TYPE-CERTIFICATE
DATA SHEET

NO. EASA.A.433

for
HB 23/2400

Type Certificate Holder
HB-Flugtechnik

HB-Flugtechnik GmbH
Dr. Adolf Schärflstraße 42
A-4053 Haid
Austria

For variants:

HB 23/2400
HB 23/2400 SP
HB 23/2400 Scanliner
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Change Record
SECTION 1   HB 23/2400

A.I. General

1. a) Type: HB 23/2400
   b) Variant: ---

2. Airworthiness Category: Utility

3. Type Certificate Holder: HB-Flugtechnik GmbH
                           Dr. Adolf Schärfstraße 42
                           A-4053 Haid
                           Austria
                           www hb-flugtechnik at

4. Manufacturer: HB Aircraft Industries AG
                 Luftfahrzeug Aktiengesellschaft
                 A-4053 Haid
                 Austria
                 HB Brditschka GmbH & CoKG
                 A-4053 Haid
                 Austria

5. Certification Application Date: ---

6. BAZ/ACG Certification Date: November 1985 see Note 6

7. The EASA Type Certificate replaces the Austrian Type Certificate SF 10/85

8. EASA Certification Date: ---

A.II. Certification Basis

1. Reference Date for determining the applicable requirements: ---

2. (Reserved)

3. (Reserved)


6. Requirements elected to comply: None

7. Special Conditions: None
8. Exemptions: None


A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Drawing Set and following approved Design Changes (ÅM – System)

2. Description: Single engine, two-seated high wing airplane, wooden wing/steel tube fuselage construction, T-tail, side by side seating configuration, fixed tri gear, air brakes on upper wing surface and pusher propeller

3. Equipment: Minimum Equipment:
   - 1 airspeed indicator (range up to 250 km/h)
   - 1 altimeter with mbar barometric dial
   - 1 magnetic compass with deviation table
   - 1 RPM indicator
   - 1 running time meter
   - 1 oil pressure gauge
   - 1 oil temperature gauge
   - 1 Voltmeter
   - 1 fuel pressure indicator
   - 2 fuel quantity gauge
   - 1 stall warning indicator
   - 1 at least 4-point harness for each seat
   - 1 Masterwitch
   - 1 Current protection (circuit protection)
   - 1 Generator and 1 Battery

4. Dimensions:
   - Span 16,4 m
   - Length 8,0 m
   - Height 2,45 m
   - Wing Area 19,067 m²

5. Engines: VW-HB-2400 G or G/2 (see Note 5)
   Engine Type Certificate Data Sheet: ACG 4/82

   5.1 Engine Limits:
   - Max take-off rotational speed 4000 r.p.m.
   - Max continuous rotational speed 3600 r.p.m

   For power-plants limits refer to Flight Manual,

6. (Reserved)
7. Propellers:

1. Hoffmann HO 14 C-172 130 LD or
   Propeller Type Certificate Data Sheet: LBA 32.110/1
   Reduction Gearing Ratio: 1:1.55 +/- 5%

2. Mühlbauer MT 172 LD 130-SC or
   Propeller Type Certificate Data Sheet: EASA P.006
   Reduction Gearing Ratio: 1:1.55 +/- 5%

   Propeller Type Certificate Data Sheet: LBA 32.110/12
   Reduction Gearing Ratio: 1:1.94 +/- 5% (see Note 3)

7.1 Settings

Low pitch setting/ Static RPM:

8. Fluids:

8.1 Fuel:

AVGAS 100 LL or
Automotive Gasoline,
Leaded/unleaded min ROZ 98
(see Note 4)

8.2 Oil:

quality automotive oils
Castrol GTX2 or any HD SAE 15W40
(see Flight Manual)

9. Fluid capacities:

9.1 Fuel: Standard Fuel Tank
Total: 76 (2x 38) liters
Usable: 75 liters
Optional Fuel tank
Total: 100 (2x 50) liters
Usable: 99 liters

9.2 Oil:

Maximum: 4.0 liters
Minimum: 3.0 liters

10. Air Speeds:

Design Manoeuvring Speed \( v_A \): 173 km/h

Maximum rough air speed \( v_{\text{Rmax}} \): 173 km/h.

