



TYPE-CERTIFICATE DATA SHEET

No. EASA.A.083

for
LAK-17

Type Certificate Holder

JSC "Sportinė Aviacija ir KO"

Pociūnai
LT-59327 Prienai
Republic of Lithuania

For model: LAK-17A
 LAK-17AT
 LAK-17B FES
 LAK-17B FES mini
 LAK-17A mini
 LAK-17C FES
 LAK-17A FES



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Section A: LAK-17A

A.I. GENERAL

Allgemeines

- | | |
|---|--|
| 1. Data Sheet No.:
Kennblatt-Nr.: | EASA.A.083 |
| 2. a) Type: (Muster)
b) Model: (Baureihe)
c) Sales Designation (Variante) | LAK-17
LAK-17A
LAK-17B from Serial No. 201 |
| 3. Airworthiness Category:
Lufttüchtigkeitskategorie: | Sailplane, JAR 22 - Utility |
| 4. Manufacturer:
Hersteller: | JSC „Sportinė Aviacija ir KO“
LT-59327 Prienai
Republic of Lithuania |
| 5. Lithuanian CAA Type Certification Date:
Datum der CAA LT Musterzulassung: | 12 November 1999 |
| 6. This TCDS replaces Lithuanian TCDS No 03 / 03 LAK-17A
Dieses Kennblatt ersetzt das Kennblatt CAA LT Nr. 03 / 03 LAK-17A | |

A.II. CERTIFICATION BASIS

Zulassungsbasis

- | | |
|--|--|
| 1. Certification Basis:
Zulassungsbasis: | JAR 22, Amdt. 5 |
| 2. Airworthiness Requirements:
Lufttüchtigkeitsforderungen: | Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22), effective 28 October 1995 (Amendment 5 of the English original version)
Lufttüchtigkeitsforderungen für Segelflugzeuge und Motorsegler (JAR-22) vom 28.10.1995 (Amendment 5 der englischen Originalversion)
CS-22, Amendment 2 published on 5 March 2009 ^{Note3} |
| 3. Requirements elected to comply:
Gewählte Forderungen: | Standards for Structural Substantiation of Sailplane and Powered Sailplane Components consisting of Glass or Carbon Fiber Reinforced Plastics, issued July 1991
Richtlinien zur Führung des Festigkeitsnachweises für Bauteile aus glasfaser- und kohlenstoffaserverstärkten Kunststoffen von Segelflugzeugen und Motorseglern, Ausgabe Juli 1991. |
| 4. Environmental Standards:
Lärmschutzforderungen: | - |
| 5. Special Conditions:
Sonderforderungen: | - |
| 6. Exemptions:
Ausnahmen: | - |
| 7. Equivalent Safety Findings:
Nachweise gleichwertiger Sicherheit: | Lak-17A - JAR 22.49: NPA 22B-83 and NPA 22C&D-84,
LAK-17B – none ^{Note 3} |



A.III. TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

Technische Merkmale und Betriebsgrenzen

1. **Type Design Definition:**
Musterdefinition:

Lithuanian CAA approved List of Drawings LAK-17A issued 19.05.1999 with amendment 2002
Zeichungsliste LAK-17A vom 19.05.1999 mit Ergänzungen 2002

List of Drawings LAK-17B issued 01.02.2012
Zeichungsliste LAK-17B vom 01.02.2012
2. **Description:**
Beschreibung:

Single seat, mid-wing sailplane, CFRP/GFRP – construction, with flaps, T-tail (fixed horizontal stabilizer with elevator, fin and rudder), Schempp-Hirth type airbrakes on upper wing surface, water ballast tanks in the wing and in the fin, retractable main wheel with mechanical drum brake or hydraulic brake (BERINGER)^{Note3}. Optional with 15 m and Winglets or wingtip or 18 m wingspan.

Einsitziger, freitragender Mitteldecker in CFK/GFK Bauweise mit Wölbklappen, T-Leitwerk mit Flosse und Ruder, Schempp-Hirth Bremsklappen auf der Flügeloberseite, Wassertanks im Tragflügel und in der Seitenflosse, bremsbares gefedertes Einziehfahrwerk. Wahlweise 15 m mit Winglets oder normalen Randbogen oder 18 m Spannweite.
3. **Equipment:**
Ausrüstung:

Min. Equipment:
Mindestausrüstung

 - 1 Air speed indicator (up to 300 km/h)
Geschwindigkeitsmesser (bis 300 km/h)
 - 1 Altimeter
Höhenmesser
 - 1 Outside air temperature indicator with sensor
(when flying with water ballast)
Außenthermometer mit Fühler (beim Flug mit Wasserballast)
 - 1 4-Point harness (symmetrical)
4-teiliger Anschnallgurt (symmetrisch)

For Additional Equipment refer to Flight Manual
Zusatzrüstung siehe Flug- und Wartungshandbuch
4. **Dimensions:**
Abmessungen:

Span (Spannweite)	15,0 m	18,0 m	18,0 m ^{Note3}
Wing Area (Flügelfläche)	9,06 m ²	9,8 m ²	10,32 m ² ^{Note3}
5. **Launching Hooks:**
Schleppkupplungen:

Safety hook „Europa G 88“,
LBA Data sheet No. 60.230/2
Sicherheitskupplung „Europa G 88“,
LBA Kennblattnummer 60.230/2

Aero tow hook and/or winch/auto-tow hook optional:
Flugzeugschlepp- und/oder Winden-/Autostart-Kupplung wahlweise:
6. **Weak links:**
Sollbruchstellen:

Max. Ultimate Strength:
Max. Bruchfestigkeit

- for winch and auto tow launching (Windenstart und Krafffahrzeugschlepp)	650 daN	780 daN ^{Note3}
- for aero-tow (Flugzeugschlepp)	650 daN	780 daN ^{Note3}



7.	Air Speeds: Geschwindigkeiten:	Manoeuvring Speed V_A Manövergeschwindigkeit Never Exceed Speed V_{NE} Höchstzulässige Geschwindigkeit Maximum permitted speeds Höchstzulässige Geschwindigkeit - with flaps at +1, +2, L bei Wölbklappenstellung - with flaps at -1, 0 bei Wölbklappenstellung - in rough air V_{RA} bei starker Turbulenz - in aero-tow V_T bei Flugzeugschlepp - in winch-launch V_W bei Windschlepp - for gear operating V_{LO} bei Kraftfahrzeugschlepp	205 km/h 190 km/h ^{Note3} 275 km/h 160 km/h 190 km/h ^{Note3} 275 km/h 205 km/h 190 km/h ^{Note3} 160 km/h 140 km/h 205 km/h	
8.	Maximum Masses: Höchstzulässige Massen:	Max. Mass Höchstzulässige Masse Max. Mass of Non-Lifting Parts Höchstzulässige Masse der nichttragenden Teile	500 kg 600 kg ^{Note3} 233 kg 276.3 kg ^{Note3}	
9.	Operational Capability	Approved for VFR-flying in daytime. Zugelassen für Flüge nach VFR bei Tag.		
10.	Centre of Gravity Range: Schwerpunktsbereich:	Datum: wing leading edge at wing root Leveling means: slope rear top fuselage 1000:29 horizontal Bezugsebene (BE) : Flügelvorderkante Wurzelrippe Flugzeuglage : Keil 1000:29 auf Oberkante Rumpfröhre waagerecht Forward Limit 182 mm (206 mm ^{Note3})aft of datum point Vordere Grenze hinter Bezugspunkt Rearward Limit 305 mm (328 mm ^{Note3})aft of datum point Hintere Grenze hinter Bezugspunkt		
11.	Minimum Flight Crew: Minimale Besatzung:	1 (Pilot)		
12.	Maximum Seating Capacity: Maximale Anzahl der Sitze:	1		
13.	Lifetime limitations: Lebensdauerbegrenzte Teile:	Refer to Maintenance Manual Siehe Wartungshandbuch		
14.	Deflection of control surfaces: Ruderausschläge	Refer to Maintenance Manual Siehe Wartungshandbuch		



A.IV. OPERATING AND SERVICE INSTRUCTIONS

Betriebs- und Instandhaltungsanweisungen

1. Flight Manual for LAK-17A sailplane, latest approved revision
2. Maintenance Manual for the LAK-17A sailplane, latest revision
3. Flight Manual for LAK-17B sailplane, latest approved revision^{Note3}
4. Maintenance Manual for the LAK-17B sailplane, latest revision^{Note3}
5. Operating Instructions for the Tost safety tow release mechanism model "EUROPA G 88", latest approved revision
Betriebshandbuch für die Sicherheitskupplung "Europa G 88", in der jeweils gültigen Ausgabe.

