

## TYPE CERTIFICATE

**EASA.A.453**

This Type Certificate is issued by EASA, acting in accordance with Regulation (EC) No. 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation and in accordance with Commission Regulation (EU) No. 748/2012 to

### **AEROCLUBUL ROMANIEI**

**LASCAR CATARGIU NR. 54  
010673 BUCURESTI  
ROMANIA**

and certifies that the product type design listed below complies with the applicable Type Certification Basis and environmental protection requirements when operated within the conditions and limitations specified on the associated:

Type Certificate Data Sheet Number: EASA.A.453

#### **Type Design - Model:**

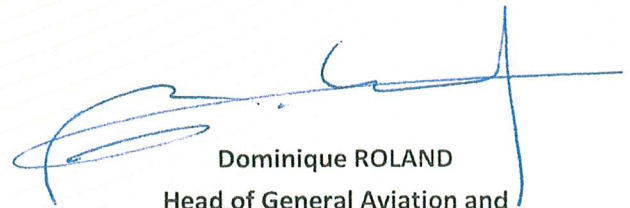
IS sailplanes - IS-28B2  
IS sailplanes - IS-28M2  
IS sailplanes - IS-28M2/80HP  
IS sailplanes - IS-28M2/G  
IS sailplanes - IS-28M2/GR  
IS sailplanes - IS-29D  
IS sailplanes - IS-29D2  
IS sailplanes - IS-30  
IS sailplanes - IS-32A

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**Dominique ROLAND**  
**Head of General Aviation and**  
**Remotely Piloted Aircraft Systems (RPAS)**

TYPE CERTIFICATE - 10026206 - AEROCLUBUL ROMANIEI - 307908





**EASA**

**TYPE-CERTIFICATE  
DATA SHEET**

**EASA.A.453**

**IS sailplanes**

Type Certificate Holder:

Aeroclubul Romaniei  
Bd.Lascar Catargiu, Nr.54, cod: 010673  
Sector 1, Bucharest  
Romania

Models: IS-29D  
IS-29D2  
IS-28B2  
IS-28M2  
IS-28-M2/80HP  
IS-28M2/G  
IS-28M2/GR  
IS-30  
IS-32A

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## **Section A: IS-29D**

### **A.I. General**

Allgemeines

- |   |  |
|---|--|
| 1. Data Sheet No.:<br>Kennblatt-Nr.   | EASA.A.453 (since 23.08.2016 before A.452)   |
| 2. a) Type: (Muster)<br>b) Variant: (Baureihe)                                    | IS-29D<br>IS-29D   |
| 3. Airworthiness Category:<br>Lufttüchtigkeitskategorie :                         | Sailplane, OSTIV – Normal "N"  |
| 4. Type Certificate Holder:<br>Halter der Musterzulassung                         | Aeroclubul Romaniei<br>Bd.Lascar Catargiu, Nr.54, cod: 010673<br>Sector 1, Bucharest<br>Romania  |
| 5. Manufacturer:<br>Hersteller  | S.C. Constructii Aeronautice S.A<br>Str. Aeroportului Nr. 1<br>507075 Ghimbav, Brasov<br>Romania |
| 6. Certification Application Date:<br>Datum der Antragstellung                    | November 14, 1970  |
| 7. Romanian CAA Certification Date:   | August 11, 1973  |
| 8. The EASA Type Certificate replaces the Romanian CAA Type Certificate No. PN-01 |  |

