

European Aviation Safety Agency

EASA TYPE-CERTIFICATE DATA SHEET

Diamond DV 20

Type Certificate Holder:

Diamond Aircraft Industries GmbH.

N.A. Otto-Strasse 5
2700 Wr. Neustadt
AUSTRIA

Manufacturer:

HOAC-AUSTRIA

Flugzeugwerk Wr. Neustadt GesmbH.
N.A. Otto-Strasse 5
2700 Wr. Neustadt
AUSTRIA

Diamond Aircraft Industries GmbH.

N.A. Otto-Strasse 5
2700 Wr. Neustadt
AUSTRIA

For models: **DV 20**
DV 20 E

Issue 03: Januar,25. 2016

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Change Record

SECTION 1 DV 20

A.I. General

1. a) Type: DV 20
b) Model: DV 20
2. Airworthiness Category: CS-VLA
3. Type Certificate Holder: Diamond Aircraft Industries GmbH.
N.A. Otto-Strasse 5
2700 Wr. Neustadt
AUSTRIA
DOA ref. EASA 21J.052
4. Manufacturer: Diamond Aircraft Industries GmbH.
N.A. Otto-Strasse 5
2700 Wr. Neustadt
AUSTRIA
5. EASA Certification Application Date: None (Prior to 28. September 2003, accepted under Regulation EC 1702/2003)
6. ACG Type Certification Date: 15. April 1993
7. EU Member States reference Type Certificates Austria: FZ 1/93
8. EASA Type Certificate Issue Date: 27. March 2009

A.II. Certification Basis

1. Reference Date for determining the applicable requirements: Accepted under Regulation EC 1702/2003
2. (Reserved)
3. (Reserved)
4. Certification Basis: The EASA Aircraft Type Certification standard includes that of ACG TCDS FZ 1/93, based on individual EU member state certification of this standard prior to 28. September 2003 using JAR-VLA as the applicable airworthiness requirement.
5. Airworthiness Requirements: JAR-VLA including Amendment VLA/92/1
6. Requirements elected to comply: None
7. Special Conditions: CRI A-09 Night VFR
8. (Reserved):
9. Equivalent Safety Findings: None

10. Environmental Standards: ICAO, Annex 16, Volume I, see EASA Type Certificate Data Sheet Noise TCDSN A.439

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Configuration - Drawing List dated 25.4.1993 including Design Changes ÄM 1 through 237 MÄM 20-239 and subsequent OÄM 20-238 and subsequent RÄM 20-001 and subsequent
2. Description: Single engine, two-seated cantilever low wing airplane, composite construction, fixed tricycle landing gear, T-tail
3. Equipment: see Equipment List, AFM. In addition a fire extinguisher and a fuel pipette acc. to AFM must be installed.
4. Dimensions:
- | | |
|-----------|---------------------|
| Span | 10.78 m |
| Length | 7.16 m |
| Height | 2.10 m |
| Wing Area | 11.6 m ² |
5. Engines: Rotax 912 A3 or 912 S3
EASA Engine TCDS No. E.121
see Note 5
- Engine Limits (prop r.p.m)
- | | |
|---------------------------------|-------------|
| Model with engine Rotax 912 A3 | |
| Max take-off rotational speed | 2550 r.p.m. |
| Max continuous rotational speed | 2420 r.p.m. |
| Propeller reduction | 1:2.2727 |
| Model with engine Rotax 912 S3 | |
| Max take-off rotational speed | 2385 r.p.m. |
| Max continuous rotational speed | 2260 r.p.m. |
| Propeller reduction | 1:2.43 |
- For power-plants limits, refer to AFM.
6. (Reserved)
7. Propellers: Model with engine Rotax 912 A3
Hoffmann HO-V72F/S170DW
LBA TCDS 32.130/19
or
Hoffmann HO-V352F/170FQ or
Hoffmann HO-V352F/C170FQ
LBA TCDS No. 32.130/88
or
MT-Propeller MTV-21-A/175-05
LBA TCDS 32.130/86
See Note 4
- Model with engine Rotax 912 S3
Hoffmann HO-V352F/170FQ or

