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
CONTENT

SECTION 1:       DV 20

A.I.       General
A.II.      Certification Basis
A.III.     Technical Characteristics and Operational Limitations
A.IV.      Operating and Service Instructions
A.V.       Notes

SECTION 2:       DV 20 E

B.I.       General
B.II.      Certification Basis
B.III.     Technical Characteristics and Operational Limitations
B.IV.      Operating and Service Instructions
B.V.       Notes

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
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 m²

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)
   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)


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  300x100/4.00 - 4 or 5.00 - 4
   Main Wheel Tyre Size  380x150/ 15 x 6.00-5

   For approved types and rating, refer to AFM.

A.IV. Operating and Service Instructions

   See Note 3  Document No. 4.01.01

2. Airplane Maintenance Manual (AMM)  Model with engine Rotax 912 S3
   (incl. Airworthiness Limitations)  Document No. 4.01.20

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.


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.


4. Dimensions:

- Span: 10.87 m
- Length: 7.15 m
- Height: 2.10 m
- Wing Area: 11.6 m²

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


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

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue 1</td>
<td>27. Mar 2009</td>
<td>Initial Issue; Transfer from Austrian TCDS FZ 1/93 Production by Diamond Aircraft Industries GmbH.</td>
</tr>
<tr>
<td>Issue 3</td>
<td>25-Jan-2016</td>
<td>New Variant DV 20 E, EASA Project 0010035261 Section 2 added</td>
</tr>
</tbody>
</table>