### **A.II. Certification Basis**

Zulassungsbasis

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|--|--|
| 1. Certification Basis:<br>Zulassungsbasis:                    | C. Av. C. DTA letter nr. /June 15, 1971  |
| 2. Airworthiness Requirements:<br>Lufttüchtigkeitsforderungen: | OSTIV Airworthiness Requirements for Sailplanes, issue 1966  |
| 3. Requirements elected to comply:<br>Gewählte Forderungen:    | None   |
| 4. Special Conditions:<br>Sonderforderungen:                   | None   |
| 5. Exemptions:<br>Ausnahmen:                                   | The following paragraphs are excepted from the Certification Basis:<br><br>Par.2.531 the sailplane is capable of performing sideslip only at bank angle of 10° instead of 15°<br><br>Par.2.72 the sailplane meets the requirements of OSTIV issue 1, paragraph 2.71 i.e. it is capable to demonstrate the efficiency of air-brakes at any angle up to 45° at all speeds below the value of V <sub>NE</sub><br><br>Par.5.121 for sailplanes S/N 21 to 35 only : the highest stress taken in consideration during the design and calculation for the commercial material used for the following parts : <ul style="list-style-type: none"><li>▪ 29D-12.01-200, 201, 240, 241 master fitting</li><li>▪ 29D-12.01-202, 203 master bolt</li></ul> |

- 29D-11.02-0125 rudder bar, when applying loads at ultimate stress, is 100% of the generally accepted values, instead of 75% .

Note: The materials used for the above mentioned parts are going to be approved as aviation materials. During static tests, parts manufactured from these materials demonstrated that at 100% load of the generally accepted values, no fractures occurred.

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|----|---|------|
| 6. | Equivalent Safety Findings:<br>Nachweise gleichwertiger Sicherheit: | None |
| 7. | Environmental Standard<br>Lärmschutzforderungen:                    | None |

### **A.III. Technical Characteristics and Operational Limitations**

Technische Merkmale und Betriebsgrenzen

- |                |   |  |           |         |              |         |                |         |           |                       |
|----------------|---|--|-----------|---------|--------------|---------|----------------|---------|-----------|-----------------------|
| 1.             | Type Design Definition:<br>Musterdefinition:      | Document No. 29D-0001, current issue   |           |         |              |         |                |         |           |                       |
| 2.             | Description:<br>Beschreibung:                     | single-seat sailplane, metallic construction, "T"- tail  |           |         |              |         |                |         |           |                       |
| 3.             | Equipment:<br>Ausrüstung:                         | Mandatory equipment according to Aircraft Flight Manual, Chapter 1.4.11.1  |           |         |              |         |                |         |           |                       |
| 4.             | Dimensions:<br>Abmessungen:                       | <table border="0"> <tr> <td>Wing Span</td> <td>15,000m</td> </tr> <tr> <td>Total Length</td> <td>7,300 m</td> </tr> <tr> <td>Maximum Height</td> <td>1,640 m</td> </tr> <tr> <td>Wing Area</td> <td>10,400 m<sup>2</sup></td> </tr> </table> | Wing Span | 15,000m | Total Length | 7,300 m | Maximum Height | 1,640 m | Wing Area | 10,400 m <sup>2</sup> |
| Wing Span      | 15,000m   |  |           |         |              |         |                |         |           |                       |
| Total Length   | 7,300 m   |  |           |         |              |         |                |         |           |                       |
| Maximum Height | 1,640 m   |  |           |         |              |         |                |         |           |                       |
| Wing Area      | 10,400 m <sup>2</sup>                             |  |           |         |              |         |                |         |           |                       |
| 5.             | Engines<br>Triebwerk                              | N/A  |           |         |              |         |                |         |           |                       |
|                | 5.1 Engine Limits<br>Triebwerksgrenzwerte         | N/A  |           |         |              |         |                |         |           |                       |
| 6.             | Propellers<br>Propeller:                          | N/A  |           |         |              |         |                |         |           |                       |
| 7.             | Fluids and Fluid capacities:<br>Kraftstoffmengen: | N/A  |           |         |              |         |                |         |           |                       |
| 8.             | Launching Hooks:<br>Schleppkupplungen:            | Nose and center of gravity tow hooks TOST „E72G”/”E73G”  |           |         |              |         |                |         |           |                       |
| 9.             | Weak links:<br>Sollbruchstellen:                  | For winch launching or aero-tow: 500daN  |           |         |              |         |                |         |           |                       |

