



**AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL**

**TYPE CERTIFICATE DATA SHEET Nº EA-2008T04**

Type Certificate Holder:

**DIAMOND AIRCRAFT INDUSTRIES GmbH**  
N. A. Otto-Str.5  
A-2700 Wiener Neustadt  
**AUSTRIA**

EA-2008T04  
Sheet 01

DIAMOND

DA 40  
DA 40F

05 November 2008

This data sheet, which is part of Type Certificate No. 2008T04, 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 DA 40 (Normal and Utility Category), approved 05 November 2008.**

<b>ENGINE</b>	Textron Lycoming IO-360-M1A, (EM 8207)
<b>FUEL</b>	100LL minimum grade aviation gasoline.
<b>ENGINE LIMITS</b>	Maximum Take-Off, 2700 rpm. Continuous Operation, 2400 rpm.
<b>PROPELLER AND PROPELLER LIMITS</b>	MT-Propeller MTV-12-B/180-17( ), EH 2005-T06. ( ) – designations: none or f Diameter: 1800 mm +0 mm -50mm (70.9 in +0 in – 2 in) Low Pitch 10.5° High Pitch 30°
<b>AIRSPEED LIMITS (CAS)</b>	Maximum Never Exceed Speed (Vne): 173 kcas Maximum Structural Cruising Speed (Vno): 128 kcas Design Cruising Speed (Vc): 128 kcas Maneuvering Speed (Va) (up to 980 kg (2 161 lb)) 97 kcas (Va) (up to 1 150 kg (2 535 lb)) 109 kcas Flaps extended (Vfe) - Full flap: 94 kcas - Take-off flap: 109 kcas
<b>CG RANGE</b>	Forward CG position (aft of datum): Up to 980 kg (2 161 lb) 2.4 m (94.5 in) at 1 150 kg (2 535 lb) 2.46 m (96.8 in) at 1 200 kg (2 646 lb) 2.48 m (97.6 in) Varying Linearly with weight between Rearward CG position (aft of datum) With standard fuel tank 2.59 m (102.0 in) With long range fuel tank 2.55 m (100.4 in)

<b>CG RANGE</b> (Empty weight)	None		
<b>DATUM</b>	2.194 m (86.4 in) in front of leading edge of stub-wing at the wing joint.		
<b>LEVELING MEANS</b>	Wedge 600:31 top surface of fuselage tube in front of dorsal fin.		
<b>MAXIMUM WEIGHT</b>	Takeoff (Utility category):	980 kg (2 161 lb)	
	Takeoff (Normal category):	1 150 kg (2 535 lb)	
	Takeoff (Normal Category):	1 200 kg (2 646 lb)	see NOTE 13
	Landing:	1 092 kg (2 407 lb)	
		1 150 kg (2 535 lb)	see NOTE 10
<b>MINIMUM CREW</b>	1		
<b>MAXIMUM PASSENGERS</b>	3 (Seats 4)		
<b>MAXIMUM BAGGAGE</b>	Behind Rear seats	30 kg (66.14 lb)	
	Baggage Tube	5 kg (11.02 lb)	
	With baggage Extension	45 kg (100 lb)	see NOTE 8
<b>FUEL CAPACITY</b>	With standard fuel tank	156 l (41.2 gal) total	
		152 l (40.2 gal) usable	
	With long range fuel tank	193 l (51.0 gal) total	
		189.2 l (50.0 gal) usable	
<b>OIL CAPACITY</b>	Maximum 7.7 l (8 qts) Minimum 3.785 l (4 qts) (see NOTE 1)		
<b>MAXIMUM OPERATING ALTITUDE</b>	5 000 m (16 404 ft)		
<b>CONTROL SURFACE MOVEMENTS</b>	Elevator:	Trailing edge up	Trailing edge down
	With Standard fuel tank	23° ±1°	15° ±1°
	Elevator:	Trailing edge up	Trailing edge down
	With Long Range fuel tank	23° +0°, -1°	16° +1°, -0°
	Elevator:	Trailing edge up	Trailing edge down
	With Standard or Long Range fuel tank (see NOTE 13)	18° +0°, -1°	16° +1°, -0°
	Elevator trim tab: S/N 40.006 to 40.044 (except 40.030)	Nose up 18° ±2°	Nose down 33° ±2°
	Elevator trim tab: S/N 40.030 and 40.045 and subsequent	Nose up 12° ±2°	Nose down 39° ±2°
	Rudder with standard fuel tank	Right 31° ±2°	Left 29° ±1°
	Rudder with long range fuel tank	Right 26° ±1°	Left 24° ±1°
	Rudder MAM 40-113 installed (see NOTE 9)	Right 26° ±1°	Left 24° ±1°

