

Ailerons Up $24^\circ + 1^\circ$ 2.36 ± 0.12 in. (60 ± 3 mm)
 Ailerons Down $12^\circ + 1^\circ$ 1.18 ± 0.12 in. (30 ± 3 mm)
 Measurement radius 5.67 in. (144 mm) from hinge line

Elevator: Up $3.90 \pm .04$ in. (99 ± 1 mm)
 Down $3.58 \pm .04$ in. (91 ± 1 mm)
 Measurement radius 8.94 in. (227 mm) from hinge line

Rudder: 8.54 -.2 in. (217 - 5 mm) to the right and left.
 Measurement radius 16.5 in. (420 mm) from hinge line.
 Tolerance for rudder only - not +

Serial Nos. Eligible.

See Import Requirement

Certification Basis.

- 1) FAR 21.23, 21.29 and 21.50 effective February 1, 1965 including Amendment 21-1 through 21-53.
- 2) Joint Airworthiness requirements for Sailplanes and Powered Sailplanes (JAR-22) Change 4 dated May 17, 1987, including amendments 22/90/1, 22/90/1, and 22/92/1.
- 3) Preliminary guideline for the stress analysis of glasfiber and carbonfiber reinforced plastic structures for sailplanes and powered sailplanes issued May 1986.
- 4) Type Certificate No. G08CE issued December 29, 1997.
- 5) Date of Application for Type Certificate September 22, 1997.

The German civil airworthiness authority (LBA) originally type certificated this glider under its type certificate Number 348. The FAA validated this product under U.S. Type Certificate Number G08CE. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of Germany. The EASA TCDS number is EASA.A.233.

Import Requirements.

The FAA can issue a U.S. airworthiness certificate for an aircraft manufactured under a Production Organisation Approval (POA) or other prior production approval issued by the Luftfahrt Bundesamt (LBA) based on the following:

- An EASA Form 27, Export Certificate of Airworthiness (Export C of A), or
- A German Export Certificate of Airworthiness issued before September 28, 2008.

The Export C of A must be signed by a representative of the LBA. The Export C of A should contain the following statement: 'The aircraft covered by this certificate has been examined, tested, and found to comply with U.S. airworthiness regulations 14 CFR Part 21.17(b) approved under U.S. Type Certificate No. G08CE and to be in a condition for safe operation.'

Gliders manufactured in Slovenia under jurisdiction of the Slovenian Directorate of Civil Aviation are not within the scope of the current agreement or past agreements and therefore are not eligible for a U.S. standard airworthiness certificate. The following serial numbered gliders manufactured in Slovenia which currently hold a U.S. standard airworthiness certificate may continue to hold that certificate until surrendered or revoked:

Serial Number	Date	Manufacturer
5E182X33	1998	ELAN
5E186X36	1998	ELAN
5E198X42	1999	ELAN

5E201X46	1999	AMS
5E211X53	2000	AMS
5E215X55	2000	AMS
5E221X59	2001	AMS

Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the glider for certification. In addition, the DG-500 Elan Orion Flight Manual, LBA-approved dated November 1995, is required.

Service Information.

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by the Luftfahrt Bundesamt (LBA).

- Service bulletins,
- Structural repair manuals,
- Vendor manuals,
- Aircraft flight manuals, and
- Overhaul and maintenance manuals.

The FAA accepts such documents and considers them FAA-approved for type design data only unless one of the following conditions exists:

- The documents change the limitations, performance, or procedures of the FAA approved manuals.

The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on a case-by-case basis to EASA to approve on behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.

NOTESNOTE 1.

Current weight and balance data together with 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.

NOTE 2.

The placards listed in items 2.19 of the LBA approved DG-500 Elan Orion Flight Manual must be displayed.

NOTE 3.

Section 0. Airworthiness Limitations of the DG-500 Elan Orion. Instructions for continued airworthiness, dated July 1995 is FAA-approved. It specifies mandatory replacement times, and structural repair procedures. These airworthiness limitations may not be changed without FAA approval.

NOTE 4.

All external portions of the glider exposed to sunlight must be painted white except the surfaces for the registration Nos. and anti-collision paint as specified by the manufacturer.

NOTE 5.

Major structural repairs must be accomplished at FAA certificated repair stations rated for composite aircraft structure work, or by a certified mechanic in accordance with DG Flugzeugbau GmbH repair methods approved by FAA.

NOTE 6.

Information essential for the proper operation, maintenance and Inspection of the glider is contained in the Model DG-500 Elan Orion Flight Manual and Maintenance Manual.

