TYPE-CERTIFICATE
DATA SHEET

NO. EASA.A.357

for
BÖLKOW BO 209

Type Certificate Holder
Airbus Defence and Space GmbH
Willy-Messerschmitt-Straße 1
82024 Taufkirchen
Germany

For models: Bölkow BO 209 MONSUN
Bölkow BO 209 S
SECTION A: BÖLKOW BO 209 MONSUN

A.I. General

A.II. EASA Certification Basis

A.III. Technical Characteristics and Operational Limitations

A.IV. Operating and Service Instructions

A.V. Notes

SECTION B: BÖLKOW BO 209 S

B.I. General

B.II. EASA Certification Basis

B.III. Technical Characteristics and Operational Limitations

B.IV. Operating and Service Instructions

B.V. Notes

SECTION ADMINISTRATIVE

I. Acronyms & Abbreviations

II. Type Certificate Holder Record

III. Change Record
SECTION A: BÖLKOW BO 209 MONSUN

A.I. General

1. Type/ Model/ Variant
   1.1 Type Bölkow BO 209
   1.2 Model Bölkow BO 209 MONSUN
   1.3 Variant N/A

2. Airworthiness Category
   Normal
   Utility

3. Manufacturer
   Messerschmitt-Bölkow-Blohm GmbH
   Am Flugplatz
   7958 Laupheim, Germany
   Pneuma-Technik, E. Ficht
   Thomas-Mayr-Strasse 4
   8018 Grafing, Germany

4. EASA Type Certification Application Date
   02 February 2015

5. State of Design Authority
   Germany

6. State of Design Authority
   Type Certificate Date
   09 April 1970

7. EASA Type Certification Date
   02 February 2015

A.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements
   N/A

2. Airworthiness Requirements
   S/N 101 through 180:
   FAR-23, Amendment 23-1 through 23-6
   S/N 181 and higher:
   FAR-23, Amendment 23-1 through 23-9

3. Special Conditions
   N/A

4. Exemptions
   N/A

5. (Reserved) Deviations
   N/A

6. Equivalent Safety Findings
   N/A

7. Environmental Protection
   ICAO Annex 16, Vol. I; for details see TCDSN.A.357
A.III.  Technical Characteristics and Operational Limitations

1. Type Design Definition
   Set of drawings, specifications and reports

2. Description
   Single engine, cantilever low-wing aircraft with non-retractable or retractable nose wheel, all metal construction

3. Equipment
   Minimum equipment pursuant to airworthiness requirements
   Details concerning minimum equipment as well as possible additional equipment can be found in the flight manual

4. Dimensions
   Wing Span: 8,40m
   Length: 6,60m
   Height: 2,20m

5. Engine
   5.1. Model
      Engine 1: Lycoming AIO-320-C1B
      Engine 2: Lycoming IO-320-D1A
      Engine 3: Lycoming IO-320-D1B
      Engine 4: Lycoming O-320-E1C
      Engine 5: Lycoming O-320-E1F
      Engine 6: Lycoming O-320-E2C
      Engine 7: Lycoming O-320-E2F
   5.2 Type Certificate
      Engine 1 - 3: US 1E12
      Engine 4 - 7: US E-274
   5.3 Limitations
      Maximum speed 2700rpm

6. Load factors
   Normal:  \( n = -1,9 \) to +3,8
   Utility:  \( n = -2,2 \) to +4,4

7. Propeller
   7.1 Model
      Propeller 1: Hartzell HC-C2YL-1B/7663 A-6
      For engines 1 - 3:
      Max. pitch 27°, min. pitch 14° 57’, measured @ R=762mm
      For engines 4 and 5:
      Max. pitch 27°, min. pitch 12° 12’, measured @ R=762mm
      Propeller 2: McCauley 1C172/MGM 70.5-60 or -66
      For engines 6 and 7:
      Pitch 60inch or 66inch
      Speed on ground 2100 - 2400rpm
      See section V for further engine/propeller combinations
   7.2 Type Certificate
      Propeller 1: EASA.IM.P.130
      Propeller 2-4: US P-910
   7.3 Number of blades
      2
   7.4 Diameter
      Propeller 1: 178cm (70inch)
      Propeller 2: 179cm (70,5inch)
   7.5 Sense of Rotation
      Clockwise
8. Fluids

8.1 Fuel
- Engine 1 - 3: 100/130 octane
- Engine 4 - 7: min. 80/87 octane

8.2 Oil
- above +15°C (60°F): SAE 50
- from 0°C (32°F) to +32°C (90°F): SAE 40
- from -18°C (0°F) to +21°C (70°F): SAE 30
- below -12°C (10°F): SAE 20