A.V. NOTES

Bemerkungen

1. Manufacturing is confined to industrial production.
Herstellung nur im Industriebau zulässig.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
Alle Bauteile, die der Sonneneinstrahlung ausgesetzt sind, müssen, mit Ausnahme des Bereichs für Kennzeichen und Farbwarnlackierung, eine weiße Oberfläche haben.
3. From Serial No. 201 aircraft produced have introduced several modifications and data as given above and receive sales designation LAK-17B.



Section B: LAK-17AT

B.I. GENERAL

Allgemeines

- | | |
|--|--|
| 1. Data Sheet No.:
Kennblatt-Nr.: | EASA.A.083 |
| 2. a) Type: (Muster)
b) Model: (Baureihe)
c) Sales Designation (Variante) | LAK-17
LAK-17AT
LAK-17BT from S/N 201 on |
| 3. Airworthiness Category:
Lufttüchtigkeitskategorie: | Powered Sailplane, CS 22 - Utility |
| 4. Manufacturer:
Hersteller: | JSC „Sportinė Aviacija ir KO“
LT-59327 Prienai
Republic of Lithuania |
| 5. Application Date:
CAA LT Antragsdatum: | 8 January 2003 |
| 6. EASA Type Certification Date:
Datum der EASA-Musterzulassung: | 21 April 2006 |

B.II. CERTIFICATION BASIS

Zulassungsbasis

- | | |
|--|--|
| 1. Certification Basis:
Zulassungsbasis: | JAR 22, Lithuanian CAA decision, dated 16 April 2003 |
| 2. Airworthiness Requirements:
Lufttüchtigkeitsforderungen: | Joint Airworthiness Requirements for
Sailplanes and Powered Sailplanes (JAR 22),
effective August 01, 2001
(Amendment 6 of the English original version)

Lufttüchtigkeitsforderungen für Segelflugzeuge und
Motorsegler (JAR-22) vom 01.08.2001
(Amendment 6 der englischen Originalversion)

CS-22, Amendment 2 published on 5 March
2009 ^{Note3} |
| 3. Requirements elected to comply:
Gewählte Forderungen: | Standards for Structural Substantiation
of Sailplane and Powered Sailplane
Components consisting of Glass or Carbon
Fiber Reinforced Plastics, issued July 1991

Richtlinien zur Führung des Festigkeitsnachweises
für Bauteile aus glasfaser- und kohlenstofffaserverstärkten
Kunststoffen von Segelflugzeugen und Motorseglern,
Ausgabe Juli 1991. |
| 4. Environmental Standards:
Lärmschutzforderungen: | - |
| 5. Special Conditions:
Sonderforderungen: | - |
| 6. Exemptions:
Ausnahmen: | - |
| 7. Equivalent Safety Findings:
Nachweise gleichwertiger Sicherheit: | LAK-17AT - JAR 22.207(c) Stall warning,
LAK-17BT – none ^{Note3} |



B.III. TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

Technische Merkmale und Betriebsgrenzen

1. **Type Design Definition:**
Musterdefinition:

Lithuanian CAA approved List of Drawings for powered sailplane model "LAK-17AT", issue March 2006

Aufstellung der Zeichnungen für den Motorsegler
LAK-17AT, CAA LT-anerkannt, Stand März 2006

List of Drawings LAK-17BT issued 25.04.2013
Zeichungsliste LAK-17B FES vom 25.04.2013
2. **Description:**
Beschreibung:

Single seat, mid-wing non-self launching powered sailplane, CFRP/GFRP/AFRP – construction, 2-piece wing (15m with wingtip or winglet) and with 18m tip extensions (with winglets), double-panel Schempp-Hirth type airbrakes on upper wing surface, water ballast tanks in the wing and in the fin; CFRP/GFRP/AFRP-fuselage, retractable main wheel with mechanical drum brake or hydraulic brake (BERINGER)^{Note3}, tail wheel, T-tail (fixed horizontal stabilizer with elevator, fin and rudder).

Einsitziger nicht eigenstartfähiger Motorsegler, freitragender Mitteldecker in CFK/GFK/AFK Bauweise, zweiteiliger Tragflügel (15 m mit normalen Randbögen oder Winglets) oder 18 m mit angesteckter Flügelerweiterung mit oder ohne Winglets), doppelstöckige Schempp-Hirth Bremsklappen auf der Flügeloberseite, Wassertanks im Tragflügel und in der Seitenflosse, CFK/GFK/AFK-Rumpf, einziehbares, bremsbares Zentralrad, festes Spornrad, T-Leitwerk mit Flosse und Ruder.
3. **Equipment:**
Ausrüstung:

Min. Equipment:
Mindestausrüstung

 - 1 Air speed indicator (up to 300 km/h)
Geschwindigkeitsmesser (bis 300 km/h)
 - 1 Altimeter
Höhenmesser
 - 1 Magnetic compass
Magnetkompass
 - 1 Outside air temperature indicator with sensor
(when flying with water ballast)
Außenthermometer mit Fühler (beim Flug mit Wasserballast)
 - 1 Engine control unit featuring:
 - RPM indicator
 - Engine hour meter
 - Fuel quantity indicator
 - battery level
 - cylinder head temperature indicator

Triebwerksbedieneinheit mit

 - Drehzahlanzeige
 - Betriebsstundenzähler
 - Kraftstoff-Vorratsanzeige
 - Amperemeter
 - Zylinderkopftthermometer
 - 1 Rear view mirror
Rückspiegel
 - 1 4-Point harness (symmetrical)
4-teiliger Anschnallgurt (symmetrisch)
 - 1 Power supply
Batterie
 - 1 Required placards, check list and Flight Manual
Erforderliche Aufkleber, Checkliste, Flughandbuch

For Additional Equipment refer to Flight Manual
Zusatzrüstung siehe Flug- und Wartungshandbuch



4.	Dimensions: Abmessungen:	Span (Spannweite)	15,0 m	18,0 m	18,0 m ^{Note3}
		Wing Area (Flügelfläche)	9,06 m ²	9,8 m ²	10,32 m ² ^{Note3}
5.	Engine designation: Antrieb:	Solo 2350 LBA Type Certificate Data Sheet No. 4603 LBA Kennblatt Nr. 4603			
6.	Engine Limits: Triebwerksgrenzwerte:	Max. continuous Power Maximale Dauerleistung	19,6 kW at 5500 RPM		
		Maximum RPM Maximale Drehzahl	6500 RPM		
7.	Propellers: Propeller:	LAK-P4-90, TCDS EASA P.014 Propeller diameter: 90 cm, blade pitch 57 cm (constant through the radius)			
8.	Fluids and Fluid capacities: Kraftstoffmengen:	Fuselage tank Rumpftank	7,5 l optionally +4,5 l		
		Non-usable amount of fuel nicht ausfliegbare Kraftstoffmenge	0,3 l		
9.	Launching Hooks: Schleppkupplungen:	Safety hook „Europa G 88“, LBA Data sheet No. 60.230/2 Sicherheitskupplung „Europa G 88“ LBA Kennblattnummer 60.230/2 Aero tow hook and/or winch/auto-tow hook optional: Flugzeugschlepp- und/oder Winden-/Autostart-Kupplung wahlweise:			
10.	Weak links: Sollbruchstellen:	Max. Ultimate Strength: Max. Bruchfestigkeit			
		- for winch and auto tow launching (Windenstart und Kraftfahrzeugschlepp)	650 daN	780 daN ^{Note3}	
		- for aero-tow (Flugzeugschlepp)	650 daN	780 daN ^{Note3}	
11.	Air Speeds: Geschwindigkeiten:	Manoeuvring Speed V _A	205 km/h	190 km/h ^{Note3}	
		Manövergeschwindigkeit			
		Never Exceed Speed V _{NE}	275 km/h		
		Höchstzulässige Geschwindigkeit			
		Maximum permitted speeds Höchstzulässige Geschwindigkeit			
		- with flaps at +1, +2, L bei Wölbklappenstellung	160 km/h	190 km/h ^{Note3}	
		- with flaps at -1, 0 bei Wölbklappenstellung	275 km/h		
		- in rough air V _{RA} bei starker Turbulenz	205 km/h	190 km/h ^{Note3}	
		- in aero-tow V _T bei Flugzeugschlepp	160 km/h		
		- in winch-launch V _W bei Windenschlepp	140 km/h		