II. Model DG-500 Elan Trainer Glider, Certified in Utility and Aerobatic Category when operated in accordance with the designated Flight Manual. Approved December, 1997

<u>Airspeed Limits (IAS).</u>	V _{NE} (never exceed)	168 mph	270 km/h	146 knots
	V _B (in rough air)	127 mph	205km/h	111 knots
	V _A (maneuvering)	127 mph	205 km/h	111 knots
	V _{LO} (Landing Gear operating)	127 mph	205 km/h	111 knots
	V _T (Aero-tow)	127 mph	205 km/h	111 knots
	V _W (Winch launch)	88 mph	140 km/h	76 knots

C.G. Range. 7.28 in. to 18.9 in. (185 mm to 480 mm) aft of datum.

Empty Weight C.G. See Flight Manual. (Record of Weight and Balance)

Datum. Wing leading edge at wing root

Leveling Means. Aft fuselage midline horizontal and Aft fuselage boom slope 1000:33 (tail down)

Maximum Weight. 1356 lbs (615 Kg)

No. of Seats. Two, in front of datum, tandem position.

Maximum Baggage. 33 lb (15 kg) 12.2 in. (310 mm) aft of datum.

Control Surface Movements.

Ailerons Up 2.96 ± 0.12 in. (75 ± 3 mm)
Down 1.50 ± 0.12 in. (38 ± 3 mm)
Measurement radius 5.67 in. (144 mm) from hinge line

Elevator: Up 3.90 ± .04 in. (99 ± 1 mm)
Down 3.58 ± .04 in. (91 ± 1 mm)
Measurement radius 8.94 in. (227 mm) from hinge line

Rudder: 8.54 -.2 in. (217 - 5 mm) to the right and left.
Measurement radius 16.5 in. (420 mm) from hinge line.
Tolerance for rudder only - not +

Serial Nos. Eligible. See Import Requirement

- Certification Basis.
- 1) FAR 21.23, 21.29 and 21.50 effective February 1, 1965 including Amendment 21-1 through 21-53.
 - 2) Joint Airworthiness requirements for Sailplanes and Powered Sailplanes (JAR-22) Change 4 dated May 7, 1987.
 - 3) Preliminary guideline for the stress analysis of glasfiber and carbonfiber reinforced plastic structures for sailplanes and powered sailplanes issued May 1986.
 - 4) Type Certificate No. G08CE issued December 29, 1997.
 - 5) Date of Application for Type Certificate September 22, 1997.

The German civil airworthiness authority (LBA) originally type certificated this glider under its type certificate Number 348. The FAA validated this product under U.S. Type Certificate Number G08CE. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of Germany. The EASA TCDS number is EASA.A.233.

Import Requirements.

The FAA can issue a U.S. airworthiness certificate for an aircraft manufactured under a Production Organisation Approval (POA) or other prior production approval issued by the Luftfahrt Bundesamt (LBA) based on the following:

- An EASA Form 27, Export Certificate of Airworthiness (Export C of A), or
- A German Export Certificate of Airworthiness issued before September 28, 2008.

The Export C of A must be signed by a representative of the LBA. The Export C of A should contain the following statement: 'The aircraft covered by this certificate has been examined, tested, and found to comply with U.S. airworthiness regulations 14 CFR Part 21.17(b) approved under U.S. Type Certificate No. G08CE and to be in a condition for safe operation.'

Gliders manufactured in Slovenia under jurisdiction of the Slovenian Directorate of Civil Aviation are not within the scope of the current agreement or past agreements and therefore are not eligible for a U.S. standard airworthiness certificate. The following serial numbered gliders manufactured in Slovenia which currently hold a U.S. standard airworthiness certificate may continue to hold that certificate until surrendered or revoked:

Serial Number	Date	Manufacturer
5E182X33	1998	ELAN
5E186X36	1998	ELAN
5E198X42	1999	ELAN
5E201X46	1999	AMS
5E211X53	2000	AMS
5E215X55	2000	AMS

Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the glider for certification. In addition, the DG-500 Elan Trainer Flight Manual, LBA-approved dated December 1990, is required.

Service Information.

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by the Luftfahrt Bundesamt (LBA).

- Service bulletins,
- Structural repair manuals,
- Vendor manuals,
- Aircraft flight manuals, and
- Overhaul and maintenance manuals.

The FAA accepts such documents and considers them FAA-approved for type design data only unless one of the following conditions exists:

- The documents change the limitations, performance, or procedures of the FAA approved manuals.

The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on a case-by-case basis to EASA to approve on behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.

NOTESNOTE 1.

Current weight and balance data together with 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.

