

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A27EU
Revision 5
AIRBUS DEFENCE AND SPACE GMBH
EADS DEUTSCHLAND GMBH
DAIMLER CHRYSLER AEROSPACE AG
DAIMLER-BENZ AEROSPACE AG
DEUTSCHE AEROSPACE AG
MESSERSCHMITT-BÖLKOW-BLOHM AG
MESSERSCHMITT-BÖLKOW-BLOHM GMBH
BO-209-150 FV & RV
BO-209-160 FV & RV
BO-209-150 FF
May 6, 2016

TYPE CERTIFICATE DATA SHEET NO. A27EU

This data sheet, which is a part of Type Certificate No. A27EU, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder Airbus Defence and Space GmbH
Willy-Messerschmitt-Strasse 1
85521 Ottobrunn
Germany

Type Certificate Ownership Record Messerschmitt-Bölkow-Blohm GmbH transferred TC A27EU to Messerschmitt-Bölkow-Blohm AG on April 1, 1992 (See NOTE 4.)

Messerschmitt-Bölkow-Blohm AG transferred TC A27EU to Deutsche Aerospace AG on November 30, 1992

Deutsche Aerospace AG transferred TC A27EU to Daimler-Benz Aerospace AG on January 2, 1995

Daimler-Benz Aerospace AG transferred TC A27EU to Daimler Chrysler Aerospace AG on November 17, 1998

Daimler Chrysler Aerospace AG transferred TC A27EU to EADS Deutschland GmbH on July 10, 2000

EADS Deutschland GmbH transferred TC A27EU to Airbus Defence and Space GmbH on July 1, 2014

(See NOTE 7.)

I - Model BO-209-150 FV and RV, 2 PCLM (Normal and Utility Category), approved 9 July 1971

(FV model has fixed nose L.g.; RV model has retractable nose L.g.).

Engine Lycoming O-320-E1C or O-320-E1F
Fuel 80/87 minimum grade aviation gasoline
Engine limits For all operations, 2700 r.p.m. (150 hp.)

Propeller and Hartzell HC-C2YL-1B/7663A-6
propeller limits Diameter: 70 in. no further reduction permitted

Pitch setting at 30 in. radius: High 27°
Low 12°12'

Spinner: MBB P/N 209-61056

Governor: Woodward P/N T210452 or P/N 210681

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Airspeed limits (CAS)	<u>Normal and Utility Category</u>	
	Never exceed	173 knots (199 m.p.h.)
	Maximum structural cruising	135 knots (155 m.p.h.)
	Maneuvering	117 knots (135 m.p.h.)
	Flaps extended	88 knots (101 m.p.h.)
	*Landing gear operation	104 knots (120 m.p.h.)
	*Landing gear extended	173 knots (199 m.p.h.)
	(*Applies only to the RV model).	
C.G. range	<u>Normal Category</u>	
	(85.47) to (89.37) at 1265 lb. or less	
	(86.92) to (89.37) at 1808 lb.	
	<u>Utility Category</u>	
	(85.47) to (89.37) at 1265 lb. or less	
	(86.25) to (89.37) at 1565	
Maximum weight	1808 lb., for Normal Category	
	1565 lb., for Utility Category	
No. of seats	2 at (+ 90.7)	
Maximum baggage	110 lb. at (+114.2)	
Fuel capacity	39.2 gal. total (38.6 gal. usable; two 19.6 gal., wing tanks at + 90.7)	
Oil capacity	8 qt. (+3.94)	
	See NOTE 1 for unusable fuel and undrainable oil data.	

II - Model BO-209-160 FV and RV, 2 PCLM (Normal and Utility Category), approved 9 July 1971
(FV model has fixed nose L.g.; RV model has retractable nose L.g.).