- with power plant extended mit ausgefahrenem Triebwerk	V _W	160 km/h
- for extending power plant für das Ausfahren des Triebwerks	V _{POmin}	90 km/h
- for retracting power plant für das Einfahren des Triebwerks	V _{POmax}	110 km/h
- for gear operating für das Betätigen des Fahrwerks	V _{Lo}	205 km/h

- | | | | |
|---|---|--|---------------------------|
| 12. Maximum Masses:
Höchstzulässige Massen: | Max. Mass
Höchstzulässige Masse | 500 kg | 600 kg ^{Note3} |
| | Max. Mass of Non-Lifting Parts
Höchstzulässige Masse der nichttragenden Teile | 263 kg | 276.3 kg ^{Note3} |
| 13. Operational Capability | Approved for VFR-flying in daytime.
Zugelassen für Flüge nach VFR bei Tag. | | |
| 14. Centre of Gravity Range:
Schwerpunktsbereich: | Datum: wing leading edge at wing root
Leveling means: slope rear top fuselage 1000:29 horizontal
Bezugsebene (BE) : Flügelvorderkante Wurzelrippe
Flugzeuglage : Keil 1000:29 auf Oberkante Rumpfröhre waagrecht | | |
| | Forward Limit
Vordere Grenze | 182 mm (206 mm ^{Note3}) aft of datum point
hinter Bezugspunkt | |
| | Rearward Limit
Hintere Grenze | 305 mm (328 mm ^{Note3}) aft of datum point
hinter Bezugspunkt | |
| 15. Minimum Flight Crew:
Minimale Besatzung: | 1 (Pilot) | | |
| 16. Maximum Seating Capacity:
Maximale Anzahl der Sitze: | 1 | | |
| 17. Lifetime limitations:
Lebensdauerbegrenzte Teile: | Refer to Maintenance Manual
Siehe Wartungshandbuch | | |
| 18. Deflection angles of control
surfaces:
Ruderausschläge: | Refer to Maintenance Manual
Siehe Wartungshandbuch | | |

B.IV. OPERATING AND SERVICE INSTRUCTIONS

Betriebs- und Instandhaltungsanweisungen

1. Flight Manual for the self-sustaining powered sailplane LAK-17AT, latest approved revision.
2. Maintenance Manual for the self-sustaining powered sailplane LAK-17AT, latest revision.
3. Flight Manual for the self-sustaining powered sailplane LAK-17BT, latest approved revision.
4. Maintenance Manual for the self-sustaining powered sailplane LAK-17BT, latest revision.
5. Manual for engine model SOLO 2350, issued by engine manufacturer Solo Kleinmotoren GmbH latest approved revision.
6. Operation and installation manual for propeller LAK-P4-90, issued by manufacturer JSC „Sportiné Aviacija ir KO“, latest approved revision.
7. Operating Instructions for the Tost safety tow release mechanism model “EUROPA G 88”, latest revision.
Betriebshandbuch für die Sicherheitskupplung “Europa G 88”, in der jeweils gültigen Ausgabe.



B.V. NOTES

Bemerkungen

1. Manufacturing is confined to industrial production.
Herstellung nur im Industriebau zulässig.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
Alle Bauteile, die der Sonneneinstrahlung ausgesetzt sind, müssen, mit Ausnahme des Bereichs für Kennzeichen und Farbwarnlackierung, eine weiße Oberfläche haben.
3. From Serial No. 201 aircraft produced have introduced several modifications and data as given above and receive sales designation LAK-17BT.



Section C: LAK-17B FES

C.I. GENERAL

Allgemeines

- | | | |
|----|---|--|
| 1. | Data Sheet No.:
Kennblatt-Nr.: | EASA.A.083 |
| 2. | a) Type: (Muster)
b) Model: (Baureihe)
c) Sales Designation (Variante) | LAK-17
LAK-17B FES |
| 3. | Airworthiness Category:
Lufttüchtigkeitskategorie: | Powered Sailplane, CS 22 - Utility |
| 4. | Manufacturer:
Hersteller: | JSC „Sportinė Aviacija ir KO“
LT-59327 Prienai
Republic of Lithuania |
| 5. | Application Date: | 19 January 2011 |
| 6. | EASA Type Certification Date:
Datum der EASA-Musterzulassung: | 31 October 2014 |

C.II. CERTIFICATION BASIS

Zulassungsbasis

- | | | |
|----|---|--|
| 1. | Certification Basis:
Zulassungsbasis: | CRI A-1, 31 October 2014 |
| 2. | Airworthiness Requirements:
Lufttüchtigkeitsforderungen: | CS-22, Amendment 2 published on 5 March 2009 |
| 3. | Requirements elected to comply:
Gewählte Forderungen: | Standards for Structural Substantiation
of Sailplane and Powered Sailplane
Components consisting of Glass or Carbon
Fiber Reinforced Plastics, issued July 1991

Richtlinien zur Führung des Festigkeitsnachweises
für Bauteile aus glasfaser- und kohlenstoffaserverstärkten Kunststoffen
von Segelflugzeugen und Motorseglern, Ausgabe Juli 1991. |
| 4. | Environmental Standards:
Lärmschutzforderungen: | None |
| 5. | Special Conditions:
Sonderforderungen: | SC-22.2014-01 [Installation of electric propulsion units in
powered sailplanes]

SC E-01 [Airworthiness standard for CS-22H Electrical
retractable engine to be operated in powered sailplanes] |
| 6. | Exemptions:
Ausnahmen: | None |
| 7. | Equivalent Safety Findings:
Nachweise gleichwertiger Sicherheit: | None |



C.III. TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

Technische Merkmale und Betriebsgrenzen

1. Type Design Definition: List of Drawings LAK-17B FES issued 27.05.2014 (with GEN2 batteries).
LAK-17B-FES-MDL-01-00 "Master Document List", revision 0.3, dated 24 April 2024 (with GEN2 or GEN4 batteries).
2. Description: Single seat, mid-wing non-self-launching powered sailplane, CFRP/GFRP/AFRP – construction, 2-piece wing of 18m wingspan (with winglets), double-panel Schempp-Hirth type airbrakes on upper wing surface, water ballast tanks in the wing and in the fin; CFRP/GFRP/AFRP-fuselage, retractable main wheel with hydraulic brake (BERINGER), tail wheel, T-tail (fixed horizontal stabilizer with elevator, fin and rudder).
3. Equipment: Min. Equipment:
 - 1 Air speed indicator (up to 300 km/h)
 - 1 Altimeter
 - 1 Magnetic compass
 - 1 Outside air temperature indicator with sensor (when flying with water ballast)
 - 1 Engine control unit featuring:
 - RPM indicator
 - Engine hour meter
 - battery level (V meter, A meter)
 - temperature indicator of motor
 - 1 4-Point harness (symmetrical)
 - 1 Power supply
 - 1 Required placards, check list and Flight ManualFor Additional Equipment refer to Flight Manual
4. Dimensions:

Span	18.0 m
Wing Area	10.32 m ²
5. Engine [electrical propulsion]:

5.1 Model	FES-LAK-M100
5.2 Type Certificate	Accepted as part of the aircraft.
5.3 Max. revs	4500 RPM
5.4 Max. continuous revs	4000 RPM
5.5 Max. over speed revs	4500 RPM
5.6 Max. motor temperature	90°C
5.7 Max. power electronics temp.	90°C
6. Propeller:

6.1 Model	FES-LAK-P10-100
6.2 Type Certificate	Accepted as part of the aircraft.
6.3 Number of blades	2
6.4 Diameter	1.0m (3.28 ft)
6.5 Max. revs	4500 RPM



