



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 |
| 3. Exemptions: | N/A |
| 4. Deviations: | N/A |
| 5. Equivalent Safety Findings: | N/A |
| 6. Requirements elected to comply: | N/A |
| 7. Environmental Standards: | LSL Chapter VI and X dated 01-Jan-1991 |
| 8. Additional National Requirements: | N/A |
| 9. (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 m ² |

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 I | | | | | | | | | | | | |
| 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: | <table border="0"> <tr> <td>V_{NE} (Never Exceed Speed)</td> <td>193 KIAS</td> </tr> <tr> <td>V_A (Manoeuvring Speed)</td> <td>128 KIAS</td> </tr> <tr> <td>V_{NO} (Maximum Structural Cruising Speed)</td> <td>157 KIAS</td> </tr> <tr> <td>V_{FE} (Maximum Flap Extended Speed)</td> <td>102 KIAS</td> </tr> <tr> <td>V_{LO} (Maximum Landing Gear Operating Speed)</td> <td>140 KIAS</td> </tr> <tr> <td>V_{LE} (Maximum Landing Gear Extended Speed)</td> <td>140 KIAS</td> </tr> </table> | V_{NE} (Never Exceed Speed) | 193 KIAS | V_A (Manoeuvring Speed) | 128 KIAS | V_{NO} (Maximum Structural Cruising Speed) | 157 KIAS | V_{FE} (Maximum Flap Extended Speed) | 102 KIAS | V_{LO} (Maximum Landing Gear Operating Speed) | 140 KIAS | V_{LE} (Maximum Landing Gear Extended Speed) | 140 KIAS |
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| V_{LE} (Maximum Landing Gear Extended Speed) | 140 KIAS | | | | | | | | | | | | |
| 10. Load factors: | <p>Flaps retracted : +3,8g to -1,52g^{*)}</p> <p>Flaps extended (15° and 30°): +2,0g to 0,0g</p> <p>^{*)}Intended manoeuvres with negative load factors are prohibited</p> | | | | | | | | | | | | |
| 11. Maximum Operating Altitude: | Not specified | | | | | | | | | | | | |
| 12. Allweather Operations Capability: | VFR Day/Night, IFR 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: | <p>Forward limit</p> <p>2,2685 m (89.3 in) aft of datum at 1350 kg (2977 lbs)</p> <p>2,1976 m (86.5 in) aft of datum at 1250 kg (2756 lbs)</p> <p>2,1976 m (86.5 in) aft of datum at 961 kg (2119 lbs)</p> <p>Aft limit:</p> <p>2,3677 m (93.2 in) aft of datum at 1350 kg (2977 lbs)</p> <p>2,3677 m (93.2 in) aft of datum at 961 kg (2119 lbs)</p> | | | | | | | | | | | | |



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
- | | | |
|--------------------|------|----------|
| Flaps | Up | 0° |
| | Down | 15°, 30° |
| Aileron | Up | 16° |
| | Down | 11° |
| Elevator | Up | 18° |
| | Down | 15° |
| Rudder | LH | 25° |
| | RH | 27° |
| Trim tab | Up | 13° - 1° |
| (Elevator neutral) | Down | 28° - 1° |
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

1. Flight Manual: Airplane Flight Manual R90-230 RG Issue 1, Revision 0, dated March 1994
2. Technical Manual: Maintenance Manual R90-230 RG Issue 1, Revision 3, dated June 25th , 1994
3. Repair Manual: see Maintenance Manual
4. Manual for Operation: see Airplane Flight Manual
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



A.V. 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

| Date | Type Certificate Holder |
|-------------|--|
| 12-Jun-1992 | Ruschmeyer-Luftfahrttechnik GmbH Segelfliegerweg 41 49324 Melle Federal Republic of Germany |
| 23-Dec-1996 | deister electronic Verwaltungsgesellschaft für Industriebeteiligungen mbH Hedwigstr. 18 30159 Hannover Federal Republic of Germany |
| 24-Dec-1996 | Bernd Hager/Anatoli Stobbe GbR Hedwigstr. 18 30159 Hannover Federal Republic of Germany |
| 21-Feb-2022 | Bernd Hager Hedwigstr. 18 30159 Hannover Federal Republic of Germany |



III. Change Record

| Issue | Date | Changes | TC Date |
|--------------|--------------|--|----------------|
| Issue 01 | 27 May 2014 | First Edition | 27 May 2014 |
| Issue 02 | 24 June 2014 | Type designation corrected | - |
| Issue 03 | 11 Feb 2020 | Changed name of the Contracted DOA holder. New TCDS format | - |
| Issue 04 | 21 Feb 2022 | Changed ownership. Changed name of contracted DOA holder | 21 Feb 2022 |

-END-