**CONTROL SURFACE  
MOVEMENTS**

Aileron:	Trailing edge up	Trailing edge down
	$20^{\circ} \pm 2^{\circ}$	$13^{\circ} +2^{\circ}, -0^{\circ}$
Takeoff flaps setting:	$20^{\circ} \pm 2^{\circ}$	
Landing flaps setting:	$42^{\circ} \pm 1^{\circ}$	

**SERIAL NUMBER ELIGIBLE**

- a) For aircraft produced at Diamond Aircraft Industries GmbH, N. A Otto-str. 5, A-2700 Wiener-Neustadt Austria, eligible serial numbers are 40.006 to 40.200.
- b) For aircraft produced at Diamond Aircraft Industries Inc. 1560 Crumlim Sideroad, London, Ontario, N5V 1S2 Canada, eligible serial numbers are 40.201 and subsequent.

**IMPORT ELIGIBILITY**

For aircraft produced in Austria, a Brazilian Certificate of Airworthiness may be issued on the basis of on 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. 2008T04 and in condition of safe operation”.

For aircraft produced in Canada, a Brazilian Certificate of Airworthiness may be issued on the basis of on a TCCA 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. 2008T04 and in condition of safe operation”.

The ANAC Report H.10-2160-00, dated 05 November 2008 or further revisions, contains the Brazilian requirements for the acceptance of these airplanes. (See NOTE 4)

**CERTIFICATION BASIS**

Brazilian Type Certificate No. 2008T04 issued on 05 November 2008 based on the RBHA 21.29, as amended by 21-1 through 21-05, including the following requirements.

RBHA 23 Brazilian Requirements for Aeronautical Certification, which endorses the 14 CFR Part 23 effective 1 February 1965, as amended by 23-1 through 23-51.

Special Conditions:

23-107-SC applicable to the model DA40 for Protection of Systems for HIRF, published on 7 June 2001.

Equivalent levels of safety findings:

ACE-03-01 to RBHA/14 CFR 23.1337(b), for auxiliary fuel level indication system is applicable to de Model DA40 equipped with long range fuel tanks per Optional Design Change OAM 40-071c (ref. Note 7).

Noise requirements:

14 CFR Part 36 effective 1 December 1969, including Amendments 36-1 through amendment 36-21.

**REQUIRED EQUIPMENT**

The basic required equipment, as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane.

**NOTES:****NOTE 1****Weight and balance.**

A current weight and balance report including list of equipment included in the certificated empty weight and loading instructions when necessary, must be provided for each aircraft at the time of original certification.

The certification empty weight and corresponding center of gravity location must include full oil, coolant and unusable fuel.

**NOTE 2**

**Markings and placards.** The placards specified in the approved Aircraft Flight Manual, including the placards in Portuguese specified in the Aircraft Flight Manual Supplement N023 must be displayed.

**NOTE 3****Continuing Airworthiness.**

Instruction for Continued Airworthiness and Service Life Limited components is included in the Maintenance Manual Document No. 6.02.01. Revisions to Airworthiness limitation must be approved by EASA.

**NOTE 4**

The differences of the Brazilian airplanes in relation to the basic EASA type design are summarized below:

1. The Brazilian Airplane Flight Manual Cover Page
2. Markings and placards listed in Aircraft Flight Manual Supplement N023

**NOTE 5**

Exterior color is limited to that specified in Document No. 6.02.01.

**NOTE 6**

Major structural repairs must be accomplished at ANAC certified repair stations rated for composite aircraft structure work, in accordance with EASA approved Diamond repair methods or other methods approved by the ANAC.

**NOTE 7**

Optional design change OÄM 40-071c, long range fuel tank, approved for Serial Number 40.030 and subsequent.

**NOTE 8**

The increased baggage load is applicable if the baggage extension, Optional design change OÄM 40-163, is installed.

**NOTE 9**

If Mandatory Design Change MÄM 40-113 has been accomplished, the rudder and rudder deflections are the same as those listed for the long range fuel tank.

**NOTE 10**

The landing mass 1 150 kg (2 535 lb) is only approved with Mandatory Design Change MÄM 40-123 installed.

**NOTE 11**

For Night VFR Operation the Optional Design Change OÄM 40-064 must be installed.

**NOTE 12**

For IFR Operation the Optional Design Change OÄM 40-067 must be installed.

**NOTE 13**

The maximum takeoff mass of 1 200 kg (2 646 lb) is only approved if Mandatory Design Change MÄM 40-227 1 200 kg (2 646 lb) Maximum Takeoff mass and MÄM 40-123 1 150 kg (2 535 lb) Maximum Landing Mass are installed. Flight Manual temporary revision TR-MÄM-40-227 or later approved of DA 40 Airplane Flight Manual Document No. 6.01.01-E where this TR has been incorporated is required.