8.3 Coolant
N/A

9. Fluid capacities

9.1 Fuel
- Max fuel quantity: 148l
- Usable fuel quantity: 146l

9.2 Oil
- 7,4l

9.3 Coolant system capacity
N/A

10. Air Speeds

Normal (all S/N) & Utility (S/N 101 through 180 and S/N 188):
- Never Exceed Speed \( V_{NE} \): 173kts
- Manoeuvring Speed \( V_A \): 117kts
- Maximum Normal Operating Speed \( V_{NO} \): 135kts
- Maximum Flap Extended Speed \( V_{FE} \): 88kts
- Maximum landing gear lowering speed \( V_{LO} \): 104kts
- Maximum landing gear extended speed \( V_{LE} \): 173kts

Utility (S/N 181 and higher excluding S/N 188):
- Never Exceed Speed \( V_{NE} \): 183kts
- Manoeuvring Speed \( V_A \): 127kts
- Maximum Normal Operating Speed \( V_{NO} \): 135kts
- Maximum Flap Extended Speed \( V_{FE} \): 94kts
- Maximum landing gear lowering speed \( V_{LO} \): 104kts
- Maximum landing gear extended speed \( V_{LE} \): 183kts

11. Flight Envelope
Not specified

12. Approved Operations Capability
VFR, no icing

13. Maximum Masses

Maximum Take-off mass
- Normal: 820kg
- Utility: 710kg

14. Centre of Gravity Range

Normal:
- Max. FWD: 2208mm @ 820kg linear to 2171mm @ 575kg or less
- Max. AFT: 2270mm

Utility (S/N 101 through 180 and S/N 188):
- Max. FWD: 2191mm @ 710kg linear to 2171mm @ 575kg or less
- Max. AFT: 2270mm
Utility (S/N 181 and higher excluding S/N 188):
Max. FWD: 2196mm @ 740kg linear to 2171mm @ 575kg or less
Max. AFT: 2270mm

15. Datum
Reference plane is 1918mm FWD of leading edge of wing stub at the split line of the wing/wing stub fairing

16. Control surface deflections
Aileron
Up 29° (+/-1°)
Down 14° (+/-1°)
Rudder
Left/Right 28° (+/-2°)
Elevator
Up 18° (+/-1°)
Down 9° (+/-1°)
Flaps
Up 0° (+/-0°)
Down 35° (+0°/-3°)
Trim tab see Maintenance Manual

17. Levelling Means
horizontal using extended line from level marks on left side of fuselage

18. Minimum Flight Crew
1
19. Maximum Passenger
1
Seating Capacity

20. Baggage/ Cargo Compartments
max. 50kg

21. Wheels and Tyres
Main Tyres 5.50 x 6/6 PR or 380 x 150-5/6PR
Nose Tyre 5.00 x 5/6 PR

22. (Reserved)

A.IV. Operating and Service Instructions

1. Flight Manual
S/N 101 through 180 and S/N 188:
Flight Manual BO 209 Monsun, LBA-approved 09 April 1970 (LF 5D or LF 5E) incl. revisions
S/N 181 and higher excluding S/N 188:
Flight Manual BO 209 Monsun, LBA-approved 15 November 1971 (LF 36D or LF 41E) incl. revisions

S/N 101 through 180 and S/N 188:
Maintenance Manual BO 209 Monsun, LBA-approved 09 April 1970 (LF 5D or LF 5E) incl. revisions
S/N 181 and higher excluding S/N 188:
A. Structural Repair Manual  
Not specified

Covered in Flight Manual and Maintenance Manual

5. Illustrated Parts Catalogue  
Werkstatthandbuch und Ersatzteilkatalog BO209 Monsun

A.V. Notes

1. Serial Numbers

Messerschmitt-Bölkow-Blohm GmbH: 101 to 201
Pneuma-Technik: 301 and following

2. Airworthiness categories

S/N 181 and higher (excluding S/N 188) were originally approved for aerobatics being limited to normal and utility categories as per LBA LTA-1986-255/2 dated 27 January 1987.

3. Type certification approval

Type Certification was granted on the basis of a type inspection on application of Messerschmitt-Bölkow-Blohm GmbH on 09 April 1970, expanded on 09 July 1971 and 05 November 1971. This certification applies for serial numbers 101 through 201 (Messerschmitt-Bölkow-Blohm GmbH) and 301 and following (Pneuma-Technik).