10.	Air Speeds: Geschwindigkeiten:	Never exceed speed km/h IAS	$V_{NE}$	225
		Demonstrated diving speed km/h CAS	$V_{DF}$	236
		Maxim operating speed with wing flaps fully deflected km/h CAS	$V_{FO}$	150
		Stalling speed CAS	$V_S$	75 km/h
		Maximum landing gear operating speed km/h IAS	$V_{LG}$	140
		Maximum aerotow speed - undisturbed air	$V_T$	140
		- gust of $\pm 10$ m/s	$V_T$	120
		Maximum winch launching speed km/h IAS	$V_w$	110
11.	Operational Capability Betriebsart	Approved for VFR - day Cloud flying approved according to Aircraft Flight Manual Chapter 4.4.3. Fly by night prohibited.		
12.	Maximum Masses: Höchstzulässige Massen:	Take-off	360 kg	
13.	Centre of Gravity Range: Schwerpunktsbereich:	Datum: leading edge of wing root rib Leveling means: Longitudinal axis: marked points on fuselage sides Lateral axis: marked points on left and right wing (see AFM) Forward Limit           16% of MAC Rearward Limit         43% of MAC		
14.	Seating Capacity: Anzahl der Sitze:	1		
15.	Lifetime limitations: Lebensdauerbegrenzte Teile:	Refer to Aircraft Flight Manual (AFM) Siehe Wartungshandbuch		
16.	Deflection of control surfaces: Ruderausschläge	Refer to Aircraft Flight Manual (AFM) Siehe Wartungshandbuch		

#### **A.IV. Operating and Service Instructions**

Betriebs- und Instandhaltungsanweisungen

1. Aircraft Flight Manual issue 2 / Amd 17 or later amd. approved by the Agency (AFM)
2. Aircraft Maintenance Manual issue 1 / Amd 20 or later amd. approved by the Agency (AMM)

**A.V. Notes**

Bemerkungen

1. The Type Certificate No. PN-01 was initially issued on 11.08.1973, for Intreprinderea de Construcții Aeronautice Brașov, which has changed its name in S.C. IAR S.A. Brașov since January 1991. Since December 2004, this Type Certificate has been transferred to its present Holder, S.C. Construcții Aeronautice S.A. Brașov.



## **Section B: IS-29D2**

### **B.I. General**

Allgemeines

- |   |  |
|---|--|
| 1. Data Sheet No.:<br>Kennblatt-Nr.   | EASA.A.453 (since 23.08.2016 before A.452)   |
| 2. a) Type: (Muster)<br>b) Variant: (Baureihe)                                    | IS-29D<br>IS-29D2  |
| 3. Airworthiness Category:<br>Lufttüchtigkeitskategorie :                         | Sailplane, OSTIV - Normal "N"  |
| 4. Type Certificate Holder:<br>Halter der Musterzulassung                         | Aeroclubul Romaniei<br>Bd.Lascar Catargiu, Nr.54, cod: 010673<br>Sector 1, Bucharest<br>Romania  |
| 5. Manufacturer:<br>Hersteller  | S.C. Constructii Aeronautice S.A<br>Str. Aeroportului Nr. 1<br>507075 Ghimbav, Brasov<br>Romania |
| 6. Certification Application Date:<br>Datum der Antragstellung                    | December 18, 1974  |
| 7. Romanian CAA Certification Date:   | May 12, 1976   |
| 8. The EASA Type Certificate replaces the Romanian CAA Type Certificate No. PN-06 |  |

