN 6018 of DG-Flugzeugbau GmbH.	
06	25 August 2015	Corrections of typos; CG range LS-4; nose tow hook LS-6 series.	



07	13 July 2017	Amendment of Winglets, weight of non-lifting parts, wing-fuselage junctions, aileron end plates for LS1-f and LS1-F(45) according TN 63-LSof DG-Flugzeugbau GmbH	
08	05 October 2018	Correction of errors in Section I,J,K: max airspeeds with flap settings 0° and -7°	
09	03 July 2019	Changes to section J.III, K.III, L.III, M.III, N.III, L.V, and M.V (max airspeeds with flaps, max. masses for TM4047, TM4049	
10	08 November 2021	Change to section Q.V.4, U.V.4, V.V.5 for TN 6043 and TN 7018 (winglets) amendment of certification basis.	
11	06 April 2022	Change of TC-holder	24 March 2022
12	24 October 2023	Change to section D.III.9, D.V.6, E.III.7 and .9, E.V.5 for TN LS1-64 (Winglets)	
13	04 March 2026	Clean up and elimination of formatting issues and typing errors including removal of German translations Correction of errors from initial transfer from LBA datasheets Removing non existing manuals in English Languages for LS1 models and LS3 V1 Introduction of LS3 and LS3-a winglets with changes to sections: I.III, I.V, J.III, J.V	

-END-