4. Supplemental Type Certificates (without separate STC)

a) Sailplane towing is permissible when the towing gear acc. to drawing no. 209-85003 of Messerschmitt-Bölkow-Blohm GmbH has been installed and is operated according to Flight Manual annex “Towing”. Towing of non-rigid tow banners is permissible when the towing gear acc. to drawing no. 209-87000 of Messerschmitt-Bölkow-Blohm GmbH has additionally been installed.

b) Aircraft with S/N 102, 121 through 180 and 188 can be converted to the build standard of S/N 181 according to Messerschmitt-Bölkow-Blohm GmbH conversion instruction 209-09200. Operation of the converted aircraft must conform to operating instruction LF 36D or LF41E.

c) Aircraft with S/N V0 and from 131 onwards can be equipped with larger wing caps pursuant to Messerschmitt-Bölkow-Blohm GmbH conversion instruction 209-09210. The large rudder specified in the conversion instruction has to be used with the large wing caps. The operating limits specified in the flight manual remain unchanged. Flights in the airworthiness group aerobatic aircraft may not be executed. The maximum weight limit in the utility airworthiness class remains limited to 710 kg.

d) Installation of a Christen reflux oil system (extended modification) is permissible. Original Christen parts (equipment set) including the corresponding manual are to be used. Observe the Flight Manual annex “Operation with (Christen) engine oil supply kit for inverted flight installed”. The aforementioned documentation can be obtained from Christen Industries.

e) Installation of the Hoffmann 3-blade propeller HO-V123L/180R-10 in conjunction with the engines Lycoming IO-320-D1A und D1B as well as Lycoming O-320 E1C und E1F is permissible. Conversion instruction 152 and the annex to the Flight Manual for the Hoffman adjustable propeller (153 - LBA-approved 5 March 1984) are to be observed. The documentation is available from Hoffmann GmbH & Co. KG.
SECTION B: BÖLKOW BO 209 S

B.I. General

1. Type/ Model/ Variant
   1.1 Type Bölkow BO 209
   1.2 Model Bölkow BO 209 S
   1.3 Variant N/A

2. Airworthiness Category
   Normal
   Utility

3. Manufacturer
   Messerschmitt-Bölkow-Blohm GmbH
   Am Flugplatz
   7958 Laupheim, Germany
   Pneuma-Technik, E. Ficht
   Thomas-Mayr-Strasse 4
   8018 Grafing, Germany

4. EASA Type Certification
   Application Date 02 February 2015

5. State of Design Authority
   Germany

6. State of Design Authority
   Type Certificate Date 13 March 1972

7. EASA Type Certification Date
   02 February 2015

B.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements
   N/A

2. Airworthiness Requirements
   FAR-23, Amendment 23-1 through 23-9

3. Special Conditions
   N/A

4. Exemptions
   N/A

5. (Reserved) Deviations
   N/A

6. Equivalent Safety Findings
   N/A

7. Environmental Protection
   ICAO Annex 16, Vol. I; for details see TCDSN.A.357

B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition
   Set of drawings, specifications and reports
2. Description
   Single engine, cantilever low-wing aircraft with non-retractable nose wheel, all metal construction

3. Equipment
   Minimum equipment pursuant to airworthiness requirements
   Details concerning minimum equipment as well as possible additional equipment can be found in the flight manual

4. Dimensions
   Wing Span: 9,025m
   Length: 6,70m
   Height: 2,20m

5. Engine
   5.1 Model
   Rolls Royce RR O-240-A
   5.2 Type Certificate
   US E11EU
   5.3 Limitations
   Maximum speed 2800rpm

6. Load factors
   Normal: \( n = -1.9 \) to +3.8
   Utility: \( n = -2.2 \) to +4.4

7. Propeller
   7.1 Model
   McCauley 1C172 EM 70,5-55
   7.2 Type Certificate
   US P-910
   7.3 Number of blades
   2
   7.4 Diameter
   179cm (70,5inch)
   7.5 Sense of Rotation
   Clockwise

8. Fluids
   8.1 Fuel
   100/130 octane
   8.2 Oil
   below 5°C (41°F) SAE 30
   above 5°C (41°F) SAE 50
   8.3 Coolant
   N/A

9. Fluid capacities
   9.1 Fuel
   Max fuel quantity: 148l
   Usable fuel quantity: 146l
   9.2 Oil
   5.7l
   9.3 Coolant system capacity
   N/A

10. Air Speeds
    Never Exceed Speed \( V_{NE} \) 173kts
    Manoeuvring Speed \( V_{A} \) 117kts
    Maximum Normal Operating Speed \( V_{NO} \) 135kts
    Maximum Flap Extended Speed \( V_{FE} \) 88kts