6.6	Sense of Rotation	Clockwise looking at direction of flight	
7.	Fluids and Fluid capacities:	N/A	
8.	Battery [electrical propulsion]		
	8.1 Model	2xFES GEN2 14S 40Ah	2xFES GEN4 14S 56Ah
	8.2 Battery capacity	2x2.1 kWh	2x2.8 kWh
	8.3 Non-usable battery capacity	~10%	~10%
	8.4 Max battery discharge temperature	55°C	55°C
	8.5 Min battery discharge temperature	-10°C	-10°C
	8.6 Max battery charge temperature	55°C	55°C
	8.7 Min battery charge temperature	0°C	0°C
	8.8 Range of permissible cell voltage	2.8V ÷ 4.18V	2.8V ÷ 4.18V
9.	Launching Hooks:	Safety hook „Europa G 88“, LBA Data sheet No. 60.230/2 Aero tow hook and/or winch/auto-tow hook optional.	
10.	Weak links:	Max. Ultimate Strength:	
		- for winch and auto tow launching	780 daN
		- for aero-tow	780 daN
11.	Load Factors:	for VA = 190 km/h (102 kts) +5.3 / -2:65 for VNE = 275 km/h (148 kts) +4.0 / -1:5 for VNE = 275 km/h (148 kts), air brakes extended +3.5 / 0 for VF = 160 km/h (86 kts), flaps +1, +2, L +4.0 / 0.	
12.	Air Speeds:	Manoeuvring Speed	VA 190 km/h
		Never Exceed Speed	VNE 275 km/h
		Maximum permitted speeds	
		- with flaps at +1, +2, L	190 km/h
		- with flaps at -1, 0	275 km/h
		- in rough air	VRA 190 km/h
		- in aero-tow	VT 160 km/h
		- in winch-launch	VW 140 km/h
		- for engine operation	VPE 160 km/h
		- min. speed for engine start	VPOmin 80 km/
		- max. speed for engine start	VPOmax 160 km/h
		- for gear operating	VLO 205 km/h
13.	Maximum Masses:	Max. Mass	600 kg
		Max. Mass of Non-Lifting Parts	276.3 kg
14.	Approved Operations Capability	Approved for VFR-flying in daytime	



- | | |
|--|---|
| 15. Launch methods: | Aero tow
Winch launch and auto launch |
| 16. Centre of Gravity Range: | Datum: wing leading edge at wing root
Leveling means: slope rear top fuselage 1000:29 horizontal |
| | Forward Limit 206 mm aft of datum point |
| | Rearward Limit 328 mm aft of datum point |
| 17. Minimum Flight Crew: | 1 (Pilot) |
| 18. Maximum Seating Capacity: | 1 |
| 19. Lifetime limitations: | Refer to Maintenance Manual |
| 20. Deflection angles of control surfaces: | Refer to Maintenance Manual |

C.IV. OPERATING AND SERVICE INSTRUCTIONS

1. LAK-17B-FES-AFM-01-00 Flight Manual for the self-sustaining powered sailplane LAK-17B FES. Issue 0, rev.3. Date of issue: 20/10/2017 or later EASA approved revision.
2. LAK-17B-FES-AMM-01-00 Maintenance Manual for self-sustaining powered sailplane LAK-17B FES. Issue 0, rev.5. Date of issue: 20/10/2017 or later EASA accepted revision.
3. FES-FCU-57-01-00 FES FCU instrument manual. Version 1.80. Date of issue: 18/12/2017 or later EASA approved revision issued by JSC "Sportin  aviacija ir Ko".
4. FES-GEN2-14S-01-00 FES BATTERY PACK GEN2 14S 40Ah manual with integrated BMS. Version 1.19. Date of issue: 18/12/2017 or later EASA accepted revisions issued by JSC "Sportin  aviacija ir Ko".
5. FES-GEN4-14S-01-00 FES BATTERY PACK GEN4 14S 56Ah manual with integrated BMS and G sensor. Version 1.0. Date of issue: May 2023 or later EASA accepted revisions issued by JSC "Sportin  aviacija ir Ko".
6. FES-BMS-CM-01-00 FES BMS CONTROL MANUAL. Version 1.21, (for BMS control software version 1.31). Date of issue: 18/12/2017 or later EASA accepted revision issued by JSC "Sportin  aviacija ir Ko".
7. FES-LAK-M100-01-00 FES MOTOR MANUAL. Version 1.41. Date of issue: 18/12/2017 or later EASA accepted revisions issued by JSC "Sportin  aviacija ir Ko".
8. FES-LAK-P10-100-01-00 FES PROPELLER MANUAL. Version 1.0. Date of issue: 18/12/2017 or later EASA accepted revisions issued by JSC "Sportin  aviacija ir Ko".
9. Operating Instructions for the Tost safety tow release mechanism model "EUROPA G 88". Revision No.3. Date of issue: March 2001 or later issue.

For compliance with EASA AD 2017-0167-E the sailplane has to operated and maintained in accordance with the documents presented in section C.IV.



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. Engine and propeller are accepted as part of the aircraft according to Part 21.A.23(b)(2)
4. As of 22 December 2020, the model (all serials) is eligible for a standard Certificate of Airworthiness (CofA). Restricted CofA issued before that date remain valid.



Section D: LAK-17B FES mini

D.I. GENERAL

- | | |
|--|--|
| 1. Data Sheet No.:
Kennblatt-Nr.: | EASA.A.083 |
| 2. a) Type:
b) Model:
c) Sales Designation | LAK-17
LAK-17B FES mini
LAK-17B FES mini |
| 3. Airworthiness Category: | Powered Sailplane, CS 22 - Utility |
| 4. Manufacturer: | JSC „Sportinė Aviacija ir KO“
LT-59327 Prienai
Republic of Lithuania |
| 5. Application Date: | 27 April 2016 |
| 6. EASA Type Certification Date: | 22 December 2020 |

D.II. CERTIFICATION BASIS

- | | |
|--|---|
| 1. Reference date for determining the applicable requirements: | 27 April 2016 |
| 2. Airworthiness Requirements: | CS-22, Amendment 2 published on 5 March 2009 |
| 3. Requirements elected to comply: | Standards for Structural Substantiation of Sailplane and Powered Sailplane Components consisting of Glass or Carbon Fiber Reinforced Plastics, issued July 1991 |
| 4. Environmental Standards: | Refer to TCDSN EASA.A.083 |
| 5. Special Conditions: | SC-22.2014-01 [Installation of electric propulsion units in powered sailplanes]

SC E-01 [Airworthiness standard for CS-22H Electrical retractable engine to be operated in powered sailplanes] |
| 6. Exemptions: | None |
| 7. Equivalent Safety Findings: | ESF-F22.925-01 (Propeller clearance) |



D.III. TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

Technische Merkmale und Betriebsgrenzen

1. Type Design Definition: List of Drawings LAK-17B FES mini issued 18 Dec 2020 (with GEN2 batteries).
LAK-17B-FES-mini-MDL-01-00 "Master Document List", revision 0.3, dated 24 April 2024 (with GEN2 or GEN4 batteries).
2. Description: Single seat, mid-wing self-launching powered sailplane, CFRP/GFRP/AFRP – construction, 13,5 m wing with winglet, double-panel Schempp-Hirth type airbrakes on upper wing surface, water ballast tanks in the wing and in the fin; CFRP/GFRP/AFRP-fuselage, retractable main wheel with hydraulic brake (BERINGER), tail wheel, T-tail (fixed horizontal stabilizer with elevator, fin and rudder).
3. Equipment: Min. Equipment:
1 Air speed indicator (up to 300 km/h)
1 Altimeter
1 Magnetic compass
1 Outside air temperature indicator with sensor (when flying with water ballast)
1 Engine control unit featuring:
 - RPM indicator
 - Engine hour meter
 - battery level (V meter, A meter)
 - temperature indicator of motor1 4-Point harness (symmetrical)
1 Power supply
1 Required placards, check list and Flight Manual
For Additional Equipment refer to Flight Manual
4. Dimensions: Span 13.5 m
Wing Area 8.41 m²
5. Engine [electrical propulsion]:
 - 5.1 Model FES-LAK-M100
 - 5.2 Type Certificate Accepted as part of the aircraft.
 - 5.3 Max. revs 4500 RPM
 - 5.4 Max. continuous revs 4000 RPM
 - 5.5 Max. over speed revs 4500 RPM
 - 5.6 Max. motor temperature 90°CMax. power electronics temp. 90°C
6. Propeller:
 - 6.1 Model FES-LAK-P10-100
 - 6.2 Type Certificate Accepted as part of the aircraft.
 - 6.3 Number of blades 2
 - 6.4 Diameter 1.0m (3.28 ft)
 - 6.5 Max. revs 4500 RPM