- NOTE 2. The placards listed in items 2.19 of the LBA approved DG-500 Elan Trainer Flight Manual must be displayed.
- NOTE 3. Section 0. Airworthiness Limitations of the DG-500 Elan Trainer. Instructions for continued airworthiness, dated July 1990 is FAA-approved. It specifies mandatory replacement times, and structural repair procedures. These airworthiness limitations may not be changed without FAA approval.
- NOTE 4. All external portions of the glider exposed to sunlight must be painted white except the surfaces for the registration Nos. and anti-collision paint as specified by the manufacturer.
- NOTE 5. Major structural repairs must be accomplished at FAA certificated repair stations rated for composite aircraft structure work, or by a certified mechanic in accordance with DG Flugzeugbau GmbH repair methods approved by FAA.
- NOTE 6. Information essential for the proper operation, maintenance and Inspection of the glider is contained in the Model DG-500 Elan Trainer Flight Manual and Maintenance Manual.

III. Model DG-500/22 Elan Glider, Utility Category, approved December 29, 1997

<u>Airspeed Limits (IAS).</u>	V _{NE} (never exceed)	168 mph	270 km/h	146 knots
	V _B (in rough air)	122 mph	197km/h	106 knots
	V _A (maneuvering)	122 mph	197 km/h	106 knots
	V _{FE} (Wing flaps extended)			
	(+10°, +5°)	122 mph	197 km/h	106 knots
	(L=+15°)	93 mph	150 km/h	81 knots
	V _{LO} (Landing Gear operating)	122 mph	197 km/h	106 knots
	V _T (Aero-tow)	122 mph	197 km/h	106 knots
	V _W (Winch launch)	88 mph	140 km/h	76 knots
<u>C.G. Range.</u>	7.28 in. to 18.9 in. (185 mm to 480 mm) aft of datum.			
<u>Empty Weight C.G.</u>	See Flight Manual. (Record of Weight and Balance)			
<u>Datum.</u>	Wing leading edge at wing root			
<u>Leveling Means.</u>	Aft fuselage midline horizontal and Aft fuselage boom slope 1000:33 (tail down)			
<u>Maximum Weight.</u>	1653 lbs (750 Kg)			
<u>No. of Seats.</u>	Two, in front of datum, tandem position.			
<u>Maximum Baggage.</u>	33 lb (15 kg) 12.2 in. (310 mm) aft of datum.			
<u>Water Capacity.</u>	Each wing 21.2 U.S. gal (80 liter) 9.6 in. (243 mm) aft of datum			
<u>Control Surface Movements.</u>	Ailerons Up	2.52 ± 0.12 in. (64 ± 3 mm)		
	Down	1.26 ± 0.12 in. (32 ± 3 mm)		
	Measurement radius 6.54 in. (166 mm) from hinge line			

Elevator: Up 3.90 ± .04 in. (99 ± 1 mm)
 Down 3.58 ± .04 in. (91 ± 1 mm)
 Measurement radius 8.94 in. (227 mm) from hinge line

Rudder: 8.54 -.2 in. (217 - 5 mm) to the right and left.
 Measurement radius 16.5 in. (420 mm) from hinge line.
 Tolerance for rudder only - not +

Wing Flaps: Flap Setting - 10°
 Up: 1.57 ± .12 in (40 ± 3 mm)
 Flap setting 0°
 0 in. (0 mm)
 Flap setting L=15°
 Down: 2.32 ± .12 (59 ± 3 mm)
 Measurement radius 9.0 in. (228 mm) from hinge line

Serial Nos. Eligible.

See Import Requirement

Certification Basis.

- 1) FAR 21.23, 21.29 and 21.50 effective February 1, 1965 including Amendment 21-1 through 21-53.
- 2) Joint Airworthiness requirements for Sailplanes and Powered Sailplanes (JAR-22) Change 4 dated May 7, 1987.
- 3) Preliminary guideline for the stress analysis of glasfiber and carbonfiber reinforced plastic structures for sailplanes and powered sailplanes issued May 1986.
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The German civil airworthiness authority (LBA) originally type certificated this glider under its type certificate Number 348. The FAA validated this product under U.S. Type Certificate Number G08CE. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of Germany. The EASA TCDS number is EASA.A.233.

Import Requirements.

The FAA can issue a U.S. airworthiness certificate for an aircraft manufactured under a Production Organisation Approval (POA) or other prior production approval issued by the Luftfahrt Bundesamt (LBA) based on the following:

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5E186X36	1998	ELAN
5E198X42	1999	ELAN
5E201X46	1999	AMS
5E211X53	2000	AMS
5E215X55	2000	AMS

Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the glider for certification. In addition, the DG-500/22 Elan Flight Manual, LBA-approved dated December 1990, is required.

Service Information.

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by the Luftfahrt Bundesamt (LBA).

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- Structural repair manuals,
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NOTESNOTE 1.

Current weight and balance data together with 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.

NOTE 2.

The placards listed in items 2.19 of the LBA approved DG-500/22 Elan Flight Manual must be displayed.

