



TYPE CERTIFICATE DATA SHEET Nº EP-2021T06

Type Certificate Holder:

SCHEMPP-HIRTH FLUGZEUGBAU GMBH
KREBENSTRASSE 25
73230 KIRCHHEIM / TECK
GERMANY

EP-2021T06-00
Sheet 01

SCHEMPP-HIRTH

ARCUS M

24 November 2021

This data sheet, which is part of Type Certificate No. 2021T06, prescribes conditions and limitations under which the product, for which the Type Certificate was issued, meets the airworthiness requirements of the Brazilian Aeronautical Regulations.

I - Model Arcus M (Utility Category), approved 24 November 2021.

ENGINE	1 SOLO 2625-02 (EM 2012T03)
ENGINE LIMITS	Maximum continuous Power 50 kW at 6 600 RPM Maximum RPM 6 700 RPM Maximum coolant temperature: 115°C
OIL	Fuel / oil mixture 1:50 (2%) Oils according to the specification JASO FC or FD, recommended oil Castrol ACT>EVO
PROPELLER AND PROPELLER LIMITS	Technoflug Leichtflugzeugbau GmbH. KS-1G-160-R-120 (EH 2021T05) Or Binder Type series propeller BM-G-160-R-120-1 (EH 2012T04)
AIRSPPEED LIMITS (IAS)	Maneuvering Speed V_A 180 km/h Never Exceed Speed V_{NE} 280 km/h Maximum Permitted Speed: - with flaps at 0, -1, -2, S 280 km/h - with flaps at +1, +2, L 180 km/h - in rough air V_{RA} 180 km/h - in aero-tow V_T 180 km/h - in winch-launch V_W 150 km/h - for gear operating V_{LO} 180 km/h - with extended Powerplant V_{PE} 180 km/h Permitted speeds for power plant extension/retraction:

	- min. for extending/retracting power plant V_{POmin}	90 km/h
	- max. for extending/retracting power plant V_{POmax}	120 km/h
CG RANGE	Powerplant installed: Forward Limit: According to NOTE 7: Rearward Limit:	100 mm aft of datum point 95 mm aft of datum 290 mm aft of datum point
	Powerplant removed: Forward Limit: Rearward Limit:	75 mm aft of datum point 290 mm aft of datum point
DATUM	Most inner wing leading edge	
LEVELING MEANS	Wedge 100:4,5 on slope of rear top fuselage to be horizontal	
MAXIMUM WEIGHT	Max. Mass with Water Ballast when increased according to NOTE 7: Max. Mass of Non-Lifting Parts when increased according to NOTE 7: Max. Mass of Non-Lifting Parts, engine removed	800 kg 850 kg 550 kg 560 kg 530 kg
MINIMUM CREW	1 Pilot – when flown solo, control is from front seat only.	
MAXIMUM SEATS	2	
MAXIMUM BAGGAGE	2 kg (4.4 lb)	
FUEL CAPACITY	Fuselage tank Non-usable amount of fuel Tank in right wing (optional) Non-usable amount of fuel Tank in left wing (optional) Non-usable amount of fuel	15,9 l 0,2 l 13,0 l 0,5 l 13,0 l 0,5 l
LAUNCHING HOOKS:	1) Nose tow hook “E 85”, LBA Datasheet No. 60.230/1 2) Safety hook “Europa G 88”, LBA Datasheet No. 60.230/2	
WEAK LINKS:	Ultimate Strength: - for winch and auto-tow launching max. - for aero-tow max.	1000 daN 850 daN
OPERATIONAL CAPABILITY	Approved for VFR-Day only. Suitable for cloud flying in accordance with the directions given in the Flight Manual. Suitable for restricted aerobatic maneuvers in accordance with the directions given in the Flight Manual.	
SERIAL NUMBER ELIGIBLE	1 and subsequent	

IMPORT ELIGIBILITY

A Brazilian Certificate of Airworthiness may be issued on the basis of an EASA Export Certificate on Airworthiness (or a third country Export Certificate on Airworthiness, in case of used aircraft imported from such country), including the following statement:

“The aircraft covered by this certificate has been inspected, tested and found to be in conformity with the Brazilian approved type design as defined by the Brazilian Type Certificate no. 2021T06 and in condition of safe operation”.

