TYPE-CERTIFICATE

DATA SHEET

No. EASA.A.546

for
PS-28 Cruiser

Type Certificate Holder

Czech Aircraft Group s.r.o.

Na Záhonech 212
686 04 Kunovice
CZECH REPUBLIC

For models: PS-28 Cruiser
PS-28 N Cruiser

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SECTION A: PS-28 CRUISER

A.I. General	
1. Type/ Model/ Variant	
1.1 Type	PS-28 Cruiser
1.2 Model	PS-28 Cruiser
1.3 Variant	Not applicable
2. Airworthiness Category	Restricted
3. Manufacturer	Czech Sport Aircraft a.s. Na Záhonech 212 686 04 Kunovice CZECH REPUBLIC Czech Aircraft Group s.r.o. Na Záhonech 212 686 04 Kunovice CZECH REPUBLIC S/N C0413, S/N C0418, S/N C0421, S/N C0630, S/N C0637, S/N C0638, S/N C0646, S/N C0648, S/N C0655, S/N C0656, S/N C0657, S/N C0659 and from S/N C0660 inclusive
4. EASA Type Certification Application Date Note: State of Design Authority certification application date for grandfathered products	31 March 2011
5. State of Design Authority	---
6. State of Design Authority Type Certificate Date	---
7. EASA Type Certification Date	16 April 2012

A.II. EASA Certification Basis	
1. Reference Date for determining the applicable requirements	27 June 2011
2. Airworthiness Requirements	Certification Specifications for Light Sport Aeroplanes CS-LSA, Initial Issue, 27 June 2011
3. Special Conditions	None
4. Exemptions	None
5. (Reserved) Deviations	None
6. Equivalent Safety Findings	None
7. Environmental Protection	See TCDSN EASA.A.546

A.III. Technical Characteristics and Operational Limitations	
1. Type Design Definition	PS-28 Cruiser RTC Type Design - Report No. PS-REP-10-02-EN, Rev. 11, or later approved revisions
2. Description	Two-seat, low wing, single-engine, semi-monocoque structure, with tricycle landing gear
3. Equipment	PS-28 Cruiser RTC Type Design – Report No. PS-REP-10-02-EN, Rev. 11, or later approved revisions The minimum instruments and equipment list is shown in POH Section 2 – Limitations.
4. Dimensions	Span 8.600 m Length 6.620 m Height 2.315 m Wing Area 12.3 m^2
5. Engine	
5.1. Model	Engine 1 Rotax 912 S2 Engine 2 Rotax 912 ULS2
5.2 Type Certificate	Engine 1 TC EASA.E.121 Engine 2 Certified as part of the aircraft
5.3 Limitations	Power Max. Take-off: 73.5 kW at 5,800 rpm (max. 5 min) Max. continuous: 69 kW at 5,500 rpm Cruising (75 %): 51 kW at 5,000 rpm
	Engine speed: Max. Take-off: 5,800 rpm (max. 5 min) Max. continuous: 5,500 rpm Cruising (75 %): 5,000 rpm Idling: 1,400 rpm (minimum)
	Oil pressure: Minimum: 0.8 bar below 3,500 rpm Maximum: 7 bar cold engine starting Optimum: 2 – 5 bar above 3,500 rpm
	Oil temperature: Minimum: 50 °C Maximum: 130 °C Optimum: 90 – 110 °C
	Cylinder Head Temperature (CHT): Maximum: 135 °C Coolant Temperature (CT): Maximum: 120 °C *) *) With the change to a new cylinder heads design (applicable for 912 ULS2 engines from S/N 6 781 410 inclusive and for 912 S2 engines from S/N 4 924 544 inclusive, or on all engines with type designation followed by suffix-01, or on all

