DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

G29EU
Revision 4
CAPRONI
"Calif" A21
"Calif" A21S
March 1, 2012

TYPE CERTIFICATE DATA SHEET No. G29EU

This data sheet which is part of Type Certificate No. G29EU prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder

Agusta S.p.A.
Via Giovanni Agusta 520
21017 Cascina Costa Samarate (VA)
Italy

Type Certificate Ownership Record

(1) This TC was considered not valid by the state of design on April 6, 2011, and has been replaced by European Aviation Safety Agency (EASA) Specific Airworthiness Specification (SAS) number EASA.SAS.A.118, issued April 6, 2011. Only standard airworthiness certificates issued prior to March 1, 2012 are valid.

(2) Future unsafe conditions existing in the aircraft may result in the revocation of the airworthiness certificates of the aircraft if there is no entity to comply with 14 CFR § 21.99(a), "Required design changes."

(3) Replacement parts may not be available in the future.

I. Model "Calif" A21 Glider, approved May 30, 1973.

Airspeed Limits (I.A.S.)

Never exceed speed	156 m.p.h.	(136 knots)
Maximum air brakes operating speed	156 m.p.h.	(136 knots)
Maximum maneuvering and rough air speed	105 m.p.h.	(91 knots)
Maximum flap speed (with any flap setting below the 8° "UP" setting)	100 m.p.h.	(86 knots)
Maximum landing gear extension speed	100 m.p.h.	(86 knots)
Maximum aero-tow speed	87 m.p.h.	(75 knots)

C.G. Range: (+87.1 inches) to (98.0 inches)

Empty Weight C.G. Range: None

Datum: 78.7 inches forward of wing leading edge at root.

Leveling Means: Template P/N 001 on rear top surface of fuselage (Slope 2°06' tail down)

Weight Limitations: 1420 lb. maximum

Number of Seats: 2 (at +56.4 inches)

Maximum Baggage: None

Control Surface Movements (see NOTE 4)	Elevator	Up	18°	±	2°	
		Down	7°	±	2°	
	Rudder	Right	5.7	±	1/2	inches
		Left	5.7	±	1/2	inches
	Flaps	Up	8°	±	1°	The flap root ribs aligns with the fuselage wing fairings when flaps are in the 8° "UP" position.
		Down	8°	±	1°	
	Ailerons	Up	45°	±	3°	
		Down	24°	±	3°	

Air Brakes: The plane of the spoilers on the upper wing surface rotates 76° when air brakes are selected. Flap sections are driven down by spoilers.

Weak Link for Towing 1200 lb. max.

II. Model "Calif" A21S Glider, approved July 13, 1976.

(Similar to "Calif" A21 except for: horizontal and vertical tail, trim device, flap down setting.)

Airspeed Limits (I.A.S.)

Never exceed speed	156 m.p.h.	(136 knots)
Maximum air brakes operating speed	156 m.p.h.	(136 knots)
Maximum maneuvering and rough air speed	105 m.p.h.	(91 knots)
Maximum flap speed (with any flap setting below the 8° UP setting)	98 m.p.h.	(84 knots)
Maximum landing gear extension speed	100 m.p.h.	(86 knots)
Maximum aero-tow speed	87 m.p.h.	(75 knots)

C.G. Range (+87.1 inches) to (+98.0 inches)

Empty Weight C.G. Range None

Datum 78.7 inches forward of wing leading edge at root.

Leveling Means Template P/N 001 on rear top surface of fuselage (Slope 2°06' tail down).

Weight Limitations 1420 lb. maximum

Number of Seats 2 (at +56.4 inches)

Maximum Baggage None

Control Surface Movements	Elevator	Up	30°	±	3°	
		Down	25°	±	3°	
	Rudder	Right	26°	±	2°	
		Left	26°	±	2°	
	Flaps	Up	8°	±	1°	The flap root ribs aligns with the fuselage wing fairings when flaps are in the 8° "UP" position.
		Down	12°	±	2°	
	Ailerons	Up	45°	±	3°	
		Down	24°	±	3°	

Air Brakes: The plane of the spoilers on the upper wing surface rotates 76° when air brakes are selected. Flap sections are driven down by spoilers.

Weak Link for Towing 1200 lb. max.

DATA PERTINENT TO ALL MODELS

Serial Numbers Eligible	Only those aircraft serials holding a standard airworthiness certificate issued prior to March 1, 2012 are eligible. The Registro Aeronautico Italiano Certificate of Airworthiness for Export endorsed as noted below under "Import Requirements" must be submitted for each individual glider for which application for standard airworthiness certification is made.
Certification Basis	FAR 21.29 and FAR 21.23, effective 1 February 1965. Type Certificate No. G29EU, issued 30 May 1973. Date of Application for Type Certificate: 18 September 1970.
Validation Basis	Type Certificate No. G29EU was issued pursuant to FAR 21.29(a)(1)(ii), effective 1 December 1969, in validation of the Registro Aeronautico Italiano's certification of compliance with the British Civil Airworthiness Requirements, Section E, Issue 2, dated 16 May 1960 (Italian Certification Basis) which was found to provide a level of safety equivalent to the aforementioned FAA Certification Basis.
Import Requirements	None eligible after March 1, 2012. Previous to this date: A U.S. airworthiness certificate may be issued on the basis of a Certificate of Airworthiness for Export signed by a representative of the Registro Aeronautico Italiano, containing the following statement: a) <u>For the Model "Calif" A21</u> "The glider covered by this certificate has been examined, tested, and found to conform to the type design approved under FAA Certificate No. G29EU and is in a condition for safe operation". In addition, for glider Serial Number 201, 204, 205, 206, 207, and 208, as applicable, the glider must be modified in accordance with the following Caproni-Vizzola Service Bulletins before original Standard Airworthiness Certification: (1) Service Bulletin No. 72-02, RAI-approved on 3 January 1973 for modification of the landing gear retraction lever. (Not applicable to S/N 208). (2) Service Bulletin No. 72-03, RAI-approved on 3 January 1973 to ensure correct angular travel of the ailerons. (Not applicable to S/N 208). (3) Service Bulletin No. 72-04, RAI-approved on 3 January 1973 to provide a means to visually inspect the fin front attachment. b) <u>For the Model "Calif" A21S</u> "The glider covered by this certificate has been examined, tested, and found to conform to the type design approved under FAA Type Certificate No. G29EU and is in a condition for safe operation".
Service Information	Service bulletins, structural repair manuals, aircraft flight manuals, and overhaul and maintenance manuals, which contain a statement that the document is Registro Aeronautico Italiano (RAI) approved, are accepted by the FAA and are considered FAA approved. These approvals pertain to the type design only.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the glider for standard airworthiness certification.