### **B.II. Certification Basis**

Zulassungsbasis

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|--|---|
| 1. Certification Basis:<br>Zulassungsbasis:                            | D. Av. C. letter nr. 128/January 6, 1975  |
| 2. Airworthiness Requirements:<br>Lufttüchtigkeitsforderungen:         | OSTIV Airworthiness Requirements for Sailplanes, issue 1966   |
| 3. Requirements elected to comply:<br>Gewählte Forderungen:            | None  |
| 4. Special Conditions:<br>Sonderforderungen:                           | None  |
| 5. Exemptions:<br>Ausnahmen:   | None  |
| 6. Equivalent Safety Findings:<br>Nachweise gleichwertiger Sicherheit: | Par.2.71 "Capacity of Air Brakes" of OSTIV issue 1971 instead of par. 2.72 of OSTIV issue 1966<br>Par.3.26 "Gust loads" of OSTIV issue 1971 instead of par. 3.3 of OSTIV issue 1966 |
| 7. Environmental Standard<br>Lärmschutzforderungen:                    | None  |

### **B.III. Technical Characteristics and Operational Limitations**

Technische Merkmale und Betriebsgrenzen

1.	Type Design Definition: Musterdefinition:	Document No. 29D2-0001/0002, current issue	
2.	Description: Beschreibung:	single-seat sailplane, metallic construction, "T"- tail	
3.	Equipment: Ausrüstung:	Mandatory equipment according to Aircraft Flight and Maintenance Manual	
4.	Dimensions: Abmessungen:	Wing Span	15,000m
		Total Length	7,300 m
		Maximum Height	1,680 m
		Wing Area	10,300 m <sup>2</sup>
5.	Engines Triebwerk	N/A	
	5.1 Engine Limits Triebwerksgrenzwerte	N/A	
6.	Propellers Propeller:	N/A	
7.	Fluids and Fluid capacities: Kraftstoffmengen:	N/A	
8.	Launching Hooks: Schleppkupplungen:	Nose and center of gravity tow hooks TOST „E 72G”/”E73G”	
9.	Weak links: Sollbruchstellen:	For winch launching or aero-tow: 500daN	
10.	Air Speeds: Geschwindigkeiten:	Never exceed speed $V_{NE}$ IAS	225 km/h
		Maneuvering speed $V_M$ IAS	172 km/h
		Maximum speed in gust ( $\pm 15$ m/s) $V_B$ IAS	172 km/h
		Maxim speed with wing flaps fully deflected $V_F$ IAS	140 km/h
		Maximum landing gear extension speed $V_{LG}$ IAS	140 km/h
		Maximum aerotow speed $V_T$ IAS	140 km/h
		Maximum winch launching speed $V_W$ IAS	125 km/h
		Stalling speed in landing configuration $V_{SO}$ IAS	65 km/h
11.	Operational Capability Betriebsart	Approved for VFR - day Cloud flying approved according to Aircraft Flight and Maintenance Manual Fly by night prohibited.	

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|--|---|
| 12. Maximum Masses:<br>Höchstzulässige Massen:           | Take-off            360 kg  |
| 13. Centre of Gravity Range:<br>Schwerpunktsbereich:     | Datum: leading edge of wing root rib<br>Leveling means:<br>Longitudinal axis: marked points on fuselage sides<br>Lateral axis: marked points on left and right wing (see AFM)<br>Forward Limit            18,75% of MAC<br>Rearward Limit           43,00% of MAC |
| 14. Seating Capacity:<br>Anzahl der Sitze:               | 1   |
| 15. Lifetime limitations:<br>Lebensdauerbegrenzte Teile: | Refer to Aircraft Flight Manual (AFMM)<br>Siehe Wartungshandbuch  |
| 16. Deflection of control surfaces:<br>Ruderausschläge   | Refer to Aircraft Flight Manual (AFMM)<br>Siehe Wartungshandbuch  |

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

Betriebs- und Instandhaltungsanweisungen

1. Aircraft Flight and Maintenance Manual issue 4 / Amd 10 or later amd. approved by the Agency (AFMM) – for S/N 1÷ 55
2. Aircraft Flight and Maintenance Manual issue 5 / Amd 21 or later amd. approved by the Agency (AFMM) – for S/N 56 and on

#### **B.V. Notes**

Bemerkungen

1. The Type Certificate No. PN-06 was initially issued on 12.05.1976, for Intreprinderea de Construcții Aeronautice Braşov, which has changed its name in S.C. IAR S.A. Braşov since January 1991. Since December 2004, this Type Certificate has been transferred to its present Holder, S.C. Construcții Aeronautice S.A. Braşov.

