

TYPE CERTIFICATE DATA SHEET № 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.

ENGINE	Textron Lycoming IO-360-M1A, (EM 8207)			
FUEL	100LL minimum grade aviation gasoline.			
ENGINE LIMITS	Maximum Take-Off, 2700 rpm. Continuous Operation, 2400 rpm.			
PROPELLER AND PROPELLER LIMITS	MT-Propeller MTV-12-B/180-17(), EH 2005-T06. () – designations: none or f			
	Diameter: Low Pitch High Pitch	1800 mm +0 mm -50mm (70.9 in +0 in – 2 i 10.5° 30°		n – 2 in)
AIRSPEED LIMITS (CAS)	Maximum Neve Maximum Struc Design Cruising Maneuvering Sp Flaps extended - Full flap: - Take-off flap:	Maximum Never Exceed Speed (Vne): Maximum Structural Cruising Speed (Vno): Design Cruising Speed (Vc): Maneuvering Speed (Va) (up to 980 kg (2 161 lb)) (Va) (up to 1 150 kg (2 535 lb)) Flaps extended (Vfe) Full flap: Take-off flap:		173 kcas 128 kcas 128 kcas 97 kcas 109 kcas 94 kcas 109 kcas
CG RANGE	Forward CG pos Up to 980 kg (2 at 1 150 kg (2 5 at 1 200 kg (2 6 Varying Linearly Rearward CG p With standard fu With long range	sition (aft of datum 161 lb) 35 lb) 46 lb) 7 with weight betwe osition (aft of datur Jel tank fuel tank): 2.4 m (94.5 in) 2.46 m (96.8 in) 2.48 m (97.6 in) een m) 2.59 m (102.0 in) 2.55 m (100.4 in)	

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

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CG RANGE (Empty weight)	None			
DATUM	2.194 m (86.4 in) in front of leading edge of stub-wing at the wing joint.			
LEVELING MEANS	Wedge 600:31 top surface of fuselage tube in front of dorsal fin.			
MAXIMUM WEIGHT	Takeoff (Utility category): Takeoff (Normal category): Takeoff (Normal Category) Landing:	980 kg (2 161 lb 1 150 kg (2 535 1 200 kg (2 646 1 092 kg (2 407 1 150 kg (2 535) lb) lb) see NOTE 13 lb) lb) see NOTE 10	
MINIMUM CREW	1			
MAXIMUM PASSENGERS	3 (Seats 4)			
MAXIMUM BAGGAGE	Behind Rear seats Baggage Tube With baggage Extension	30 kg (66. 5 kg (11.02 45 kg (100	14 lb) 2 lb) 9 lb) see NOTE 8	
FUEL CAPACITY	With standard fuel tank	156 I (41.2	gal) total	
	With long range fuel tank	1521 (40.2 193 (51.0 189.2 (50	2 gal) usable 9 gal) total 9.0 gal) usable	
OIL CAPACITY	Maximum 7.7 I (8 qts) Minimum 3.785 I (4 qts) (see NOTE 1)			
MAXIMUM OPERATING ALTITUDE	5 000 m (16 404 ft)			
CONTROL SURFACE MOVEMENTS	Elevator: With Standard fuel tank Elevator: With Long Range fuel tank Elevator: With Standard or Long Range fuel tank (see NOTE 13) Elevator trim tab: S/N 40.006 to 40.044 (except 40.030)	Trailing edge up $23^{\circ} \pm 1^{\circ}$ Trailing edge up $23^{\circ} +0^{\circ}, -1^{\circ}$ Trailing edge up $18^{\circ} +0^{\circ}, -1^{\circ}$ Nose up $18^{\circ} \pm 2^{\circ}$	Trailing edge down $15^{\circ} \pm 1^{\circ}$ Trailing edge down $16^{\circ} + 1^{\circ}, -0^{\circ}$ Trailing edge down $16^{\circ} + 1^{\circ}, -0^{\circ}$ Nose down $33^{\circ} \pm 2^{\circ}$	
	Elevator trim tab: S/N 40.030 and 40.045 and subsequent	Nose up $12^{\circ} \pm 2^{\circ}$	Nose down 39° $\pm 2^\circ$	
	Rudder with standard fuel tank Rudder with long range fuel tank Rudder MÄM 40-113 installed (see NOTE 9)	Right 31° ±2°	Left 29° ±1°	
		Right 26° ±1°	Left 24° ±1°	
		Right 26° ±1°	Left 24° ±1°	