Hoffmann HO-V352F/C170FQ
LBA TCDS No. 32.130/88

- Propeller limits: for Hoffmann Propeller; Diameter
Maximum: 1700 + 0 mm
Minimum: 1700 – 10 mm
- For mt-Propeller; Diameter
Maximum: 1750 + 0 mm
Minimum: 1750 – 0 mm
8. Fluids:
Fuel: AVGAS 100LL or
Unleaded Automotive Fuel 95 RON / 91 AKI
(Specification EN 228)
- See AFM for approved fuel grades.
- Oil: See AFM for approved oil types and grades.
9. Fluid capacities:
Fuel: Usable: 77 litres
Total: 79 litres
- Oil: Minimum: 2.5 litres
Maximum: 3.0 litres
10. Air Speeds:
Design Manoeuvring Speed v_A : 193 km/h (104 KCAS)
Flap Extended Speed v_{FE} : 150 km/h (81 KCAS)
Maximum structural cruising speed v_{NO} : 215 km/h (116 KCAS)
Never exceed speed v_{NE} : 291 km/h (157 KCAS)
11. All-weather Capability: Day/Night-VFR (see note 6)
12. Maximum Masses: Take-Off 730 kg
Landing 730 kg
13. Centre of Gravity Range:
Forward limit (for all masses): 250 mm behind Datum
Rear limit (for all masses): 390 mm behind Datum
14. Datum: tangent to the leading edge of the wing at the root rib
15. (reserved)
16. Levelling Means: Wedge 52:1000, 500 mm (19.69 in) in front of the rudder fin.
17. Minimum Flight Crew: 1 (Pilot)
18. Maximum Passenger Seating Capacity: 1
19. (Reserved)
20. Baggage / Cargo Compartments: Max. allowable load
20 kg only permissible with baggage harness

21. Wheels and Tyres
Nose Wheel Tyre Size
Main Wheel Tyre Size

300x100/4.00 - 4 or 5.00 - 4
380x150/ 15 x 6.00-5

For approved types and rating, refer to AFM.

A.IV. Operating and Service Instructions

- | | |
|---|--|
| 1. Airplane Flight Manual (AFM)
See Note 3 | Model with engine Rotax 912 A3
Document No. 4.01.01 |
| | Model with engine Rotax 912 S3
Document No. 4.01.20 |
| 2. Airplane Maintenance Manual (AMM)
(incl. Airworthiness Limitations) | Document No. 4.02.02 |
| 3. Service Informations, Service Bulletins and Services Letters | |
| 4. Life Limited Parts | as listed in AMM |

A.V. Notes

1. This certification applies to SNo. 20003, 20005 to 20160 for production at HOAC Austria, SNo. 20200 and subsequent for production at Diamond Austria.

SNo. 20003 has approved deviations from the original type design according to Diamond Doc. 4.07.200 Chpt.1 und Doc.No.4.07.200 Chpt.2. and AFM Supplement No. 4 dated 20.April 1998.
2. Any structural part must be painted white, except in the area of the registration marks and decorative painting areas according to the AMM.
3. Master Manual is the approved German Version, in addition approved English Version is available.
4. For the propeller MTV-21-A/175-05, AFM Supplement 5 dated 20.December 1998 applies.
5. The retrofit installation of the Rotax 912 S3 engine is approved with SB 20-37.
6. Night VFR is approved for SNo. 20200 and up, when the engine Rotax 912 S3 and design change OÄM 20-267/b or higher is installed. AFM Supplement O01 applies.

SECTION 2 DV 20 E

B.I. General

- | | |
|---|---|
| 1. a) Type: | DV 20 |
| b) Model: | DV 20 E |
| 2. Airworthiness Category: | CS-VLA |
| 3. Type Certificate Holder: | Diamond Aircraft Industries GmbH.
N.A. Otto-Strasse 5
2700 Wr. Neustadt
AUSTRIA
DOA ref. EASA 21J.052 |
| 4. Manufacturer: | Diamond Aircraft Industries GmbH.
N.A. Otto-Strasse 5
2700 Wr. Neustadt
AUSTRIA
PO ref. AT.21.G 0001 |
| 5. EASA Certification Application Date: | 22-Dec-2014 |
| 6. EASA Type Certificate Issue Date: | 25-Jan-2016 |

B.II. Certification Basis

- | | |
|--|--|
| 1. Reference Date for determining the applicable requirements: | 15-Apr-1993 (accepted under EC 1702/2003, determining JAR-VLA incl. Amdt. VLA/92/1 dated 1.1.1992 as applicable requirement) |
| 2. Airworthiness Requirements: | CS-VLA incl. Amendment 1 |
| 3. Requirements elected to comply: | CS-VLA incl. Amendment 1
CS 23.701 |
| 4. Special Conditions: | CRI A-09 Night VFR
CRI A-07 MTOM 800 kg
CRI B-01 Intentional Spinning |
| 5. Equivalent Safety Findings: | CRI E-01 Fuel Pumps
CRI A-08 NVFR with MTOM 800 kg |
| 6. Environmental Standards: | CS 36 Amendment 3, ICAO, Annex 16, Volume I, see EASA Type Certificate Data Sheet Noise TCDSN A.439 |