In addition the following equipment must be installed:

A. For the Model "Calif" A21

(1) Instruments (non-cloud flying):

a) Airspeed indicator marked as follows:

Red Radial	156 m.p.h.	(136 knots)
Yellow Arc	105-156 m.p.h.	(91-136 knots)
Green Arc	43.5-105 m.p.h.	(38-91 knots)
White Arc	39.0-100 m.p.h.	(34-86 knots)

b) Altimeter

c) Magnetic Compass

(2) Additional instruments required for cloud flying:

a) Turn and Bank Indicator

b) Variometer

B. For the Model "Calif" A21S

(1) Instruments (non-cloud flying):

a) Airspeed indicator marked as follows:

Red Radial	156 m.p.h.	(136 knots)
Yellow Arc	105-156 m.p.h.	(91-136 knots)
Green Arc	43.5-105 m.p.h.	(38-91 knots)
White Arc	39.0-98 m.p.h.	(84 knots)

b) Altimeter

c) Magnetic Compass

(2) Additional instruments required for cloud flying:

a) Turn and Bank Indicator

b) Variometer

(3) RAI approved Model "Calif" A21S Flight Manual.

NOTE 1. Current weight and balance report including list of equipment in certificated empty weight, and loading instructions, when necessary, must be provided for each glider at the time of original certification.

NOTE 2. a) The following placard must be installed in full view of the pilot:

(1) "This glider must be operated in compliance with the Operating Limitations stated in the form of placards, markings, and manuals".
(2) "Cloud flying: permitted only when the following instruments are installed:
1) Airspeed Indicator
2) Altimeter
3) Magnetic Compass
4) Turn and Bank
5) Variometer"

(3) "The following acrobatic maneuvers are approved: Spins (Flap up), spins (airbrakes extended), steep turns, and chandelles. Spins with flaps down are prohibited".

Recommended entry speeds:

- Steep Turns	150 km/h.	81 knots	98 m.p.h.
- Chandelles	160 km/h.	86 knots	99 m.p.h.
- Spins	See Flight Manual		

(4) "Night flying is prohibited".

(5) i) <u>(For the Model "Calif" A21)</u>

Max. Air Brakes Operating Speed	156 m.p.h.	(136 knots)
Max. Maneuvering, and Rough Air Speed	105 m.p.h.	(91 knots)
Max. Flap Speed	100 m.p.h.	(86 knots)
Max. Landing Gear Extension Speed	100 m.p.h.	(86 knots)
Max. Aero-Tow Speed	87 m.p.h.	(75 knots)
Stall Speed - Air Brakes Extended	38.5 m.p.h.	(33 knots)

The max. flap speed limit applies to all flap positions below the 8° "Up" position.

ii) <u>(For the Model "Calif" A21S)</u>

Max. Air Brakes Operating Speed	156 m.p.h.	(136 knots)
Max. Maneuvering, and Rough Air Speed	105 m.p.h.	(91 knots)
Max. Flap Speed	98 m.p.h.	(84 knots)
Max. Landing Gear Extension Speed	100 m.p.h.	(86 knots)
Max. Aero-Tow Speed	87 m.p.h.	(75 knots)
Stall Speed - Air Brakes Extended	38.5 m.p.h.	(33 knots)

The max. flap speed limit applies to all flap positions below the 8° UP position.

(6) "Maximum Weight: 1420 lb.
C.G. Range: 87.1 inches to 98.0 inches".
(7) "Weak Link - 1200 lb."
(8) "Auto or winch launching prohibited".

b) The following placard must be installed on the wing center carry-through section in the cabin.
"No baggage allowed"

NOTE 3. (Reserved)

NOTE 4.

a) For the Model "Calif" A21
Locations for measuring the elevator, rudder, flaps, and aileron control surface movements are given in Table 4 of the RAI-approved "Calif" A21 Flight and Service Manual". Rigging information for the flaps and air brake spoilers, when the flap control handle is in the air brake position is given in the Calif A21 Maintenance Manual.

b) For the Model "Calif" A21S
Locations for measuring the elevator, rudder, flaps and aileron control surface movements as well as rigging information for the flaps and air brake spoilers when the flap control handle is in the air brake position, are given in the Calif A21S Maintenance Manual.

NOTE 5.

a) For the Model "Calif" A21
Information essential for the proper operation, maintenance, and inspection of the glider is contained in the RAI-approved "Calif A21 Flight and Service Manual".

b) For the Model "Calif" A21S
Information essential for the proper operation, maintenance, and inspection of the glider is contained in the RAI-approved "Calif A21S Flight Manual" and in the "Calif A21S Maintenance Manual".

NOTE 6. As of November 30, 1989, Caproni Vizzola Costruzioni Aeronautiche S.p.A. became a member of the Agusta S.p.A. Group.

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