6.6	Sense of Rotation	Clockwise looking at direction of flight	
7.	Fluids and Fluid capacities	N/A	
8.	Battery [electrical propulsion]		
	8.1 Model	2xFES GEN2 14S 40Ah	2xFES GEN4 14S 56Ah
	8.2 Battery capacity	2x2.1 kWh	2x2.8 kWh
	8.3 Non-usable battery capacity	~10%	~10%
	8.4 Max battery discharge temperature	55°C	55°C
	8.5 Min battery discharge temperature	-10°C	-10°C
	8.6 Max battery charge temperature	55°C	55°C
	8.7 Min battery charge temperature	0°C	0°C
	8.8 Range of permissible cell voltage	2.8V ÷ 4.18V	2.8V ÷ 4.18V
9.	Launching Hooks:	Safety hook „Europa G 88“, LBA Data sheet No. 60.230/2 Aero tow hook and/or winch/auto-tow hook optional	
10.	Weak links:	Max. Ultimate Strength:	
		- for winch and auto tow launching	500 daN
		- for aero-tow	500 daN
11.	Load Factors:	for VA = 170 km/h (92 kts) +5.3 / -2:65 for VNE = 230 km/h (124 kts) +4.0 / -1:5 for VNE = 230 km/h (124 kts), air brakes extended +3.5 / 0 for VF = 170 km/h (92 kts), flaps +1, +2, L +4.0 / 0.	
12.	Air Speeds:	Manoeuvring Speed	V _A 170 km/h
		Never Exceed Speed	V _{NE} 230 km/h
		Maximum permitted speeds	
		- with flaps at	+1, +2, L 170 km/h
		- with flaps at	-1, 0 230 km/h
		- in rough air	V _{RA} 170 km/h
		- in aero-tow	V _T 160 km/h
		- in winch-launch	V _W 140 km/h
		- for engine operation	V _{PE} 160 km/h
		- min. speed for engine start	V _{POmin} 80 km/h
		- max. speed for engine start	V _{POmax} 160 km/h
		- for gear operating	V _{LO} 170 km/h
13.	Maximum Masses:	Max. Mass	350 kg
		Max. Mass of Non-Lifting Parts	274 kg
14.	Approved Operations Capability	Approved for VFR-flying in daytime.	



15. Launch methods: Aero tow
Winch launch and auto launch
Self-launch
16. Centre of Gravity Range: Datum: wing leading edge at wing root
Leveling means: slope rear top fuselage 1000:29 horizontal
- | | | |
|----------------|--------|--------------------|
| Forward Limit | 182 mm | aft of datum point |
| Rearward Limit | 305 mm | aft of datum point |
17. Minimum Flight Crew: 1 (Pilot)
18. Maximum Seating Capacity: 1
18. Lifetime limitations: Refer to Maintenance Manual
19. Deflection angles of control surfaces: Refer to Maintenance Manual

D.IV. OPERATING AND SERVICE INSTRUCTIONS

1. LAK-17B-FES-mini-AFM-00-02 Flight Manual for the self-launching powered sailplane LAK-17B FES mini. Issue 2, rev.0. Date of issue: 18/12/2020 or later EASA approved revision.
2. LAK-17B-FES-mini-AMM-00-02 Maintenance Manual for the self-launching powered sailplane LAK-17B FES mini. Issue 2, rev.0. Date of issue: 18/12/2020 or later EASA accepted revision.
3. FES-FCU-57-01-00 FES FCU instrument manual. Version 1.80. Date of issue: 18/12/2017 or later EASA approved revision issued by JSC "Sportinè aviacija ir Ko".
4. FES-GEN2-14S-01-00 FES BATTERY PACK GEN2 14S 40Ah manual with integrated BMS. Version 1.19. Date of issue: 18/12/2017 or later EASA accepted revisions issued by JSC "Sportinè aviacija ir Ko".
5. FES-GEN4-14S-01-00 FES BATTERY PACK GEN4 14S 56Ah manual with integrated BMS and G sensor. Version 1.0. Date of issue: May 2023 or later EASA accepted revisions issued by JSC "Sportinè aviacija ir Ko".
6. FES-BMS-CM-01-00 FES BMS CONTROL MANUAL. Version 1.21, (for BMS control software version 1.31). Date of issue: 18/12/2017 or later EASA accepted revision issued by JSC "Sportinè aviacija ir Ko".
7. FES-LAK-M100-01-00 FES MOTOR MANUAL. Version 1.41. Date of issue: 18/12/2017 or later EASA accepted revisions issued by JSC "Sportinè aviacija ir Ko".
8. FES-LAK-P10-100-01-00 FES PROPELLER MANUAL. Version 1.0. Date of issue: 18/12/2017 or later EASA accepted revisions issued by JSC "Sportinè aviacija ir Ko".
9. Operating Instructions for the Tost safety tow release mechanism model "EUROPA G 88". Revision No.3. Date of issue: March 2001 or later issue.



D.V. NOTES

Bemerkungen

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. Engine and propeller are accepted as part of the aircraft according to Part 21.A.23(b)(2)
4. This powered sailplane is considered as self-launchable sailplane, but not as TMG i.a.w. FCL.010.



Section E: LAK-17A mini

E.I. GENERAL

Allgemeines

- | | | |
|----|---|--|
| 1. | Data Sheet No.:
Kennblatt-Nr.: | EASA.A.083 |
| 2. | a) Type: (Muster)
b) Model: (Baureihe)
c) Sales Designation (Variante) | LAK-17
LAK-17A mini
LAK-17A mini |
| 3. | Airworthiness Category:
Lufttüchtigkeitskategorie: | Powered Sailplane, CS 22 - Utility |
| 4. | Manufacturer:
Hersteller: | JSC „Sportinė Aviacija ir KO“
LT-59327 Prienai
Republic of Lithuania |
| 5. | Application Date: | 26 May 2016 |
| 6. | EASA Type Certification Date:
Datum der EASA-Musterzulassung: | 30 June 2021 |

E.II. CERTIFICATION BASIS

Zulassungsbasis

- | | | |
|----|---|---|
| 1. | Reference date for determining the applicable requirements:
Zulassungsbasis: | 26 May 2016 |
| 2. | Airworthiness Requirements:
Lufttüchtigkeitsforderungen: | CS-22, Amendment 2 published on 5 March 2009 |
| 3. | Requirements elected to comply:
Gewählte Forderungen: | Standards for Structural Substantiation of Sailplane and Powered Sailplane Components consisting of Glass or Carbon Fiber Reinforced Plastics, issued July 1991

Richtlinien zur Führung des Festigkeitsnachweises für Bauteile aus glasfaser- und kohlenstoffaserverstärkten Kunststoffen von Segelflugzeugen und Motorseglern, Ausgabe Juli 1991. |
| 4. | Environmental Standards:
Lärmschutzforderungen: | n/a |
| 5. | Special Conditions:
Sonderforderungen: | n/a |
| 6. | Exemptions:
Ausnahmen: | n/a
n/a |
| 7. | Equivalent Safety Findings:
Nachweise gleichwertiger Sicherheit: | n/a |



E.III. TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

Technische Merkmale und Betriebsgrenzen

1. **Type Design Definition:**
Musterdefinition: List of Drawings LAK-17A mini issued 18 Dec 2020
Zeichungsliste LAK-17A mini vom 18 Dec 2020

2. **Description:**
Beschreibung: Single seat, mid-wing sailplane, CFRP/GFRP/AFRP – construction, 13,5 m wing with winglet, double-panel Schempp-Hirth type airbrakes on upper wing surface, water ballast tanks in the wing and in the fin; CFRP/GFRP/AFRP-fuselage, retractable main wheel with hydraulic brake (BERINGER), tail wheel, T-tail (fixed horizontal stabilizer with elevator, fin and rudder).