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**II - Model DA 40 F(Normal and Utility Category), approved 05 November 2008.**

<b>ENGINE</b>	Textron Lycoming O-360-A4M, (EM-8206)	
<b>FUEL</b>	100LL minimum grade aviation gasoline.	
<b>ENGINE LIMITS</b>	Maximum Take-Off, 2700 rpm. Continuous Operation, 2400 rpm.	
<b>PROPELLER AND PROPELLER LIMITS</b>	Sensenich Propeller 76EM8S10-0-63, EH 9809.	
<b>AIRSPEED LIMITS (CAS)</b>	Maximum Never Exceed Speed (Vne):	173 kcas
	Maximum Structural Cruising Speed (Vno):	128 kcas
	Design Cruising Speed (Vc):	128 kcas
	Maneuvering Speed (Va) (up to 980 kg (2 161 lb))	97 kcas
	(Va) (up to 1 150 kg (2 535 lb))	109 kcas
	Flaps extended (Vfe)	
	- Full flap:	94 kcas
	- Take-off flap:	109 kcas
<b>CG RANGE</b>	Forward CG position (aft of datum):	
	Up to 980 kg (2 161 lb)	2.4 m (94.5 in)
	at 1 150 kg (2 535 lb)	2.46 m (96.8 in)
	Varying Linearly with weight between	
	Rearward CG position (aft of datum)	
	With standard fuel tank	2.59 m (102.0 in)
	With long range fuel tank	2.55 m (100.4 in)
<b>CG RANGE (Empty weight)</b>	None	
<b>DATUM</b>	2.194 m (86.4 in) in front of leading edge of stub-wing at the wing joint.	
<b>LEVELING MEANS</b>	Wedge 600:31 top surface of fuselage tube in front of dorsal fin.	
<b>MAXIMUM WEIGHT</b>	Takeoff (Utility category):	980 kg (2 161 lb)
	Takeoff (Normal category):	1 150 kg (2 535 lb)
	Landing:	1 150 kg (2 535 lb)
<b>MINIMUM CREW</b>	1	
<b>MAXIMUM PASSENGERS</b>	3 (Seats 4)	
<b>MAXIMUM BAGGAGE</b>	Behind Rear seats	30 kg (66.14 lb)
	Baggage Tube	5 kg (11.02 lb)
	With baggage Extension	45 kg (100 lb) see NOTE 8

<b>FUEL CAPACITY</b>	With standard fuel tank	156 l (41.2 gal) total 152 l (40.2 gal) usable
	With long range fuel tank	193 l (51.0 gal) total 189.2 l (50.0 gal) usable
<b>OIL CAPACITY</b>	Maximum 7.7 l (8 qts) Minimum 3.785 l (4 qts) see NOTE 1	
<b>MAXIMUM OPERATING ALTITUDE</b>	5 000 m (16 404 ft)	
<b>CONTROL SURFACE MOVEMENTS</b>	Elevator:	Trailing edge up    Trailing edge down
	With Standard fuel tank	23° ±1°                15° ±1°
	Elevator:	Trailing edge up    Trailing edge down
	With Long Range fuel tank	23° +0°, -1°        16° +1°, -0°
	Elevator:	Trailing edge up    Trailing edge down
	With Standard fuel tank for intentional spinning (see NOTE 9)	21° ±0,5°            18° ±0,5°
	Elevator trim tab:	Nose up 12° ±2°    Nose down 39° ±2°
	Rudder	Right 26° ±1°        Left 24° ±1°
	Aileron:	Trailing edge up    Trailing edge down 13° +2°, -0°
	Takeoff flaps setting:	20° ± 2°
	Landing flaps setting:	42° ± 1°
<b>SERIAL NUMBER ELIGIBLE</b>	<p>a) For aircraft produced at Diamond Aircraft Industries GmbH, N. A Otto-str. 5, A-2700 Wiener-Neustadt Austria, eligible serial numbers are 40.F001 and subsequent.</p> <p>b) For aircraft produced at Diamond Aircraft Industries Inc. 1560 Crumlim Sideroad, London, Ontario, N5V 1S2 Canada, eligible serial number are 40.FC001 and subsequent.</p>	
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- NOTE 7** Optional Design Change OÄM 40-071c, long range fuel tank, approved for Serial Number 40.F001 and subsequent and 40.FC001 and subsequent.
- NOTE 8** The increased baggage load is applicable if the baggage extension, Optional Design Change OÄM 40-163, is installed.
- NOTE 9** The intentional spinning is not allowed.

**HÉLIO TARQUINIO JÚNIOR**

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(Acting Manager, Aeronautical Product Certification)**

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