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CONTROL SURFACE MOVEMENTS	Aileron: Takeoff flaps setting:	Trailing edge up $20^{\circ} \pm 2^{\circ}$ $20^{\circ} \pm 2^{\circ}$ $42^{\circ} \pm 1^{\circ}$	Trailing edge down 13° +2°, -0°
SERIAL NUMBER ELIGIBLE	 a) For aircraft produced a A Otto-str. 5, A-2700 numbers are 40.006 to b) For aircraft produced a Crumlim Sideroad, Lon serial numbers are 40.2 	42 ± 1 Miener-Neustadt A 40.200. At Diamond Aircraft Idon, Ontario, N5V 201 and subsequen	Industries GmbH, N. Austria, eligible serial t Industries Inc. 1560 1S2 Canada, eligible it.
IMPORT ELIGIBILITY	For aircraft produced in Airworthiness may be issue Certificate on Airworthiness Airworthiness, in case of u including the following state "The aircraft covered be tested and found to be in type design as defined 2008T04 and in condition For aircraft produced in Airworthiness may be issue Certificate on Airworthiness Airworthiness, in case of u including the following state "The aircraft covered be tested and found to be in type design as defined 2008T04 and in condition The ANAC Report H.10-2 further revisions, contain acceptance of these airpla	n Austria, a Bra led on the basis of s (or a third country sed aircraft importe ement: by this certificate n conformity with th by the Brazilian n of safe operation' canada, a Bra led on the basis of s (or a third country sed aircraft importe ement: by this certificate n conformity with th by the Brazilian n of safe operation' 2160-00, dated 05 is the Brazilian r nes. (See NOTE 4	azilian Certificate of f on an EASA Export y Export Certificate on ed from such country), has been inspected, ne Brazilian approved Type Certificate No. azilian Certificate of of on a TCCA Export y Export Certificate on ed from such country), has been inspected, ne Brazilian approved Type Certificate No. 5 November 2008 or equirements for the)
CERTIFICATION BASIS	Brazilian Type Certificate N 2008 based on the RBHA 05, including the following RBHA 23 Brazilian Require which endorses the 14 CF amended by 23-1 through Special Conditions: 23-107-SC applicable to th for HIRF, published on 7 J Equivalent levels of safety ACE-03-01 to RBHA/14 (0 indication system is applied long range fuel tanks per (ref. Note 7). Noise requirements: 14 CFR Part 36 effect Amendments 36-1 through	No. 2008T04 issued 21.29, as amended requirements. ements for Aeronau R Part 23 effective 23-51. the model DA40 for R une 2001. findings: CFR 23.1337(b), for cable to de Model Optional Design C ective 1 Decembre amendment 36-21	d on 05 November d by 21-1 through 21- utical Certification, 1 February 1965, as Protection of Systems or auxiliary fuel level DA40 equipped with hange OÄM 40-071c

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** <u>Markings and placards</u>. 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** <u>Continuing Airworthiness</u>. 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.