Never exceed speed \( v_{\text{NE}} \): 200 km/h

11. Maximum Operating Altitude:

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12. Allweather Capability:

Day/Night-VFR

13. Maximum Masses:

Take-off
760 kg

Maximum mass of non lifting parts
550 kg

14. Centre of Gravity Range:

Forward limit
2,360 m behind Datum
Rear limit:
2,540 m behind Datum
15. Datum: 2,00 m in front of wing leading edge at root rib 2

16. (reserved)

17. Levelling Means: top of fuselage aft of propeller horizontal

18. Minimum Flight Crew: 1 (Pilot)

19. Maximum Passenger Seating Capacity: 1

20. (Reserved)

21. Baggage / Cargo Compartments
   Behind Seats 10 kg

22. Wheels and Tyres
   Main/Tail Wheel Tyre Size For approved Types and rating see AMM

A.IV. Operating and Service Instructions

   Airplane Flight Manual (AFM)
   Airplane Flight Manual HB 23 Serie, Issue Nov. 2018, EASA approved (German Version) see Note 7

   Airplane Maintenance Manual (AMM)
   (incl. Airworthiness Limitations)
   Maintenance Manual, Issue January 1986, (German Version)

   Engine Manual – VW-HB-2400 G/2, Issue September 1085 or later approved Issue

   Hoffmann, Operation and Maintenance Manual for the HOCO propeller, latest Issue or Mt Propeller, Installation and Operating manual E-112 latest issue

Service Informations and Service Bulletins
All Master Manuals are issued in German Language only
Notes

1. Only industrial manufacturing is permitted.

2. Glider and Banner towing is approved if the following additional equipment must be installed:
   - 1 cylinder head temperature gauge
   - 1 Tow indicator in the instrument panel
   - 1 coupling type Tost E75/E85
   - 1 mirror

3. The modification to the four blade propeller assembly and modification of the reduction gearing is approved with TM HB-23/25/96

4. Use of unleaded automotive fuel SUPER PLUS 98 EN 228 (ÖNorm C1100), min. ROZ 98, in accordance with TM/HB/23/23/93, latest issue, with max 5% Ethanol/Methanol is permitted

5. Initial Certification carried out by the Austrian Aviation Authority – Bundesamt für Zivilflufahrt renamed to Austro Control

6. The certification applies to SNo. 23.005 up to 23.048 inclusive.

7. Flight Manual HB 23/2400 issued January 1986 has been replaced by an HB 23 Series flight manual valid for all variants.

8. Night VFR has been initially approved within the Austrian national type certification. Additional equipment in accordance to flight manual supplement E must be installed.
SECTION 2 HB 23/2400 SP

B.I. General

1. a) Type: HB 23/2400
   b) Variant: HB 23/2400 SP

2. Airworthiness Category: Utility

3. Type Certificate Holder:
   HB-Flugtechnik GmbH
   Dr. Adolf Schärfstraße 42
   A-4053 Haid
   Austria
   www.hb-flugtechnik.at

4. Manufacturer:
   HB Aircraft Industries AG
   Luftfahrzeug Aktiengesellschaft
   A-4053 Haid
   Austria

5. Certification Application Date: ---

6. BAZ/ACG Certification Date: Nov 1985 see Note 4,5

7. The EASA Type Certificate replaces the Austrian Type Certificate SF 10/85

8. EASA Certification Date: ---

B.II. Certification Basis

1. Reference Date for determining the applicable requirements: ---

2. (Reserved)

3. (Reserved)


6. Requirements elected to comply: None

7. Special Conditions: None

8. Exemptions: None


An agency of the European Union
10. Environmental Standards: Zivilflugzeug-Lärmzulässigkeitverordnung
BGBl. 700/1986 and 738/1993

B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Drawing Set and following approved Design Changes (ÄM – System)

2. Description: Single engine, two-seated high wing airplane, wooden wing/steel tube fuselage construction, T-tail, side by side seating configuration, fixed tri gear, air brakes on upper wing surface, pusher propeller cowl flaps and wheel fairings (see Note 10)