Engine	Lycoming IO-320-D1A or IO-320-D1B	
Fuel	100/130 minimum grade aviation gasoline	
Engine limits	For all operations, 2700 r.p.m. (160 hp.)	
Propeller and propeller limits	Hartzell HC-C2YL-1B/7663A-6	
	Diameter: 70 in. no further reduction permitted	
	Pitch setting at 30 in. radius:	High 27°
		Low 14°57'
	Spinner:	MBB P/N 209-61056
	Governor:	Woodward P/N T210452 or P/N 210681
Airspeed limits (CAS)	<u>Normal and Utility Category</u>	
	Never exceed	173 knots (199 m.p.h.)
	Maximum structural cruising	135 knots (155 m.p.h.)
	Maneuvering	117 knots (135 m.p.h.)
	Flaps extended	88 knots (101 m.p.h.)
	*Landing gear operation	104 knots (120 m.p.h.)
	*Landing gear extended	173 knots (199 m.p.h.)
	(*Applies only to the RV model).	
C.G. range	<u>Normal Category</u>	
	(85.47) to (89.37) at 1265 lb. or less	
	(86.92) to (89.37) at 1808 lb.	
	<u>Utility Category</u>	
	(85.47) to (89.37) at 1265 lb. or less	
	(86.25) to (89.37) at 1565 lb.	

Maximum weight	1808 lb. for Normal Category 1565 lb. for Utility Category
No. of seats	2 at (+ 90.7)
Maximum baggage	110 lb. at (+ 114.2)
Fuel capacity	39.2 gal. total (38.6 gal. usable; two 19.6 gal., wing tanks at + 90.7)
Oil capacity	8 qt. (+3.94) See NOTE 1 for unusable fuel and undrainable oil data.

III - Model BO-209-150 FF, 2 PCLM (Normal and Utility Category), approved 9 July 1971
(fixed nose L.g.).

Engine Lycoming O-320-E2C or O-320-E2F

Fuel 80/87 minimum grade aviation gasoline.

Engine limits For all operations, 2700 r.p.m. (150 hp.)

Propeller and
propeller limits McCauley 1C172MGM-70.5-60 or -66
Static r.p.m. at maximum permissible throttle setting:
Not over 2400, not under 2100
No additional tolerance permitted.

Diameter: Maximum 70.5 in., minimum for repairs 70 in.
No further reduction permitted

Spinner: MBB P/N 209-61156

Airspeed limits (CAS)	<u>Normal and Utility Category</u>	
	Never exceed	173 knots (199 m.p.h.)
	Maximum structural cruising	135 knots (155 m.p.h.)
	Maneuvering	117 knots (135 m.p.h.)
	Flaps extended	88 knots (101 m.p.h.)

C.G. range Normal Category
(85.47) to (89.37) at 1265 lb. or less
(86.92) to (89.37) at 1808 lb.

Utility Category
(85.47) to (89.37) at 1265 lb. or less
(86.25) to (89.37) at 1565 lb.

Maximum weight	1808 lb., for Normal Category 1565 lb., for Utility Category
No. of seats	2 at (+ 90.7)
Maximum baggage	110 lb. at (+114.2)
Fuel capacity	39.2 gal. total (38.6 gal. usable; two 19.6 gal., wing tanks at + 90.7)
Oil capacity	8 qt. (+3.94) See NOTE 1 for unusable fuel and undrainable oil data.

DATA PERTINENT TO ALL MODELS

Control Surface Movements	Ailerons	Up	$29^{\circ} \pm 1^{\circ}$	Down	$14^{\circ} \pm 1^{\circ}$
	Wing flaps			Down	$35^{\circ} + 0^{\circ}$ $- 3^{\circ}$
	Stabilator	Up	$18^{\circ} \pm 1^{\circ}$	Down	$9^{\circ} \pm 1^{\circ}$
	Rudder	Left	$28^{\circ} \pm 2^{\circ}$	Right	$28^{\circ} \pm 2^{\circ}$
	Stabilator trim, distance measured between trailing edge of trim tab and trailing edge of stabilator with stabilator in the neutral position.				
	tab neutral:	0.32 in. Down,	± 0.08 in.		
	nose down:	0.20 in. Up,	± 0.08 in.		
	nose up:	0.66 in. Down,	± 0.08 in.		
	total travel:	0.86 in.	± 0.16 in.		
Datum	75.51 in. forward of wing leading edge at split line of the wing/wing stub fairing.				
Leveling means	Two leveling points on left side of fuselage.				
Serial Nos. eligible	Serial Numbers 121 and subsequent. The Federal Republic of Germany Government Certificate of Airworthiness for Export endorsed as noted below under "Import Requirements" must be submitted for each individual aircraft for which application for airworthiness certification is made.				
Certification basis	FAR 21.29 and FAR 23 dated 1 February 1965 as amended by Amendments 23-1 through 23-9 inclusive. Type Certificate No. A27EU, issued 9 July 1971. Date of Application for Type Certificate: 11 May 1970. The Luftfahrt Bundesamt originally type certificated this aircraft under its type certificate Number 680. The FAA validated this product under U.S. Type Certificate Number A27EU. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of Germany. The EASA type certificate for the BO-209 models is EASA.A.357.				
Import Requirements	The FAA can issue a U.S. airworthiness certificate based on an NAA Export Certificate of Airworthiness (Export C of A) signed by a representative of the Luftfahrt Bundesamt on behalf of the European Community. 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 23 approved under U.S. Type Certificate No. A27EU and to be in a condition for safe operation.'				
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. <ul style="list-style-type: none"> • Service bulletins, • Structural repair manuals, • Vendor manuals, • Aircraft flight manuals, and • Overhaul and maintenance manuals. <p>The FAA accepts such documents and considers them FAA-approved unless one of the following conditions exists:</p> <ul style="list-style-type: none"> • The documents change the limitations, performance, or procedures of the FAA approved manuals; or • The documents make an acoustical or emissions changes to this product's U.S. type certificate as defined in 14 CFR § 21.93. 				