## **Section C: IS-28B2**

### **C.I. General**

Allgemeines

- |   |  |
|---|--|
| 1. Data Sheet No.:<br>Kennblatt-Nr.   | EASA.A.453   |
| 2. a) Type: (Muster)<br>b) Variant: (Baureihe)                                    | IS-28B2<br>IS-28B2   |
| 3. Airworthiness Category:<br>Lufttüchtigkeitskategorie :                         | Sailplane, OSTIV aerobatic "A" and utility "U"   |
| 4. Type Certificate Holder:<br>Halter der Musterzulassung                         | Aeroclubul Romaniei<br>Bd.Lascar Catargiu, Nr.54, cod: 010673<br>Sector 1, Bucharest<br>Romania  |
| 5. Manufacturer:<br>Hersteller  | S.C. Constructii Aeronautice S.A<br>Str. Aeroportului Nr. 1<br>507075 Ghimbav, Brasov<br>Romania |
| 6. Certification Application Date:<br>Datum der Antragstellung                    | December 23, 1974  |
| 7. Romanian CAA Certification Date:   | February 28, 1975  |
| 8. The EASA Type Certificate replaces the Romanian CAA Type Certificate No. PN-03 |  |

### **C.II. Certification Basis**

Zulassungsbasis

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|--|--|
| 1. Certification Basis:<br>Zulassungsbasis:                            | C. Av. C-Tarom letter nr. 586/January 15, 1975   |
| 2. Airworthiness Requirements:<br>Lufttüchtigkeitsforderungen:         | OSTIV Airworthiness Requirements for Sailplanes, issue 1971  |
| 3. Requirements elected to comply:<br>Gewählte Forderungen:            | None   |
| 4. Special Conditions:<br>Sonderforderungen:                           | None   |
| 5. Exemptions:<br>Ausnahmen:   | The following paragraphs are excepted from the Certification Basis:<br><br>Par.2.72 up to S/N 55, the extension of the air-brakes is permitted up to only 85% V <sub>NE</sub><br><br>Par.3.54 and Par.4.562 the stretch and operational test results for elevator and rudder control system do not comply with the requirements<br><br>Par.4.331 ground vibration tests have not been performed. |
| 6. Equivalent Safety Findings:<br>Nachweise gleichwertiger Sicherheit: | None   |
| 7. Environmental Standard<br>Lärmschutzforderungen:                    | None   |

### **C.III. Technical Characteristics and Operational Limitations**

Technische Merkmale und Betriebsgrenzen

1.	Type Design Definition: Musterdefinition:	Document No. 28B2-0016, current issue	
2.	Description: Beschreibung:	double-seat (tandem) sailplane, metallic construction, partial retractable landing gear, "T"- tail	
3.	Equipment: Ausrüstung:	Mandatory equipment according to Aircraft Flight and Maintenance Manual, Chapter 6.4.7	
4.	Dimensions: Abmessungen:	Wing Span                   17,000m Total Length               8,450 m Maximum Height          1,870 m Wing Area                   18,240 m <sup>2</sup>	
5.	Engines Triebwerk	N/A	
	5.1 Engine Limits Triebwerksgrenzwerte	N/A	
6.	Propellers Propeller:	N/A	
7.	Fluids and Fluid capacities: Kraftstoffmengen:	N/A	
8.	Launching Hooks: Schleppkupplungen:	Nose and center of gravity tow hooks TOST „E 72G”/”E73G”	
9.	Weak links: Sollbruchstellen:	For winch launching or aero-tow: 500daN	
10.	Air Speeds: Geschwindigkeiten:	Never exceed speed $V_{NE}$ km/h IAS	230
		Demonstrated diving speed $V_{DF}$ km/h IAS	240
		Maxim operating speed with wing flaps fully deflected $V_{FO}$ km/h IAS	130
		Maximum landing gear operating speed $V_{LO}$ km/h IAS	140
		Maximum aerotow speed $V_T$ km/h IAS	140
		Maximum winch launching speed $V_w$ km/h IAS	125
		Maximum speed in gust ( $\pm 15$ m/s) $V_B$ km/h IAS	165
		Stalling speed in landing configuration $V_{so}$ km/h IAS	65