CERTIFICATION BASIS

Brazilian Type Certificate No. 2021T06 issued on 24 November 2021 based on the RBAC 21.29 and 21.17(b), which endorses the CS 22 effective on 14 November 2003.

Requirements elected to comply:

- Standards for Structural Substantiation of Sailplane and Powered Sailplane Components consisting of Glass or Carbon Fibre Reinforced Plastics, issued July 1991

- Provisional guideline: Electrostatic requirements for Powered Sailplanes and Gliders, (T405, issue 24.11.2004)

- Guideline for the analysis of the electrical system for powered sailplanes, I334-MS 92, issued 15. September 1992.

Special Conditions: None

Equivalent levels of safety findings:
CS 22.207 a), c)

Exemptions: None

Environmental Standards: ICAO Annex 16

REQUIRED EQUIPMENT

Min. Equipment:

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

2 Altimeter

1 Magnetic compass

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

1 Engine control unit MCU II / MCU 3 BG (see NOTE 7) featuring:

- RPM indicator

- coolant-temperature indicator

- Fuel quantity indicator

- Engine hour meter

- Warning signals

1 Rear view mirror

4 -Point harness (symmetrical)

2 Automatic or manual parachute

or 2 Back cushion (thickness approx. 8 cm / 3.15 in.
when compressed), when flying without parachute

Additional Equipment refer to Flight and Maintenance Manual

OPERATING AND SERVICE INSTRUCTIONS

1. Flight Manual for the powered sailplane Arcus M, issued October 2012, EASA approved.

2. Maintenance Manual for the powered sailplane Arcus M, issued October 2012

3. Repair Manual for the CFRP/GFRP powered sailplane model Arcus M, latest applicable issue
4. Manual for engine model SOLO 2625-02i, latest applicable issue, issued by Solo Kleinmotoren GmbH
5. Operation and Maintenance Manual Nr. P3 for the 2 blade propeller type "KS" in the latest applicable issue, issued by Technoflug Leichtflugzeugbau GmbH
6. Operation and Maintenance Manual for BM series propellers in the latest applicable issue, issued by Binder Motorenbau GmbH
7. Operating Instructions for the Tost release, latest approved version
8. With changes according to NOTE 7:
Flight Manual for the powered sailplane Arcus M, issued May 2020, EASA approved.
9. With changes according to NOTE 7:
Maintenance Manual for the powered sailplane Arcus M, issued May 2020, EASA approved.

DATA PERTINENT TO ALL MODELS:**NOTES:**

- NOTE 1** Weight and balance. Current weight and balance data including list of equipment included in the certificated empty weight and loading instructions, when necessary, must be provided for each glider at the time of original certification and at all times thereafter.
- NOTE 2** Markings and placards. Powered Sailplane operation must be in accordance with the Brazilian Approved Airplane Flight Manual.
All placards required by the Flight Manual, the applicable operating rules and the Certification Bases must be installed in the airplane.
For translated Marking and Placard please contact the email progcert@anac.gov.br.
- NOTE 3** The differences of the Brazilian airplanes in relation to the basic EASA type design are summarized below:
1. Brazilian Aircraft FLIGHT MANUAL for powered sailplane Model: A R C U S M
2. Markings and placards.
- NOTE 4** Manufacturing is confined to industrial production.
- NOTE 5** All parts exposed to sun radiation – except the areas for markings and registration – must have a white color surface.
- NOTE 6** Operation of the powered sailplane with removed engine is allowed according to the Flight Manual, section 4.2.3.
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NOTE 7 The increase of maximum mass with water ballast and the maximum mass of non-lifting parts, the use of the new horizontal tailplane, of the electrical retractable main gear, of the new winglets, of the bug wiper housings, the new power plant system and the new cockpit design is permissible in compliance with the Schempp-Hirth Flugzeugbau Modification Bulletin No. A532-4.

CHANGE RECORD

Revision	Application Date	Changes	TC issue/reissue
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This TCDS is available at ANAC website:

<https://sistemas.anac.gov.br/certificacao/Produtos/EspecificacaoOrgE.asp>

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