II - Model DA 40 F(Normal and Ut	ility Category), approved ()5 November	2008.
ENGINE	Textron Lycoming O-360-A4M, (EM-8206)		
FUEL	100LL minimum grade aviation gasoline.		
ENGINE LIMITS	Maximum Take-Off, 2700 rpm. Continuous Operation, 2400 rpm.		
PROPELLER AND PROPELLER LIMITS	Sensenich Propeller 76EM	8S10-0-63, E⊦	I 9809.
AIRSPEED LIMITS (CAS)	Maximum Never Exceed S Maximum Structural Cruisii (Vno): Design Cruising Speed (Vo Maneuvering Speed (Va) ((2 167 (Va) (kg (2 Flaps extended (Vfe) - Full flap: - Take-off flap:	peed (Vne): ng Speed :): up to 980 kg I lb)) up to 1 150 535 lb))	173 kcas 128 kcas 97 kcas 109 kcas 94 kcas 109 kcas
CG RANGE	Forward CG position (aft or Up to 980 kg (2 161 lb) at 1 150 kg (2 535 lb) Varying Linearly with weigh Rearward CG position (aft With standard fuel tank With long range fuel tank	f datum): 2.4 m 2.46 m nt between of datum) 2.59 m 2.55 m	(94.5 in) n (96.8 in) n (102.0 in) n (100.4 in)
CG RANGE (Empty weight)	None		
DATUM	2.194 m (86.4 in) in front of leading edge of stub-wing at the wing joint.		
LEVELING MEANS	Wedge 600:31 top surface of fuselage tube in front of dorsal fin.		
MAXIMUM WEIGHT	Takeoff (Utility category): Takeoff (Normal category): Landing:	980 kg (2 16 1 150 kg (2 5 1 150 kg (2 5	1 lb) 535 lb) 535 lb)
MINIMUM CREW	1		
MAXIMUM PASSENGERS	3 (Seats 4)		
MAXIMUM BAGGAGE	Behind Rear seats Baggage Tube With baggage Extension	30 kg (66.14 5 kg (11.02 45 kg (100 l	4 lb) lb) b) see NOTE 8

DIAMOND	05 November 2008	EA-2008T04	Sheet 6/8	
FUEL CAPACITY	With standard fuel tank	156 (41.2 gal) total 152 (40.2 gal) usable 193 (51.0 gal) total 189.2 (50.0 gal) usable		
	With long range fuel tank			
OIL CAPACITY	Maximum 7.7 I (8 qts) Minimum 3.785 I (4 qts) see NOTE 1			
MAXIMUM OPERATING ALTITUDE	5 000 m (16 404 ft)			
CONTROL SURFACE MOVEMENTS	Elevator: With Standard fuel tank Elevator: With Long Range fuel tank Elevator: With Standard fuel tank for intentional spinning (see NOTE 9)	Trailing edge up $23^{\circ} \pm 1^{\circ}$ Trailing edge up $23^{\circ} + 0^{\circ}$, -1° Trailing edge up $21^{\circ} \pm 0,5^{\circ}$	Trailing edge down $15^{\circ} \pm 1^{\circ}$ Trailing edge down $16^{\circ} + 1^{\circ}, -0^{\circ}$ Trailing edge down $18^{\circ} \pm 0,5^{\circ}$	
	Elevator trim tab: Rudder Aileron:	Nose up $12^{\circ} \pm 2^{\circ}$ Right $26^{\circ} \pm 1^{\circ}$ Trailing edge up $20^{\circ} \pm 2^{\circ}$	Nose down $39^\circ \pm 2^\circ$ Left $24^\circ \pm 1^\circ$ Trailing edge	
	Takeoff flaps setting: Landing flaps setting:	20° ± 2° 42° ± 1°	down 10 12, 0	
SERIAL NUMBER ELIGIBLE	 a) For aircraft produced a N. A Otto-str. 5, A-2700 numbers are 40.F001 ar b) For aircraft produced at Crumlim Sideroad, Lond serial number are 40.FC 	at Diamond Aircraf Wiener-Neustadt A nd subsequent. Diamond Aircraft Ion, Ontario, N5V 1 001 and subseque	ft Industries GmbH, Austria, eligible serial Industries Inc. 1560 IS2 Canada, eligible nt.	
IMPORT ELIGIBILITY	For aircraft produced in Austria, a Brazilian Certificate Airworthiness may be issued on the basis of on an EASA Ex Certificate on Airworthiness (or a third country Export Certificate Airworthiness, in case of used aircraft imported from such cour 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 further revisions, contains the Brazilian acceptance of these airplanes. (See NOTI			November 2008 or equirements for the	

05 November 2008

CERTIFICATION BASIS Brazilian Type Certificate No. 2008T04 issued on 05 Nov. 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 OÄM 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** <u>Markings and placards</u>. 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.
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- **NOTE 4** The differences of the Brazilian airplanes in relation to the basic EASA type design are summarized below:
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- **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.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.

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HELIO TARQUIMIO JUNIOR Gerente-Geral Substituto, Certificação de Produto Aeronáutico (Acting Manager, Aeronautical Product Certification)