	engines which have been later equipped with the new cylinder heads design of P/N 413185 at cylinder head position 2/3), no longer the Cylinder Head Temperature is measured, but the Coolant Temperature. The Coolant Temperature is indicated on EMS-D120 screen further using the abbreviation „CHT“.
	Exhaust gas temperature (EGT): Nominal: 800 °C Maximum: 850 °C Max. take-off: 880 °C
	Fuel pressure: Minimum: 0.15 bar Maximum: 0.4 bar Maximum: 0.5 bar **) **) applicable only for fuel pumps from S/N 11.0036
7. Propeller	
7.1 Model	KLASSIC 170/3/R Pitch setting according AMM and POH Sensenich 3B0R5R68C Pitch setting according AMM and POH
7.2 Type Certificate	Both propeller models are certified as part of the aircraft
7.3 Number of blades	KLASSIC 170/3/R – Number of blades 3 Sensenich 3B0R5R68C – Number of blades 3
7.4 Diameter	KLASSIC 170/3/R – Diameter 1,712 mm +/- 3 mm Sensenich 3B0R5R68C – Diameter 1,727 mm
7.5 Sense of Rotation	Both propeller models – clockwise, in pilot’s view
8. Fluids	
8.1 Fuel	MOGAS European standards: min. RON 95, EN 228 Super, EN 228 Super plus US standard: ASTM D 4814 Canadian standards: min. AKI 91, CAN/CGSB-3.5 Quality 3 AVGAS 100 LL
8.2 Oil	AeroShell Oil Sport Plus 4 SAE: 10W-40, API: SL
8.3 Coolant	ASTM D 3306, VW TL 774C Mixing ratio coolant/water: 50/50

9. Fluid capacities	
9.1 Fuel	Total fuel quantity : 114 litres Total usable fuel : 113 litres
9.2 Oil	Minimum 3.3 litres Maximum 3.8 litres
9.3 Coolant system capacity	Approx. 2.5 litres
10. Air Speeds	Never exceed speed VNE 138 kts (256 km/h) Design manoeuvring speed VA 88 kts (163 km/h) Maximum flap extended speed VFE 75 kts (139 km/h) Stalling speed VS0 31 kts (57 km/h)
11. Flight Envelope	15,000 ft
12. Approved Operations Capability	VFR Day only
13. Maximum Masses	Maximum take-off and landing weight 600 kg Maximum fuel weight 82 kg Max. baggage weight in rear fuselage 18 kg Max. baggage weight in each wing locker 10 kg Maximum empty weight 405 kg
14. Centre of Gravity Range	Empty weight centre of gravity range: 28.2 to 29.5 % of MAC 423.0 to 442.5 mm of MAC Operating centre of gravity range: 28 to 35 % of MAC 420 to 525 mm of MAC
15. Datum	The datum (reference plane) for arms measuring is on the wing leading edge- rib No.4.
16. Control surface deflections	Rudder ± 30° ± 2° Elevator ± 24° ± 2° Aileron ± 15° ± 1° Flaps + 30° ± 1° Aileron trim ± 20° ± 2° Elevator trim + 22° / - 28° ± 2° Anti-balance tab + 25° / - 19° ± 2°
17. Levelling Means	Placement of scales under each wheel. Deflation of the nose tire and/or lowering or raising the nose strut to properly centre the bubble in the level.
18. Minimum Flight Crew	1 (pilot)
19. Maximum Passenger Seating Capacity	1
20. Baggage/ Cargo Compartments	Max. 38 kg
21. Wheels and Tyres	Main wheel MHE51CZ (5 in) Nose wheel WHLNW51CC.75R (5 in) Tyre and tube Goodyear FLIGHT SPECIAL II – 5.00-5 in (or equivalent aircraft grade)
22. Lifetime limitations	Refer to AMM, Section 2