3. Equipment: Minimum Equipment:
- 1 airspeed indicator (range up to 250 km/h)
- 1 altimeter with mbar barometric dial
- 1 magnetic compass with deviation table
- 1 RPM indicator
- 1 running time meter
- 1 oil pressure gauge
- 1 oil temperature gauge
- 1 Voltmeter
- 1 fuel pressure indicator
- 2 fuel quantity gauge
- 1 stall warning indicator
- 1 at least 4-point harness for each seat
- 1 Masterwitch
- 1 Currentprotection (circuit protection)
- 1 Generator and 1 Battery
- 1 optical and acoustical warning for closed cowl flaps

4. Dimensions:
- Span 16,40 m
- Length 8,00 m
- Height 2,45 m
- Wing Area 19,067 m²

5. Engines: VW-HB-2400 G/2
Engine Type Certificate Data Sheet: ACG TW 4/82

5.1 Engine Limits:
- Max take-off rotational speed 4000 r.p.m.
- Max continuous rotational speed 3600 r.p.m

For power-plants limits refer to Flight Manual,

6. (Reserved)

7. Propellers: (see Note 10)
- 1 Hoffmann HO 14 C -172 130 LD or
Propeller Type Certificate Data Sheet: LBA 32.110/1
- Reduction Gearing Ratio 1:1,55 + - 5%

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Proprietary document. Copies are not controlled. Confirm revision status through the EASA-Internet/Intranet.
2 Mühlbauer MT 172 LD 130-SC or
Propeller Type Certificate Data Sheet: EASA.P.006
Reduction Gearing Ratio 1:1,55 +/− 5%

3 Mühlbauer MT 172 LD 145-2C in front with MT
167 LD 145-2C behind mounted 90° offset
Propeller Type Certificate Data Sheet: LBA 32.110/12
Reduction Gearing Ratio 1:1,94 +/− 5% (see Note 3)

7.2 Settings
Low pitch setting/ Static RPM: 3500+/− 200

8. Fluids:
8.1 Fuel: AVGAS 100 LL or
Automotive Gasoline,
Leaded/unleaded min ROZ 98
(see Note 4)

8.2 Oil: quality automotive oils
Castrol GTX 2 or any HD SAE 15W40
(see Flight Manual)

9. Fluid capacities:
9.1 Fuel: Standard Fuel Tank
Total: 76 (2x38) liters
Usable: 75 liters
Optional Fuel tank
Total: 100 (2x50) liters
Usable: 99 liters

9.2 Oil: Maximum: 4,0 liters
Minimum: 3,0 liters

10. Air Speeds:
Design Manoeuvring Speed $v_A$: 173 km/h

Maximum rough air speed $V_{ra}$: 173 km/h.

Never exceed speed $V_{NE}$: 200 km/h

11. Maximum Operating Altitude: ---

12. Allweather Capability: Day/Night VFR

13. Maximum Masses:
Take-off 760 kg
Maximum mass of non lifting parts 550 kg

14. Centre of Gravity Range:
Forward limit 2,360 m behind Datum
Rear limit: 2,540 m behind Datum

15. Datum: 2,00 m in front of wing leading edge at root rib 2

16. (reserved)
17. Levelling Means: top of fuselage aft of propeller horizontal

18. Minimum Flight Crew: 1 (Pilot)

19. Maximum Passenger Seating Capacity: 1

20. (Reserved)

21. Baggage / Cargo Compartments
    Behind Seats 10 kg

22. Wheels and Tyres
    Main/Tail Wheel Tyre Size For approved Types and rating, see AMM

**B.IV. Operating and Service Instructions**


Engine Manual – VW-HB-2400 G/2, Issue September 1985 or later approved issue

Hoffmann, Operation and Maintenance Manual for the HOCO propeller, latest Issue or Mt Propeller, Installation and Operating manual E-112 latest issue

**B.V. Notes**

1. Only industrial manufacturing is permitted.

2. Glider and Banner towing is approved if, the following additional equipment must be installed:
   - 1 cylinder head temperature gauge
   - 1 Tow indicator in the instrument panel
   - 1 coupling type Tost E75/E85
   - 1 mirror

3. The modification to the four blade propeller assembly and modification of the reduction gearing is approved with TM HB-23/23/93

4. Use of unleaded automotive fuel SUPER PLUS 98 EN 228 (ÖNorm C1100), min. ROZ 98, in accordance with TM/HB/23/23/93, latest issue, with max 5% Ethanol/Methanol is permitted

5. Initial Certification carried out by the Austrian Aviation Authority – Bundesamt für Zivilluftfahrt renamed to Austro Control
6. The certification applies to S/N 23.040 up to 23.048 inclusive.