Einsitziger, freitragender Mitteldecker in CFK/GFK/AFK Bauweise, zweiteiliger Tragflügel 13,5 m mit Winglets, doppelstöckige Schempp-Hirth Bremsklappen auf der Flügeloberseite, Wassertanks im Tragflügel und in der Seitenflosse, CFK/GFK/AFK-Rumpf, einziehbares, bremsbares Zentralrad, festes Spornrad, T-Leitwerk mit Flosse und Ruder

3. **Equipment:**
Ausrüstung: **Min. Equipment:**
Mindestausrüstung

1 Air speed indicator (up to 300 km/h)
Geschwindigkeitsmesser (bis 300 km/h)

1 Altimeter
Höhenmesser

1 Magnetic compass
Magnetkompass

1 Outside air temperature indicator with sensor
(when flying with water ballast)
Außenthermometer mit Fühler (beim Flug mit Wasserballast)

1 4-Point harness (symmetrical)
4-teiliger Anschnallgurt (symmetrisch)

1 Power supply
Batterie

1 Required placards, check list and Flight Manual
Erforderliche Aufkleber, Checkliste, Flughandbuch

For Additional Equipment refer to Flight Manual
Zusatzrüstung siehe Flug- und Wartungshandbuch

4. **Dimensions:**
Abmessungen: **Span** 13,5 m
(Spannweite)
Wing Area 8,41 m²
(Flügelfläche)

5. **Launching Hooks:**
Schleppkupplungen: **Safety hook „Europa G 88“**,
LBA Data sheet No. 60.230/2
Sicherheitskupplung “Europa G 88”
LBA Kennblattnummer 60.230/2

Aero tow hook and/or winch/auto-tow hook optional:
Flugzeugschlepp- und/oder Winden-/Autostart-Kupplung wahlweise:

6. **Weak links:**
Sollbruchstellen: **Max. Ultimate Strength:**
Max. Bruchfestigkeit
- for winch and auto tow launching 500 daN
(Windenstart und Kraftfahrzeugschlepp)
- for aero-tow 500 daN
(Flugzeugschlepp)



- | | | | | |
|-----|---|---|--|----------|
| 7. | Air Speeds:
Geschwindigkeiten: | Manoeuvring Speed
Manövergeschwindigkeit | V _A | 170 km/h |
| | | Never Exceed Speed
Höchstzulässige Geschwindigkeit | V _{NE} | 230 km/h |
| | | Maximum permitted speeds
Höchstzulässige Geschwindigkeit | | |
| | | - with flaps at
bei Wölbklappenstellung | +1, +2, L | 170 km/h |
| | | - with flaps at
bei Wölbklappenstellung | -1, 0 | 230 km/h |
| | | - in rough air
bei starker Turbulenz | V _{RA} | 170 km/h |
| | | - in aero-tow
bei Flugzeugschlepp | V _T | 160 km/h |
| | | - in winch-launch
bei Windenschlepp | V _W | 140 km/h |
| | | - for gear operating
für das Betätigen des Fahrwerks | V _{LO} | 170 km/h |
| 8. | Maximum Masses:
Höchstzulässige Massen: | Max. Mass
Höchstzulässige Masse | | 350 kg |
| | | Max. Mass of Non-Lifting Parts
Höchstzulässige Masse der nichttragenden Teile | | 274 kg |
| 9. | Operational Capability | Approved for VFR-flying in daytime.
Zugelassen für Flüge nach VFR bei Tag. | | |
| 10. | Launch methods: | Aero tow
Winch launch and auto (car) launch
Flugzeugschlepp, Winden- und Autoschlepp, | | |
| 11. | Centre of Gravity Range:
Schwerpunktsbereich: | Datum: wing leading edge at wing root
Leveling means: slope rear top fuselage 1000:29 horizontal
Bezugsebene (BE) : Flügelvorderkante Wurzelrippe
Flugzeuglage : Keil 1000:29 auf Oberkante Rumpfröhre waagrecht | | |
| | | Forward Limit
Vordere Grenze | 182 mm
aft of datum point
hinter Bezugspunkt | |
| | | Rearward Limit
Hintere Grenze | 305 mm
aft of datum point
hinter Bezugspunkt | |
| 12. | Minimum Flight Crew:
Minimale Besatzung: | 1 (Pilot) | | |
| 13. | Maximum Seating Capacity:
Maximale Anzahl der Sitze: | 1 | | |
| 14. | Lifetime limitations:
Lebensdauerbegrenzte Teile: | Refer to Maintenance Manual
Siehe Wartungshandbuch | | |
| 15. | Deflection angles of control
surfaces:
Ruderausschläge: | Refer to Maintenance Manual
Siehe Wartungshandbuch | | |



E.IV. OPERATING AND SERVICE INSTRUCTIONS

Betriebs- und Instandhaltungsanweisungen

1. Flight Manual for the LAK-17A mini sailplane, issue 1, dated 02 July 2020, or later EASA approved revision.
2. Maintenance Manual for the LAK-17A mini, issue 1, dated 09 July 2020, or later EASA accepted revision.
3. Operating Instructions for the Tost safety tow release mechanism model "EUROPA G 88", latest approved revision.

E.V. NOTES

Bemerkungen

1. Manufacturing is confined to industrial production.
Herstellung nur im Industriebau zulässig.
2. All parts exposed to sun radiation – except the areas for markings and registration – must have a white colour surface.
Alle Bauteile, die der Sonneneinstrahlung ausgesetzt sind, müssen, mit Ausnahme des Bereichs für Kennzeichen und Farbwarnlackierung, eine weiße Oberfläche haben.



Section F: LAK-17C FES

F.I. GENERAL

- | | | |
|----|-------------------------------|--|
| 1. | Data Sheet No.: | EASA.A.083 |
| 2. | a) Type: | LAK-17 |
| | b) Model: | LAK-17C FES |
| 3. | Airworthiness Category: | Powered Sailplane, CS 22 - Utility |
| 4. | Manufacturer: | JSC „Sportinė Aviacija ir KO“
LT-59327 Prienai
Republic of Lithuania |
| 5. | Application Date: | 10 July 2020 |
| 6. | EASA Type Certification Date: | 02 February 2024 |

F.II. CERTIFICATION BASIS

- | | | |
|----|---|---|
| 1. | Reference date for determining the applicable requirements: | 10 July 2020 |
| 2. | Airworthiness Requirements: | CS-22, Amendment 2 published on 5 March 2009 |
| 3. | Requirements elected to comply: | Standards for Structural Substantiation of Sailplane and Powered Sailplane Components consisting of Glass or Carbon Fiber Reinforced Plastics, issued July 1991 |
| 4. | Environmental Standards: | Refer to TCDSN EASA.A.083 |
| 5. | Special Conditions: | SC-22.2014-01 [Installation of electric propulsion units in powered sailplanes]

SC E-01 [Airworthiness standard for CS-22H Electrical retractable engine to be operated in powered sailplanes] |
| 6. | Exemptions: | None |
| 7. | Equivalent Safety Findings: | ESF-F22.925-01 [Propeller clearance] |



F.III. TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

1. Type Design Definition: LAK-17C-FES-MDL-01-00 "Master Document List", revision 0.4 ; dated 29 January 2024

2. Description: Single seat, mid-wing powered sailplane, CFRP/GFRP/AFRP – construction, 2-piece wing of 18m wingspan (with winglets), double-panel Schempp-Hirth type airbrakes on upper wing surface, water ballast tanks in the wing and in the fin; CFRP/GFRP/AFRP-fuselage, retractable main wheel with hydraulic brake (BERINGER), tail wheel, T-tail (fixed horizontal stabilizer with elevator, fin and rudder).

Without water ballast (MTOW = 455 kg), the sailplane is classified as a self-launching sailplane and is allowed to take-off solely by means of it's own power.