A.IV. Operating and Service Instructions	
1. Flight Manual	
PS-28 Cruiser Pilot's Operating Handbook (Woodcomp propeller; LTD+ avionics equipment) PS-POH-1-1-11; Rev. – issued on 2011-09-01, or later approved revisions PS-28 Cruiser Pilot's Operating Handbook (Woodcomp propeller; 6-pack avionics equipment) PS-POH-1-1-12; Rev. – issued on 2011-10-24, or later approved revisions PS-28 Cruiser Pilot's Operating Handbook (Woodcomp propeller; SkyView D1000 system; Analogue Back Up Instrument) PS-POH-1-1-13; Rev. – issued on 2014-06-17, or later approved revisions PS-28 Cruiser Pilot's Operating Handbook (Woodcomp propeller; SkyView HDX 1100 system; Analogue Back Up Instrument) PS-POH-1-1-14; Rev. – issued on 2018-06-22, or later approved revisions PS-28 Cruiser Pilot's Operating Handbook (Woodcomp propeller; SkyView HDX 1100 system; Garmin G5 Back Up Instrument) PS-POH-1-1-15; Rev. – issued on 2022-06-20, or later approved revisions PS-28 Cruiser Pilot's Operating Handbook (Sensenich propeller; SkyView HDX 1100 system; Garmin G5 Back Up Instrument) PS-POH-1-2-15; Rev. – issued on 2021-06-30, or later approved revisions	
2. Maintenance Manual	
PS-28 Cruiser / SportCruiser Maintenance Manual CR-MM-1-0-00 Rev. 2 issued on 2011-11-08, or later approved revisions	
3. Structural Repair Manual	
None	
4. Weight and Balance Manual	
None	
5. Illustrated Parts Catalogue	
PS-28 Cruiser / SportCruiser / PiperSport Illustrated Parts Catalogue CR-IPC-1-0-00 Rev. – issued on 2010-12-12, or later approved revisions	
6. Instructions for Continued Airworthiness	
PS-28 Cruiser / SportCruiser Instructions for Continued Airworthiness CR-ICA-1-0-00 Rev. – issued on 2011-03-01, or later approved revisions	
7. Aircraft Assembly Manual	
PS-28 Cruiser / SportCruiser Aircraft Assembly Manual CR-AAM-0-0-00 Rev. – issued on 2011-03-01, or later approved revisions	
8. Wiring Manual	
PS-28 Cruiser / SportCruiser Wiring Manual (LTD+ avionics equipment) CR-WMA-1-0-01 Rev. – issued on 2011-03-01, or later approved revisions PS-28 Cruiser / SportCruiser Wiring Manual (SkyView system equipment) CR-WMA-1-0-03 Rev. 3 issued on 2014-09-18, or later approved revisions PS-28 Cruiser / SportCruiser Wiring Manual (6-pack avionics equipment) CR-WMA-1-0-04 Rev. – issued on 2011-03-01, or later approved revisions	

A.V. Notes	
1. Optional installation of propeller Sensenich 3B0R5R68C in addition with after-muffler (Dwg. SE0490N) approved under Major-Change No. S-Z-0005 (EASA Approval No. 10047966).	

SECTION B : PS-28 N CRUISER

B.I. General	
1. Type/ Model/ Variant	
1.1 Type	PS-28 Cruiser
1.2 Model	PS-28 N Cruiser
1.3 Variant	Not applicable
2. Airworthiness Category	Normal
3. Manufacturer	Czech Aircraft Group s.r.o. Na Záhonech 212 686 04 Kunovice CZECH REPUBLIC
4. EASA Type Certification Application Date Note: State of Design Authority certification application date for grandfathered products	16 July 2020
5. State of Design Authority	---
6. State of Design Authority Type Certificate Date	---
7. EASA Type Certification Date	26 April 2021

B.II. EASA Certification Basis	
1. Reference Date for determining the applicable requirements	16 July 2020
2. Airworthiness Requirements	Certification Specifications for Light Sport Aeroplanes CS-LSA, Amendment 1; Dated 29 July 2013.
3. Special Conditions	SC-OLSA-div-01, issue 2 Night VFR Operation for LSA
4. Exemptions	None
5. (Reserved) Deviations	None
6. Equivalent Safety Findings	None
7. Environmental Protection	See TCDSN EASA.A.546