   The conversion from model HB 23/2400 into variant HB 23/2400 SP is approved with TM 23/12/88, converted aircraft are identified with "U" after the Serial Number on the data plate.

7. The variant HB 23/2400 SP includes several modifications to improve the sailplane performance, the initial approval of the automatic feathering propeller HB-SVP-3E 170-160 LD is withdrawn, the Propeller Type certificate has bee revoked. The model HB 23/2400 SP conforms to BAZ approved equivalent level of safety finding 6285-2/31-85 dated 20.12.1985


9. Night VFR has been initially approved within the Austrian national type certification. Additional equipment in accordance to flight manual supplement E must be installed.
SECTION 3  HB 23/2400 Scanliner

C.I. General

1. a) Type: HB 23/2400  
b) Variant: HB 23/2400 Scanliner

2. Airworthiness Category: Utility

3. Type Certificate Holder: HB-Flugtechnik GmbH  
Dr. Adolf Schärfstraße 42  
A-4053 Haid  
Austria  
www hb-flugtechnik.at

4. Manufacturer: HB Brditschka GmbH & Co KG  
Fluhzeugbau  
A-4053 Haid  
Austria

5. Certification Application Date: ---

6. BAZ/ACG Certification Date: Nov 1985 see Note 6

7. The EASA Type Certificate replaces the Austrian Type Certificate SF 11/86

8. EASA Certification Date: ---

C.II. Certification Basis

1. Reference Date for determining the applicable requirements: ---

2. (Reserved)

3. (Reserved)


6. Requirements elected to comply: None

7. Special Conditions: None

8. Exemptions: None


C.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Drawing Set and following approved Design Changes (ÄM – System)

2. Description: Single engine, two-seated high wing airplane, wooden wing/steel tube fuselage construction, T-tail, side by side seating configuration, fixed tri gear, air brakes on upper wing surface, pusher propeller and full view bubble canopy

3. Equipment: Minimum Equipment:
   1. airspeed indicator (range up to 250 km/h)
   1. altimeter with mbar barometric dial
   1. magnetic compass with deviation table
   1. RPM indicator
   1. running time meter
   1. oil pressure gauge
   1. oil temperature gauge
   1. Voltmeter
   1. fuel pressure indicator
   2. fuel quantity gauge
   1. stall warning indicator
   1. at least 4-point harness for each seat
   1. Masterwitch
   1. Current protection (circuit protection)
   1. Generator and 1 Battery

4. Dimensions:
   Span 16.40 m
   Length 7.35 m
   Height 2.45 m
   Wing Area 19.067 m²

5. Engines: VW-HB-2400 G/2
   Engine Type Certificate Data Sheet: ACG TW 4/82

   5.1 Engine Limits:
   Max take-off rotational speed 4000 r.p.m.
   Max continuous rotational speed 3600 r.p.m.

   For power-plants limits refer to Flight Manual,

6. (Reserved)

7. Propellers: 1 Hoffmann HO 14 C -172 130 LD or
   Propeller Type Certificate Data Sheet: LBA 32.110/1
Reduction Gearing Ratio 1:1,55 +/− 5%

2. Mühlbauer MT 172 LD 130-SC or
Propeller Type Certificate Data Sheet: EASA P.006
Reduction Gearing Ratio 1:1,55 +/− 5%

Propeller Type Certificate Data Sheet: LBA 32.110/12
Reduction Gearing Ratio 1:1,94 +/− 5% (see Note 3)

7.3 Settings
Low pitch setting/ Static RPM: 3500+/− 200

8. Fluids:
8.1 Fuel:
AVGAS 100 LL or
Automotive Gasoline,
Leaded/unleaded min ROZ 98
(see Note 4)

8.2 Oil:
quality automotive oils
Castrol GTX2 or any HD SAE 15W40
(see Flight Manual)

9. Fluid capacities:
9.1 Fuel: Standard Fuel Tank
Total: 76 (2x 38) liters
Usable: 75 liters

Optional Fuel tank
Total: 100 (2x 50) liters
Usable: 99 liters

9.2 Oil:
Maximum: 4,0 liters
Minimum: 3,0 liters

10. Air Speeds:
Design Manoeuvring Speed $v_A$:
173 km/h

Maximum rough air speed $V_{ra}$:
173 km/h.