With water ballast (MTOW = 455. . . 600 kg), the sailplane is classified as a self-sustaining powered sailplane and is prohibited from self-launching

3. Equipment: Min. Equipment:

1 Air speed indicator (up to 300 km/h)

1 Altimeter

1 Magnetic compass

1 Outside air temperature indicator with sensor (when flying with water ballast)

1 Engine control unit featuring:
 - RPM indicator
 - Engine hour meter
 - battery level (V meter, A meter)
 - temperature indicator of motor
1 4-Point harness (symmetrical)

1 Power supply

1 Required placards, check list and Flight Manual

For Additional Equipment refer to Flight Manual

4. Dimensions:

Span 18.0 m

Wing Area 10.32 m²



5. Engine [electrical propulsion]:
- 5.1 Model FES-LAK-C100
 - 5.2 Type Certificate Accepted as part of the aircraft.
 - 5.3 Max. revs 5100 RPM
 - 5.4 Max. continuous revs 4400 RPM
 - 5.5 Max. over speed revs 5300 RPM
 - 5.6 Max. motor temperature 90°C
 - 5.7 Max. power electronics temp. 90°C
6. Propeller:
- 6.1 Model FES-LAK-P11-100
 - 6.2 Type Certificate Accepted as part of the aircraft.
 - 6.3 Number of blades 2
 - 6.4 Diameter 1.0m (3.28 ft)
 - 6.5 Max. revs 5100 RPM
 - 6.6 Sense of Rotation Clockwise looking at direction of flight
7. Fluids and Fluid capacities: N/A
8. Battery [electrical propulsion]
- 8.1 Model 2xFES GEN4 16S 56Ah
 - 8.2 Battery capacity 2x3.2kWh
 - 8.3 Non-usable battery capacity ~10%
 - 8.4 Max battery discharge temperature 55°C
 - 8.5 Min battery discharge temperature -10°C
 - 8.6 Max battery charge temperature 55°C
 - 8.7 Min battery charge temperature 0°C
 - 8.8 Range of permissible cell voltage 2.8V ÷ 4.18V
9. Launching Hooks: Safety hook „Europa G 88“,
LBA Data sheet No. 60.230/2
- Aero tow hook and/or winch/auto-tow hook optional:
10. Weak links: Max. Ultimate Strength:
- for winch and auto tow launching 780 daN
 - for aero-tow 780 daN
11. Load Factors:
- for VA = 190 km/h (102 kts) +5.3 / -2:65
 - for VNE = 275 km/h (148 kts) +4.0 / -1:5
 - for VNE = 275 km/h (148 kts), air
brakes extended +3.5 / 0
 - for VF = 160 km/h (86 kts), flaps +1,
+2, L +4.0 / 0.



12. Air Speeds:	Manoeuvring Speed	V _A	190 km/h
	Never Exceed Speed	V _{NE}	275 km/h
	Maximum permitted speeds		
	- with flaps at	+1, +2, L	190 km/h
	- with flaps at	-1, 0	275 km/h
	- in rough air	V _{RA}	190 km/h
	- in aero-tow	V _T	160 km/h
	- in winch-launch	V _W	140 km/h
	- for engine operation	V _{PE}	160 km/h
	- min. speed for engine start	V _{POmin}	80 km/h
	- max. speed for engine start	V _{POmax}	160 km/h
	- for gear operating	V _{LO}	190 km/h
13. Maximum Masses:	Max. Mass		600 kg
	Max. Mass of Non-Lifting Parts		276.3 kg
14. Approved Operations Capability	Approved for VFR-flying in daytime.		
15. Launch methods:	Aero tow Winch launch and auto launch Self-launch		
16. Centre of Gravity Range:	Datum: wing leading edge at wing root Leveling means: slope rear top fuselage 1000:29 horizontal		
	Forward Limit	206 mm aft of datum point	
	Rearward Limit	328 mm aft of datum point	
17. Minimum Flight Crew:	1 (Pilot)		
18. Maximum Seating Capacity:	1		
19. Lifetime limitations:	Refer to Maintenance Manual		
20. Deflection angles of control surfaces:	Refer to Maintenance Manual		



F.IV. OPERATING AND SERVICE INSTRUCTIONS

1. LAK-17C-FES-AFM-01-00 Flight Manual for the self-launching powered sailplane LAK-17C FES. Rev.0.4. Date of issue: 22/01/2024 or later EASA approved revision.
2. LAK-17C-FES-AMM-01-00 Maintenance Manual for the self-launching powered sailplane LAK-17C FES. Rev.0.2. Date of issue: 22/01/2024 or later EASA accepted revision.
3. FES-FCU-57-01-00 FES FCU instrument manual. Version 2.02. Date of issue: August 2022 or later EASA approved revision issued by JSC "Sportinè aviacija ir Ko".
4. FES-GEN4-16S-01-00 FES BATTERY PACK GEN4 16S 56Ah manual with integrated BMS and G sensor. Version 1.1. Date of issue: August 2023 or later EASA accepted revisions issued by JSC "Sportinè aviacija ir Ko".
5. FES-BMS-CM-01-00 FES BMS CONTROL MANUAL. Version 1.29, (for BMS control software version 1.31). Date of issue: May 2022 or later EASA accepted revision issued by JSC "Sportinè aviacija ir Ko".
6. FES-LAK-C100-01-00 FES MOTOR MANUAL. Version 1.6. Date of issue: June 2022 or later EASA accepted revisions issued by JSC "Sportinè aviacija ir Ko".
7. FES-LAK-P11-100-01-00 FES PROPELLER MANUAL. Version 2.0. Date of issue: 26/11/2019 or later EASA accepted revisions issued by JSC "Sportinè aviacija ir Ko".
8. Operating Instructions for the Tost safety tow release mechanism model "EUROPA G 88". Revision No.3. Date of issue: March 2001 or later issue.



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. Engine and propeller are accepted as part of the aircraft according to Part 21.A.23(b)(2).
4. Without water ballast (MTOW = 455 kg), the sailplane is classified as a self-launching sailplane, but not as TMG i.a.w. FCL.010.
5. With water ballast (MTOW = 455. . . 600 kg), the sailplane is classified as a self-sustaining powered sailplane and is prohibited from self-launching.



Section G: LAK-17A FES

G.I. GENERAL

- | | | |
|----|-------------------------------|--|
| 1. | Data Sheet No.: | EASA.A.083 |
| 2. | a) Type: | LAK-17 |
| | b) Model: | LAK-17A FES |
| 3. | Airworthiness Category: | Powered Sailplane, CS 22 - Utility |
| 4. | Manufacturer: | JSC „Sportinė Aviacija ir KO“
LT-59327 Prienai
Republic of Lithuania |
| 5. | Application Date: | 15 February 2022 |
| 6. | EASA Type Certification Date: | 27 March 2026 |

G.II. CERTIFICATION BASIS

- | | | |
|----|---|---|
| 1. | Reference date for determining the applicable requirements: | 15 February 2022 |
| 2. | Airworthiness Requirements: | CS-22, Amendment 3 published on 15 September 2021 |
| 3. | Requirements elected to comply: | Standards for Structural Substantiation of Sailplane and Powered Sailplane Components consisting of Glass or Carbon Fiber Reinforced Plastics, issued July 1991 |
| 4. | Environmental Standards: | None |
| 5. | Special Conditions: | SC-22.2014-01 [Installation of electric propulsion units in powered sailplanes]

SC E-01 [Airworthiness standard for CS-22H Electrical retractable engine to be operated in powered sailplanes] |
| 6. | Exemptions: | None |
| 7. | Equivalent Safety Findings: | None |



G.III. TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

1. Type Design Definition: LAK-17A-FES-MDL-01-00 "Master Document List – Modification LAK-17A to LAK-17A FES", revision 1.2, dated 26 February 2026 (with GEN2 or GEN4 batteries).
LAK-17A-FES-MDL-02-00 "Master Document List – Modification LAK-17AT to LAK-17A FES", revision 1.2, dated 26 February 2026 (with GEN2 or GEN4 batteries).
2. Description: Single seat, mid-wing self-sustaining powered sailplane, CFRP/GFRP/AFRP – construction, with flaps, T-tail (fixed horizontal stabilizer with elevator, fin and rudder), Schempp-Hirth type airbrakes on upper wing surface, water ballast tanks in the wing and in the fin, retractable main wheel with mechanical drum brake or hydraulic brake (BERINGER). Optional with 15 m (with winglets or wingtip) or 18 m wingspan.
3. Equipment: Min. Equipment:
1 Air speed indicator (up to 300 km/h)
1 Altimeter
1 Magnetic compass
1 Outside air temperature indicator with sensor (when flying with water ballast)
1 Engine control unit featuring:
- RPM indicator
- Engine hour meter
- battery level (V meter, A meter)
- temperature indicator of motor
1 4-Point harness (symmetrical)
1 Power supply
1 Required placards, check list and Flight Manual
For Additional Equipment refer to Flight Manual
4. Dimensions:

Span	15.0 m	18.0 m
Wing Area	9.06 m ²	9.8 m ²
5. Engine [electrical propulsion]:
5.1 Model FES-LAK-M100
5.2 Type Certificate Accepted as part of the aircraft.
5.3 Max. revs 4500 RPM
5.4 Max. continuous revs 4000 RPM
5.5 Max. over speed revs 4500 RPM
5.6 Max. motor temperature 90°C
5.7 Max. power electronics temp. 90°C



6.	Propeller:		
	6.1 Model	FES-LAK-P10-100	
	6.2 Type Certificate	Accepted as part of the aircraft.	
	6.3 Number of blades	2	
	6.4 Diameter	1.0m (3.28 ft)	
	6.5 Max. revs	4500 RPM	
	6.6 Sense of Rotation	Clockwise looking at direction of flight	
7.	Fluids and Fluid capacities:	N/A	
8.	Battery [electrical propulsion]		
	8.1 Model	2xFES GEN2 14S 40Ah	2xFES GEN4 14S 56Ah
	8.2 Battery capacity	2x2.1 kWh	2x2.8 kWh
	8.3 Non-usable battery capacity	~10%	~10%
	8.4 Max battery discharge temperature	55°C	55°C
	8.5 Min battery discharge temperature	-10°C	-10°C
	8.6 Max battery charge temperature	55°C	55°C
	8.7 Min battery charge temperature	0°C	0°C
	8.8 Range of permissible cell voltage	2.8V ÷ 4.18V	2.8V ÷ 4.18V
9.	Launching Hooks:	Safety hook „Europa G 88“, LBA Data sheet No. 60.230/2	
		Aero tow hook and/or winch/auto-tow hook optional	
10.	Weak links:	Max. Ultimate Strength:	
		- for winch and auto tow launching	650 daN
		- for aero-tow	650 daN
11.	Load Factors:	for VA = 190 km/h (102 kts)	
		for VNE = 275 km/h (148 kts)	+5.3 / -2.65
		for VNE = 275 km/h (148 kts), air brakes extended	+4.0 / -1.5
		for VF = 160 km/h (86 kts), flaps +1, +2, L	+3.5 / -1.5 +4.0 / 0.
12.	Air Speeds:	Manoeuvring Speed	V _A 190 km/h
		Never Exceed Speed	V _{NE} 275 km/h
		Maximum permitted speeds	
		- with flaps at	+1, +2, L 160 km/h
		- with flaps at	-1, 0 275 km/h
		- in rough air	V _{RA} 190 km/h
		- in aero-tow	V _T 160 km/h
		- in winch-launch	V _W 140 km/h
		- for engine operation	V _{PE} 160 km/h
		- min. speed for engine start	V _{POmin} 90 km/h
		- max. speed for engine start	V _{POmax} 160 km/h
		- for gear operating	V _{LO} 205 km/h



- | | | |
|--|---|---------------------------|
| 13. Maximum Masses: | Wing span 15 m | 480 kg |
| | Wing span 18 m | 500 kg |
| | Max. Mass of Non-Lifting Parts | 282.5 kg |
| 14. Approved Operations Capability | Approved for VFR-flying in daytime | |
| 15. Launch methods: | Aero tow
Winch launch and auto launch | |
| 16. Centre of Gravity Range: | Datum: wing leading edge at wing root | |
| | Levelling means: slope rear top fuselage 1000:29 horizontal | |
| | Forward Limit | 182 mm aft of datum point |
| | Rearward Limit | 305 mm aft of datum point |
| 17. Minimum Flight Crew: | 1 (Pilot) | |
| 18. Maximum Seating Capacity: | 1 | |
| 19. Lifetime limitations: | Refer to Maintenance Manual | |
| 20. Deflection angles of control surfaces: | Refer to Maintenance Manual | |



G.IV. OPERATING AND SERVICE INSTRUCTIONS

1. LAK-17A-FES-AFM-01-00 "*Flight manual for the powered sailplane LAK-17A FES*". Rev. #1.0. Date of issue: 2026/02/02 or later EASA approved revision.
2. LAK-17A-FES-AMM-01-00 "*Maintenance manual for the powered sailplane LAK-17A FES*". Rev. #1.0. Date of issue: 2026/02/02 or later EASA accepted revision.
3. FES-FCU-57-01-00 FES FCU instrument manual. Version 2.02. Date of issue: August 2022 or later EASA approved revision issued by JSC "Sportinè aviacija ir Ko".
4. FES-GEN2-14S-01-00 FES BATTERY PACK GEN2 14S 40Ah manual with integrated BMS. Version 1.27. Date of issue: September 2021 or later EASA accepted revisions issued by JSC "Sportinè aviacija ir Ko".
5. FES-GEN4-14S-01-00 "FES BATTERYPACK GEN4 14S 56Ah manual with integrated BMS and G sensor". Version 1.0. Date of issue: May 2023.
6. FES-BMS-CM-01-00 FES BMS CONTROL MANUAL. Version 1.29, (for BMS control software version 1.31). Date of issue: September 2019 or later EASA accepted revision issued by JSC "Sportinè aviacija ir Ko".
7. FES-LAK-M100-01-00 FES MOTOR MANUAL. Version 1.51. Date of issue: June 2020 or later EASA accepted revisions issued by JSC "Sportinè aviacija ir Ko".
8. FES-LAK-P10-100-01-00 FES PROPELLER MANUAL. Version 1.0. Date of issue: 18/12/2017 or later EASA accepted revisions issued by JSC "Sportinè aviacija ir Ko".
9. Operating Instructions for the Tost safety tow release mechanism model "EUROPA G 88". Revision No.3. Date of issue: March 2001 or later issue.

For compliance with EASA AD 2017-0167-E the sailplane has to operated and maintained in accordance with the documents presented in section G.IV.



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. Engine and propeller are accepted as part of the aircraft according to Part 21.A.23(b)(2)



ADMINISTRATIVE SECTION

I. Acronyms

II. Type Certificate Holder Record

TC Holder	Period
Joint Stock Company „Sportinė Aviacija“ Pociūnų km., Ašmintos sen. LT-59327 Prienai, Republic of Lithuania	12 November 1999 ÷ 18 August 2009
JSC „Sportinė Aviacija ir KO“ Pociūnai, LT-59327 Prienai Republic of Lithuania	From 30 September 2009

III. Change Record

Issue	Date	Changes	TC Issue & Date
Issue 01	21 April 2006	Initial issue	21 April 2006
Issue 02	22 April 2013	Introduction of sales variant LAK-17B/LAK-17BT	
Issue 03	31 October 2014	Introduction of model LAK-17B FES	31 October 2014
Issue 04	05 August 2015	17 B FES: Correction of engine designation FES-LAK-M100 instead of FES-LAK-100M	
Issue 05	20 December 2017	New AFM and AMM document versions	
Issue 06	22 December 2020	Introduction of model LAK-17B FES mini Removal of 'Restricted' for model LAK-17B FES	22 December 2020
Issue 07	05 January 2021	Correction Section D.III.2; D.III.14 and D.V.4 added	
Issue 08	01 July 2021	Introduction of model LAK-17A mini	01 July 2021
Issue 09	24 March 2022	Correction C.III.2, Title of Section E	
Issue 10	02 February 2024	Introduction of model LAK-17C FES	02 February 2024
Issue 11	25 April 2024	Introduction of FES GEN4 14S 56 Ah batteries in models LAK-17B FES and LAK-17B FES mini. Sections C.III; C.IV; D.III and D.IV modified.	25 April 2024
Issue 12	27 March 2026	Introduction of model LAK-17A FES	27 March 2026