B.III. Technical Characteristics and Operational Limitations	
1. Type Design Definition	PS-28 N Cruiser Type Design Definition of Model PS-28 N Cruiser Report No. PS-REP-21-01-EN issue 1, or later approved revisions
2. Description	Two-seat, low wing, single-engine, semi-monocoque structure, with tricycle landing gear
3. Equipment	Type Design Definition of Model PS-28 N Cruiser Report No. PS-REP-21-01-EN issue 1, or later approved revisions The minimum instruments and equipment list is shown in POH Section 2 – Limitations.
4. Dimensions	Span 8.600 m Length 6.680 m Height 2.315 m Wing Area 12.3 m^2
5. Engine	
5.1. Model	Rotax 912 S2
5.2 Type Certificate	TC EASA.E.121
5.3 Limitations	Power Max. Take-off: 73.5 kW at 5,800 rpm (max. 5 min) Max. continuous: 69 kW at 5,500 rpm Cruising (75 %): 51 kW at 5,000 rpm
	Engine speed: Max. Take-off: 5,800 rpm (max. 5 min) Max. continuous: 5,500 rpm Cruising (75 %): 5,000 rpm Idling: 1,400 rpm (minimum)
	Oil pressure: Minimum: 0.8 bar below 3,500rpm Maximum: 7 bar cold engine starting Optimum: 2 – 5 bar above 3,500 rpm
	Oil temperature: Minimum: 50 °C Maximum: 130 °C Optimum: 90 – 110 °C
	Cylinder Head Temperature (CHT): Maximum: 135 °C Coolant Temperature (CT): Maximum: 120 °C *) *) With the change to a new cylinder heads design (applicable for 912 S2 engines from S/N 4 924 544 inclusive, or on all engines with type designation followed by suffix-01, or on all engines which have been later equipped with the new cylinder heads design of P/N 413185 at cylinder head position 2/3), no longer the Cylinder Head Temperature is measured, but the Coolant Temperature.

	The Coolant Temperature is indicated on EMS-D120 screen further using the abbreviation „CHT“.
	Exhaust gas temperature (EGT): Nominal: 800 °C Maximum: 850 °C Max. take-off: 880 °C
	Fuel pressure: Minimum: 0.15 bar Maximum: 0.4 bar Maximum: 0.5 bar **) **) applicable only for fuel pumps from S/N 11.0036
7. Propeller	
7.1 Model	KLASSIC 170/3/R Pitch setting according AMM and POH Sensenich 3B0R5R68C Pitch setting according AMM and POH
7.2 Type Certificate	Both propeller models are certified as part of the aircraft
7.3 Number of blades	KLASSIC 170/3/R – Number of blades 3 Sensenich 3B0R5R68C – Number of blades 3
7.4 Diameter	KLASSIC 170/3/R – Diameter 1,712 mm +/- 3 mm Sensenich 3B0R5R68C – Diameter 1,727 mm
7.5 Sense of Rotation	Both propeller models – clockwise, in pilot’s view
8. Fluids	
8.1 Fuel	MOGAS European standards: min. RON 95, EN 228 Super, EN 228 Super plus US standard: ASTM D 4814 Canadian standards: min. AKI 91, CAN/CGSB-3.5 Quality 3 AVGAS 100 LL
8.2 Oil	AeroShell Oil Sport Plus 4 SAE: 10W-40, API: SL
8.3 Coolant	ASTM D 3306, VW TL 774C Mixing ratio coolant/water: 50/50
9. Fluid capacities	
9.1 Fuel	Total fuel quantity : 114 litres Total usable fuel : 113 litres
9.2 Oil	Minimum 3.3 litres Maximum 3.8 litres
9.3 Coolant system capacity	Approx. 2.5 litres

10. Air Speeds	Never exceed speed VNE 139 kts (258 km/h) Operting manoeuvring speed VO 86 kts (159 km/h) Maximum flap extended speed VFE 76 kts (141km/h) Stalling speed VS0 30 kts (56 km/h)
11. Flight Envelope	15,000 ft
12. Approved Operations Capability	VFR Day / VFR Night
13. Maximum Masses	Maximum take-off and landing weight 600 kg Maximum fuel weight 82 kg Max. baggage weight in rear fuselage 18 kg Max. baggage weight in each wing locker 10 kg Maximum empty weight 405 kg
14. Centre of Gravity Range	Empty weight centre of gravity range: 28.2 to 29.5 % of MAC 423.0 to 442.5 mm of MAC Operating centre of gravity range: 28 to 35 % of MAC 420 to 525 mm of MAC
15. Datum	The datum (reference plane) for arms measuring is on the wing leading edge–rib No.4.
16. Control surface deflections	Rudder ± 30° ± 2° Elevator ± 24° ± 2° Aileron ± 15° ± 1° Flaps + 30° ± 1° Aileron trim ± 20° ± 2° Elevator trim + 22° / - 28° ± 2° Anti-balance tab + 25° / - 19° ± 2°
17. Levelling Means	Placement of scales under each wheel. Deflation of the nose tire and/or lowering or raising the nose strut to properly centre the bubble in the level.
18. Minimum Flight Crew	1 (pilot)
19. Maximum Passenger Seating Capacity	1
20. Baggage/ Cargo Compartments	Max. 38 kg
21. Wheels and Tyres	Main wheel MHE51CZ (5 in) Nose wheel WHLNW51CC.75R (5 in) Tyre and tube Goodyear FLIGHT SPECIAL II – 5.00-5 in (or equivalent aircraft grade)
22. Lifetime limitations	Refer to AMM, Section 2