11. Flight Envelope
    Not specified

12. Approved Operations Capability
    VFR, no icing

13. Maximum Masses
    Maximum Take-off mass
    Normal: 760kg
    Utility: 710kg

14. Centre of Gravity Range
    Normal:
    Max. FWD: 2200mm @ 760kg linear to
    2171mm @ 575kg or less
Max. AFT: 2270mm

Utility:
Max. FWD: 2191mm @ 710kg linear to
2171mm @ 575kg or less
Max. AFT: 2270mm

15. Datum
Reference plane is 1918mm FWD of leading edge of wing stub at the split line of the wing/wing stub fairing

16. Control surface deflections
Aileron
Up: 29° (+/-1°)
Down: 14° (+/-1°)

Rudder
Left/Right: 28° (+/-2°)

Elevator
Up: 18° (+/-1°)
Down: 9° (+/-1°)

Flaps
Up: 0° (+/-0°)
Down: 35° (+0°/-3°)

17. Levelling Means
horizontal using extended line from level marks on left side of fuselage

18. Minimum Flight Crew
1

19. Maximum Passenger
Seating Capacity
1

20. Baggage/ Cargo Compartments
max. 50kg

21. Wheels and Tyres
Main Tyres: 5.50 x 6/6 PR or 380 x 150-5/6PR
Nose Tyre: 5.00 x 5/6 PR

22. (Reserved)

B.IV. Operating and Service Instructions

1. Flight Manual
Flight Manual BO 209 S Monsun, LBA-approved 15 November 1971 (LF 38D or LF 38E) incl. revisions

Maintenance Manual BO 209 Monsun, LBA-approved 15 November 1971 (LF 40D or LF 40E) incl. revisions

Not specified

Covered in Flight Manual and Maintenance Manual

5. Illustrated Parts Catalogue
Werkstatthandbuch und Ersatzteilkatalog BO209 Monsun
B.V.  

Notes

1. Serial Numbers
   Messerschmitt-Bölkow-Blohm GmbH: 119, 131 to 201
   Pneuma-Technik: 301 and higher

2. Type approval was granted on the basis of a type inspection on application of Messerschmitt-Bölkow-Blohm GmbH on 9 April 1970, expanded on 9 July 1971 and 5 November 1971.

3. Aircraft with S/N 131 through 180 and 188 can be converted to the build state of S/N 181 according to Messerschmitt-Bölkow-Blohm GmbH conversion instruction 209-09200. Operation of the converted aircraft must conform to operating instruction LF 36D or LF41E.
SECTION ADMINISTRATIVE

I. **Acronyms & Abbreviations**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAA</td>
<td>Federal Aviation Administration</td>
</tr>
<tr>
<td>FAR</td>
<td>Federal Aviation Regulations</td>
</tr>
<tr>
<td>FWD</td>
<td>Forward</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>LBA</td>
<td>Luftfahrt Bundesamt</td>
</tr>
<tr>
<td>N/A</td>
<td>Not applicable</td>
</tr>
<tr>
<td>SAE</td>
<td>Society of Automotive Engineers</td>
</tr>
<tr>
<td>TCDS</td>
<td>Type Certificate Data Sheet</td>
</tr>
<tr>
<td>VFR</td>
<td>Visual Flight Rules</td>
</tr>
</tbody>
</table>

II. **Type Certificate Holder Record**

<table>
<thead>
<tr>
<th>Day of Entry</th>
<th>Company Name (Legal Entity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.04.1992</td>
<td>Messerschmitt-Bölkow-Blohm AG</td>
</tr>
<tr>
<td>30.09.1992</td>
<td>Deutsche Aerospace AG</td>
</tr>
<tr>
<td>02.01.1995</td>
<td>Daimler-Benz Aerospace AG</td>
</tr>
<tr>
<td>17.11.1998</td>
<td>Daimler Chrysler Aerospace AG</td>
</tr>
<tr>
<td>10.07.2000</td>
<td>EADS Deutschland GmbH</td>
</tr>
<tr>
<td>01.07.2014</td>
<td>Airbus Defence and Space GmbH</td>
</tr>
</tbody>
</table>

III. **Change Record**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
<th>TC Issue Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>02 February 2015</td>
<td>Initial Issue after TC transfer</td>
<td>02 February 2015</td>
</tr>
<tr>
<td>02</td>
<td>22 June 2015</td>
<td>Type Certificate Holder Record revised</td>
<td>02 February 2015</td>
</tr>
<tr>
<td>03</td>
<td>13 November 2018</td>
<td>Change of TC holder address. Note in section A.V. on airworthiness categories added</td>
<td>13 November 2018</td>
</tr>
<tr>
<td>04</td>
<td>30 July 2021</td>
<td>Minor updates to wording and content</td>
<td>13 November 2018</td>
</tr>
</tbody>
</table>

-END-