TYPE-CERTIFICATE
DATA SHEET

NO. EASA.A.539

for
RUSCHMEYER R 90

Type Certificate Holder
Bernd Hager
Hedwigstr. 18
30159 Hannover
Germany

For models: R 90-230RG
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SECTION A: R 90-230RG

A.I. General

1. Data Sheet No.: EASA.A.539

2. a) Type: Ruschmeyer R 90

   b) Model: R 90-230RG

3. Airworthiness Category: Normal Category

4. Type Certificate Holder: Bernd Hager

   Hedwigstr. 18

   30159 Hannover

   Federal Republic of Germany

5. Contracted DOA Holder EASA.21J.274

   ACC COLUMBIA Jet Service GmbH

   Benkendorffstr. 38

   30855 Langenhagen

   Germany

6. Manufacturer: see Note 4

7. Reserved:

8. National Certifying Authority Luftfahrt-Bundesamt

9. National Authority Type Certificate Date: 12-Jun-1992
### A.II. EASA Certification Basis

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

2. **Airworthiness Requirements:** FAR Part 23 incl. amendment 23-1 through 23-34, effective 17-Feb-1987

3. **Special Conditions:** Refer to LBA-Letter from 07-Jan-1991
   - 1. Primary structures designed with composite material
   - 2. Protection of Systems From Lightning and HIRF

4. **Exemptions:** N/A

5. **Deviations:** N/A

6. **Equivalent Safety Findings:** N/A

7. **Requirements elected to comply:** N/A

8. **Environmental Standards:** LSL Chapter VI and X dated 01-Jan-1991

9. **Additional National Requirements:** N/A

10. **(Reserved)** N/A
A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Set of drawings 1082.xxx Specifications and reports R 90-230 RG

2. Description: Single-engine low wing airplane, four seated, dual controls, composite design, standard empennage, retracting tricycle landing gear with nose wheel

3. Equipment: Refer to AFM Section VI

4. Dimensions: Span: 9,5 m Length: 7,93 m Height: 2,73 m Wing Area: 12,94 m²

5. Engine:
   5.1.1 Model: Textron-Lycoming IO-540-C4D5
   5.1.2 Type Certificate: FAA TCDS 1E4
   5.1.3 Limitations: Refer to AFM Section II

6. Propeller:
   6.1 Model: MTV-14-B/190-17
   6.2 Type Certificate: EASA TCDS P.017
   6.3 Number of blades: 4
   6.4 Diameter: 1900mm (+ 0mm, – 30mm)
   6.5 Sense of Rotation: Clockwise

7. Fluids:
   7.1 Fuel: Aviation Grade AVGAS 100 Aviation Grade AVGAS 100LL
7.2 Oil: Refer to AFM Section 1

8. Fluid capacities:

8.1 Fuel: Total capacity: 250 litres
Useable capacity: 236 litres

8.2 Oil: Max. 11.4 litres
Min. 3.8 litres

8.3 Coolant system capacity: N/A

9. Air Speeds:

\[
\begin{align*}
V_{NE} & \quad \text{(Never Exceed Speed)} & 193 \text{ KIAS} \\
V_A & \quad \text{(Manoeuvring Speed)} & 128 \text{ KIAS} \\
V_{NO} & \quad \text{(Maximum Structural Cruising Speed)} & 157 \text{ KIAS} \\
V_{FE} & \quad \text{(Maximum Flap Extended Speed)} & 102 \text{ KIAS} \\
V_{LO} & \quad \text{(Maximum Landing Gear Operating Speed)} & 140 \text{ KIAS} \\
V_{LE} & \quad \text{(Maximum Landing Gear Extended Speed)} & 140 \text{ KIAS}
\end{align*}
\]

10. Load factors:

- Flaps retracted: +3.8g to -1.52g*1
- Flaps extended (15° and 30°): +2.0g to 0.0g

*1Intended manoeuvres with negative load factors are prohibited

11. Maximum Operating Altitude: Not specified


Flights in known icing conditions are prohibited

13. Maximum Weights: Max. Take-Off and Landing Weight 1350 kg (2977 lbs)

14. Centre of Gravity Range:

- Forward limit:
  - 2,2685 m (89.3 in) aft of datum at 1350 kg (2977 lbs)
  - 2,1976 m (86.5 in) aft of datum at 1250 kg (2756 lbs)
  - 2,1976 m (86.5 in) aft of datum at 961 kg (2119 lbs)
- Aft limit:
  - 2,3677 m (93.2 in) aft of datum at 1350 kg (2977 lbs)
  - 2,3677 m (93.2 in) aft of datum at 961 kg (2119 lbs)
15. Datum: Fuselage station 0.00 m (0.00 in) 
(2.00 m in front of wing leading edge at the kink at y = 1,675 m)

16. Control surface deflections: Refer to Maintenance Manual Chapter 06

<table>
<thead>
<tr>
<th>Surface</th>
<th>Up</th>
<th>Down</th>
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<tbody>
<tr>
<td>Flaps</td>
<td>0º</td>
<td>15º, 30º</td>
</tr>
<tr>
<td>Aileron</td>
<td>16º</td>
<td>11º</td>
</tr>
<tr>
<td>Elevator</td>
<td>18º</td>
<td>15º</td>
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<tr>
<td>Rudder</td>
<td>LH 25º</td>
<td>RH 27º</td>
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<tr>
<td>Trim tab</td>
<td>Up 13º - 1º</td>
<td>Down 28º - 1º</td>
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<tr>
<td>(Elevator neutral)</td>
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17. Levelling Means: Lower edge of door frame

18. Minimum Flight Crew: 1

19. Maximum Passenger Seating Capacity: 3

20. Baggage/Cargo Compartments: Max. 50 kg (110 lbs)

21. Wheels and Tyres: Refer to Maintenance Manual Section I

22. Serial Numbers Eligible: 3 – 24, 27 - 30
A.IV. Operating and Service Instructions


5. Spare Parts Catalogue: Illustrated Parts Catalogue Issue 1, Revision 0, dated February 23rd, 1994

6. Table of Dimensions, Limits and Clearances: see Airplane Flight Manual Section I

7. Instruments and aggregates: see Airplane Flight Manual Section VII
Notes:

1. This Type Certification Data Sheet is based on the original Luftfahrt-Bundesamt (Germany) TCDS No. 1082/SA, issue 1, dated 12 June 1992.

2. All components that are exposed to the sun have to be painted with colors and absorption coefficients in accordance with Maintenance Manual Chapter 04.

3. Structural repairs must be accomplished in accordance with Maintenance Manual Chapter 51.

4. The placards listed in Section 2 of the LBA approved Airplane Flight Manual RUSCHMEYER R90-230RG must be displayed.

5. Aircraft Serial Numbers 3 through 24 and 27 through 30 have been manufactured by Ruschmeyer Luftfahrttechnik GmbH.
SECTION ADMINISTRATIVE

I. Acronyms & Abbreviations

AFM Airplane Flight Manual
EASA European Union Aviation Safety Agency
FAA Federal Aviation Authority (US)
IFR Instrument Flight Rules
LBA Luftfahrt-Bundesamt (Germany)
N/A not applicable
VFR Visual Flight Rules

II. Type Certificate Holder Record

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<tr>
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<td>Segelfliegerweg 41</td>
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<tr>
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<td>49324 Melle</td>
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<td>für Industriebeteiligungen mbH</td>
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