B.III. Technical Characteristics and Operational Limitations

- | | |
|----------------------------|---|
| 1. Type Design Definition: | Doc. No. 4.07.00, Chapter V002/7 Rev. 5 or later approved revisions |
|----------------------------|---|

2. Description: Single engine, two-seated cantilever low wing airplane, composite construction, fixed tricycle landing gear, T-tail
3. Equipment: see Equipment List, AFM Chapter 6.
4. Dimensions:
- | | |
|-----------|---------------------|
| Span | 10.87 m |
| Length | 7.15 m |
| Height | 2.10 m |
| Wing Area | 11.6 m ² |
5. Engines: Rotax 912 iSc3 Sport
EASA Engine TCDS No. E.121
- Engine Limits
- | | |
|---------------------------------|-------------|
| Max take-off rotational speed | 5800 r.p.m. |
| Max continuous rotational speed | 5500 r.p.m. |
| Propeller reduction | 1:2.43 |
- For power-plants limits, refer to AFM.
6. (Reserved)
8. Propellers: MT-Propeller MTV-21-A/175-05
LBA TCDS 32.130/86
- Propeller limits: Maximum: 1750 + 0 mm
Minimum: 1750 – 0 mm
- Propeller Pitch Settings: 14,5° low pitch
30° high pitch
9. Fluids:
- Fuel: AVGAS 100LL (ASTM D910) or
Unleaded Automotive Fuel min 95 RON / 91
AKI (EN 228)
see AFM for all approved fuel grades.
- Oil: API SG or higher motorcycle oil of registered
brand with gear additive
see AFM for all approved oil types / grades.
- Coolant: Water/Glycol Coolant mixture ratio 1:1
see AFM for all approved coolant types
10. Fluid capacities:
- Fuel: Usable: 93 litres
Total: 84 litres
- Oil: Minimum: 3.0 litres
Maximum: 3.4 litres
- Coolant closed loop coolant system
11. Air Speeds:
- | | |
|--|---------------------|
| Design Manoeuvring Speed v_A : | 206 km/h (111 KIAS) |
| Flap Extended Speed v_{FE} : | 150 km/h (81 KCAS) |
| Maximum structural cruising speed v_{NO} : | 223 km/h (121 KCAS) |
| Never exceed speed v_{NE} : | 294 km/h (159 KCAS) |

12. All-weather Capability:	Day/Night-VFR
13. Maximum Masses:	Take-Off 800 kg Landing 800 kg
14. Centre of Gravity Range:	
Forward limit (for all masses):	240 mm behind Datum
Rear limit (for all masses):	370 mm behind Datum
15. Datum:	tangent to the leading edge of the wing at the root rib
16. Levelling Means:	Wedge 56:1000, 2000 mm aft of the canopy.
17. Minimum Flight Crew:	1 (Pilot)
18. Maximum Passenger Seating Capacity:	1
19. (Reserved)	
20. Baggage / Cargo Compartments:	20 kg
21. Wheels and Tyres	
Nose Wheel Tyre Size	5.00 – 4
Main Wheel Tyre Size	5.00 – 5

For approved types and rating, refer to AMM.

B.IV. Operating and Service Instructions

1. Airplane Flight Manual (AFM) Document No. 4.01.25-E
2. Airplane Maintenance Manual (AMM)
(incl. Airworthiness Limitations) Document No. 4.02.25
3. Service Informations, Service Bulletins and Services Letters
4. Life Limited Parts as listed in AMM

B.V. Notes

1. This certification applies to SNo.20.E001 and subsequent.
2. Any structural part must be painted white, except in the areas with the limitations as specified in the AMM.
3. For approved software/firmware of the engine, EMU and avionic systems for installation in the DV 20 E: See MSB 20E-002.

Change Record

Issue	Date	Changes
Issue 1	27. Mar 2009	Initial Issue; Transfer from Austrian TCDS FZ 1/93 Production by Diamond Aircraft Industries GmbH.
Issue 2	4.Feb 2013	Major Change OAM 20-267/b Night VFR, EASA Project 0010013127
Issue 3	25-Jan-2016	New Variant DV 20 E, EASA Project 0010035261 Section 2 added