B.IV. Operating and Service Instructions	
1. Flight Manual	
PS-28 N Cruiser Pilot's Operating Handbook (Woodcomp propeller) Rev. – issued on 2020-12-01, or later approved revisions	PSN-POH-1-1-20
PS-28 N Cruiser Pilot's Operating Handbook (Sensenich propeller) Rev. – issued on 2020-12-01, or later approved revisions	PSN-POH-1-2-20
2. Maintenance Manual	
PS-28 Cruiser / PS-28 N Cruiser Maintenance Manual Rev. 25 issued on 2021-01-15, or later approved revisions	CR-MM-1-0-00
3. Structural Repair Manual	
None	
4. Weight and Balance Manual	
None	
5. Illustrated Parts Catalogue	
PS-28 Cruiser / SportCruiser / PiperSport Illustrated Parts Catalogue Rev. – issued on 2010-12-12, or later approved revisions	CR-IPC-1-0-00
6. Instructions for Continued Airworthiness	
PS-28 Cruiser Instructions for Continued Airworthiness Rev. 2 issued on 2016-09-23, or later approved revisions	CR-ICA-1-0-00
7. Aircraft Assembly Manual	
PS-28 Cruiser / SportCruiser Aircraft Assembly Manual Rev. 1 issued on 2019-01-11, or later approved revisions	CR-AAM-0-0-00
8. Wiring Manual	
PS-28 Cruiser Wiring Manual (SkyView system equipment) Rev. 11 issued on 2018-06-22, plus Supplement No. 3 Doc. No. CR-WMA-1-0-03-S03 Rev.: - issued on 2021-01-15 or later approved revisions	CR-WMA-1-0-03

B.V. Notes	
None	

ADMINISTRATIVE SECTION

I Acronyms & Abbreviations

None

II Type Certificate Holder Record

TC Holder	Period
Czech Sport Aircraft a.s. Na Záhonech 212 686 04 Kunovice CZECH REPUBLIC	16 April 2012 – 16 January 2020
Czech Aircraft Group s.r.o. Na Záhonech 212 686 04 Kunovice CZECH REPUBLIC	Since 17 January 2020

III Change Record

Issue	Date	Changes	TC Issue No. & Date
Issue 01	16 April 2012	Initial Issue	Initial issue / 16 April 2012
Issue 02	31 January 2014	Propeller Sensenich 3B0R5R68C and after-muffler	Initial issue / 16 April 2012
Issue 03	21 November 2014	Installation of Dynon SkyView System	Initial issue / 16 April 2012
Issue 04	11 December 2015	Incorporation of new cylinder head design for Rotax 912 S2/ULS2 engine with CT monitoring	Initial issue / 16 April 2012
Issue 05	19 September 2019	Aircraft manufacturer change Correction of typo error in A.III 18.	Initial issue / 16 April 2012
Issue 06	17 January 2020	Change of TC holder (TC Transfer)	Issue 1 / 17 January 2020
Issue 07	15 June 2020	A.I.3 adding of S/N C0418	Issue 1 / 17 January 2020
Issue 08	09 February 2021	A.I.3 adding of S/N C0421	Issue 1 / 17 January 2020
Issue 09	26 April 2021	Adding of new model PS-28 N Cruiser (Section B)	Issue 2 / 26 April 2021
Issue 10	08 September 2021	Empty weight c.g. range extension	Issue 2 / 26 April 2021
Issue 11	03 May 2022	A.I.3 adding of S/N C0630, S/N C0637, S/N C0638	Issue 2 / 26 April 2021
Issue 12	04 July 2022	A.IV.1 adding of new POH doc. No. PS-POH-1-1-15 B.IV.1. correction of references	Issue 2 / 26 April 2021

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