Never exceed speed $V_{NE}$:
200 km/h

11. Maximum Operating Altitude:
---

12. Allweather Capability:
Day/Night-VFR

13. Maximum Masses:
Take-off
760 kg

Maximum mass of non lifting parts
550 kg

14. Centre of Gravity Range:
Forward limit
2,360 m behind Datum

Rear limit:
2,540 m behind Datum

15. Datum:
2,00 m in front of wing leading edge at root rib 2

16. (reserved)
17. Levelling Means:  top of fuselage aft of propeller horizontal

18. Minimum Flight Crew:  1 (Pilot)

19. Maximum Passenger Seating Capacity:  1

20. (Reserved)

21. Baggage / Cargo Compartments

| Behind Seats | 10 kg |

22. Wheels and Tyres

| Main/Tail Wheel Tyre Size | For approved Types and rating see AMM |

### C.IV. Operating and Service Instructions

- **Airplane Flight Manual (AFM)**
  Airplane Flight Manual HB 23 Serie, Issue Nov. 2018, EASA approved (German Version) see Note 8

- **Airplane Maintenance Manual (AMM)**
  Maintenance Manual, Issue November 1985, (German Version)

- **Engine Manual**
  Engine Manual – VW-HB-2400 G/2, Issue September 1085 or later approved Issue

- **Hoffmann, Operation and Maintenance Manual for the HOCO propeller, latest Issue or Mt Propeller, Installation and Operating manual E-112 latest issue**

#### Service Informations and Service Bulletins

All Master Manuals are issued in German Language only

### C.V. Notes

1. Only industrial manufacturing is permitted.

2. Glider and Banner towing is approved if, the following additional equipment must be installed:
   - 1 cylinder head temperature gauge
   - 1 Tow indicator in the instrument panel
   - 1 coupling type Tost E75/E85
   - 1 mirror

3. The modification to the four blade propeller assembly and modification of the reduction gearing is approved with TM HB-23/25/96

4. Use of unleaded automotive fuel SUPER PLUS 98 EN 228 (Önorm C1100), min. ROZ 98, in accordance with TM/HB/23/23/93, latest issue, with max 5% Ethanol/Methanol is permitted
5. Initial Certification carried out by the Austrian Aviation Authority – Bundesamt für Zivilfahrzeugtechnik renamed to Austro Control

6. The certification applies to Sno. 23.011-S-1 up to S-10. The “S” indicates the variant Scanliner with the running Sno.

7. The conversion from variant HB 23/2400 to HB 23/2400 Scanliner is approved with TM-HB-23/30/15. The original HB 23/2400 Sno. Remains unchanged. A supplemental data plate is installed.

8. Flight Manual HB 23/2400 SP issued Nov 1985 has been replaced by an HB 23 Series flight manual valid for all variants.

9. Night VFR has been initially approved within the Austrian national type certification. Additional equipment in accordance to flight manual supplement E must be installed.
## Change Record

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<td>Issue 1</td>
<td>07.Jan.2010</td>
<td>Transfer from ACG TCDS SF 10/85 issue 6, SF11/86 issue 3 and SF 14/87 issue 2 to the EASA Type Design</td>
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<tr>
<td>Issue 2</td>
<td>09.Jun.2017</td>
<td>Note for conversion from variant HB 23/2400 to HB 23/2400 Scanliner with TM-HB-23/30/15 added (EASA project no 0010041403-001), removed Variant HB 23/2400 V2 as the only eligible Sno. 23002 was destroyed, editorial changes</td>
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<td>Issue 3</td>
<td>4.Dec.2018</td>
<td>EASA Project 0060061527</td>
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<tr>
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<td>Flight Manual update and issuance of a HB 23 Series manual including revised runup procedure and caution for engine rough running, Night VFR</td>
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<td>Supplement and fuel specification, editorial changes</td>
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<td>A.III.12, A.IV, A Note 4,7,8</td>
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<td>C.III.12, C.IV, C Note 4,8,9</td>
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<td>Issue 4</td>
<td>3. March 2021</td>
<td>Administrative correction to include Night VFR for the HB-23/2400 SP</td>
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