Service Information, cont'd	The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on case-by-case 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.
Equipment	<p>The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. In addition, the following items of equipment are required:</p> <ol style="list-style-type: none"> 1. Stall Warning System. 2. LBA-approved Model BO-209 Approved Flight Manual, Ref. No. LF37E-7/71 dated July 1971 or later LBA-approved revision, (prior to September 28, 2003), or approved by EASA on or after that date. 3. Airplanes S/N 121 through 130 must be modified in accordance with MBB Technical Note TN 9-71 to provide an alternate static system source and an aural landing gear warning system. (These systems are incorporated in production on S/Ns 131 and subsequent).
NOTE 1.	Current weight and balance report including list of equipment in certificated empty weight, and loading instructions when necessary, must be provided for each airplane at the time of original airworthiness certification. The certificated empty weight and corresponding center of gravity must include undrainable oil of 0 lbs. at +39.4 and unusable fuel of 3.6 lb. at +90.7.
NOTE 2.	<p>The following placard must be displayed in front and in clear view of the pilot:</p> <p>"This airplane must be operated as a Normal or Utility Category airplane in compliance with their operating limitations stated in the form of placards, markings, and manuals."</p> <p>In addition, all placards required in the LBA-approved Airplane Flight Manual must be installed in the appropriate location.</p>
NOTE 3.	Information essential for proper maintenance of the airplane is contained in the Messerschmitt-Bolkow-Blohm GmbH., Model BO-209 Maintenance Manual included in MBB document Ref. LF 37E-7/71.
NOTE 4.	<p>The airplane manufacturer is:</p> <p>Waggon- und Maschinenbau A.G. Donauwörth, Laupheim Federal Republic of Germany (A division of Messerschmitt-Bolkow-Blohm).</p>
NOTE 5.	Installation of a Tost tow coupling (ring type), LBA approval No. 60.230.4 may be approved when installed in accordance with MBB Drwg. 209-85003 (for glider towing) or MBB Drwgs. 209-85003 and 209-8700 (for banner towing).
NOTE 6.	For issuance of an airworthiness certificate in accordance with 14 CFR Part 21.182(c), the Luftfahrt Bundesamt of Germany must certify that the airplane conforms to the type design and is in a condition for safe operation. In that regard, the Luftfahrt Bundesamt of Germany will certify that the airplane complies with all applicable mandatory continuing airworthiness information (MCAI) it has issued. For issuance of an airworthiness certificate in accordance with 14 CFR Part 21.182(d) the certifying inspector, or other authorized person, must find, among other things, that the product is in a condition for safe operation. In order to make that finding, the certifying inspector or other authorized person should contact ACE-112, Federal Aviation Administration, Small Airplane Directorate, prior to issuance to determine whether showing airplane compliance with certain MCAI is necessary to support a finding that the airplane is in a condition for safe operation.

NOTE 7. Some of these transfers were not notified to the FAA and so in some instances the actual type certificates were not reissued.

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