NOTE 3.

Section 0. Airworthiness Limitations of the DG-500/22 Elan. Instructions for continued airworthiness, dated July 1990 is FAA-approved. It specifies mandatory replacement times, and structural repair procedures. These airworthiness limitations may not be changed without FAA approval.

NOTE 4.

All external portions of the glider exposed to sunlight must be painted white except the surfaces for the registration Nos. and anti-collision paint as specified by the manufacturer.

NOTE 5.

Major structural repairs must be accomplished at FAA certificated repair stations rated for composite aircraft structure work, or by a certified mechanic in accordance with DG Flugzeugbau GmbH repair methods approved by FAA.

NOTE 6.

Information essential for the proper operation, maintenance and Inspection of the glider is contained in the Model DG-500/22 Elan Flight Manual and Maintenance Manual.

IV. Model DG-500/20 Elan Glider, Utility Category, approved December 29, 1997

<u>Airspeed Limits (IAS).</u>	V _{NE} (never exceed)	168 mph	270 km/h	146 knots
	V _B (in rough air)	122 mph	197 km/h	106 knots
	V _A (maneuvering)	122 mph	197 km/h	106 knots
	V _{FE} (Wing flaps extended)			
	(+10°, +5°)	122 mph	197 km/h	106 knots
	(L=+15°)	93 mph	150 km/h	81 knots
	V _{LO} (Landing Gear landing)	122 mph	197 km/h	106 knots
	V _T (Aero-tow)	122 mph	197 km/h	106 knots
	V _W (Winch launch)	88 mph	140 km/h	76 knots

C.G. Range. 7.28 in. to 18.9 in. (185 mm to 480 mm) aft of datum.

Empty Weight C.G. See Flight Manual. (Record of Weight and Balance)

Datum. Wing leading edge at wing root

Leveling Means. Aft fuselage midline horizontal and Aft fuselage boom slope 1000:33 (tail down)

Maximum Weight. 1653 lbs (750 Kg)

No. of Seats. Two, in front of datum, tandem position.

Maximum Baggage. 33 lb (15 kg) 12.2 in. (310 mm) aft of datum.

Water Capacity. Each wing 21.2 U.S. gal (80 liter)
9.6 in. (243 mm) aft of datum

Control Surface Movements. Aileron at flap setting 0 degrees:
Up 2.52 ± 0.12 in. (64 ± 3 mm)
Down 1.26 ± 0.12 in. (32 ± 3 mm)
Measurement radius 6.54 in. (166 mm) from hinge line

Elevator: Up 3.90 ± .04 in. (99 ± 1 mm)
Down 3.58 ± .04 in. (91 ± 1 mm)
Measurement radius 8.94 in. (227 mm) from hinge line

Rudder: 8.54 -.2 in. (217 - 5 mm) to the right and left.
Measurement radius 16.5 in. (420 mm) from hinge line.
Tolerance for rudder only - not +

Wing Flaps: Flap Setting - 10°
Up: 1.57 ± .12 in (40 ± 3 mm)
Flap setting 0°
0 in. (0 mm)
Flap setting L=+15°
Down: 2.32 ± .12 (59 ± 3 mm)
Measurement radius 9.0 in. (228 mm) from hinge line

Serial Nos. Eligible. See Import Requirement

Certification Basis. 1) FAR 21.23, 21.29 and 21.50 effective February 1, 1965 including Amendment 21-1 through 21-53.

- 2) Joint Airworthiness requirements for Sailplanes and Powered Sailplanes (JAR-22) Change 4 dated May 7, 1987, including amendments 22/90/1, 22/91/1 and 22/92/1.
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5E211X53	2000	AMS
5E215X55	2000	AMS
5E221X59	2001	AMS

Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the glider for certification. In addition, the DG-500/20 Elan Flight Manual, LBA-approved dated June 1995, is required.

Service Information.

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by the Luftfahrt Bundesamt (LBA).

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NOTE 1.

Current weight and balance data together with 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.

NOTE 2.

The placards listed in items 2.19 of the LBA approved DG-500/20 Elan Flight Manual must be displayed.

NOTE 3.

Section 0. Airworthiness Limitations of the DG-500/20 Elan. Instructions for continued airworthiness, dated July 1990 is FAA-approved. It specifies mandatory replacement times, and structural repair procedures. These airworthiness limitations may not be changed without FAA approval.

NOTE 4.

All external portions of the glider exposed to sunlight must be painted white except the surfaces for the registration Nos. and anti-collision paint as specified by the manufacturer.

NOTE 5.

Major structural repairs must be accomplished at FAA certificated repair stations rated for composite aircraft structure work, or by a certified mechanic in accordance with DG Flugzeugbau GmbH repair methods approved by FAA.

NOTE 6.

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