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|--|---|
| 11. Operational Capability<br>Betriebsart                | Approved for VFR - day<br>Cloud flying approved according to Aircraft Flight and Maintenance Manual Chapter 3.4.3.<br>Fly by night prohibited.  |
| 12. Maximum Masses:<br>Höchstzulässige Massen:           | Take-off – aerobatic category<br>"A" 520 kg<br>Take-off – utility category<br>"U" 590 kg  |
| 13. Centre of Gravity Range:<br>Schwerpunktsbereich:     | Datum: first fuselage panel<br>Leveling means:<br>Longitudinal axis: marked points on fuselage sides<br>Lateral axis: marked points on left and right wing<br>(see AFMM)<br>Forward Limit 22% of MAC<br>Rearward Limit 47% of MAC |
| 14. Seating Capacity:<br>Anzahl der Sitze:               | 2   |
| 15. Lifetime limitations:<br>Lebensdauerbegrenzte Teile: | Refer to Aircraft Flight and Maintenance Manual (AFMM)<br>Siehe Wartungshandbuch  |
| 16. Deflection of control surfaces:<br>Ruderausschläge   | Refer to Aircraft Flight and Maintenance Manual (AFMM)<br>Siehe Wartungshandbuch  |

#### **C.IV. Operating and Service Instructions**

Betriebs- und Instandhaltungsanweisungen

1. Aircraft Flight and Maintenance Manual issue 2 / Amd 24 or later amd. approved by the Agency (AFMM) – for S/N 1÷140
2. Aircraft Flight and Maintenance Manual issue 3 / Amd 39 or later amd. approved by the Agency (AFMM) – for S/N 141 and on

#### **C.V. Notes**

Bemerkungen

2. The Type Certificate No. PN-03 was initially issued on 28.02.1975, for Intreprinderea de Construcții Aeronautice Braşov, which has changed its name in S.C. IAR S.A. Braşov since January 1991. Since December 2004, this Type Certificate has been transferred to its present Holder, S.C. Construcții Aeronautice S.A. Braşov.

## **Section D: IS-28M2**

### **D.I. General**

Allgemeines

- |   |  |
|---|--|
| 1. Data Sheet No.:<br>Kennblatt-Nr.   | EASA.A.453 (since 23.08.2016 before A.454)   |
| 2. a) Type: (Muster)<br>b) Variant: (Baureihe)                                    | IS-28M2<br>IS-28M2   |
| 3. Airworthiness Category:<br>Lufttüchtigkeitskategorie :                         | Powered Sailplane, OSTIV – Utility “U”   |
| 4. Type Certificate Holder:<br>Halter der Musterzulassung                         | Aeroclubul Romaniei<br>Bd.Lascar Catargiu, Nr.54, cod: 010673<br>Sector 1, Bucharest<br>Romania  |
| 5. Manufacturer:<br>Hersteller  | S.C. Constructii Aeronautice S.A<br>Str. Aeroportului Nr. 1<br>507075 Ghimbav, Brasov<br>Romania |
| 6. Certification Application Date:<br>Datum der Antragstellung                    | October 24, 1976   |
| 7. Romanian CAA Certification Date:   | November 12, 1977  |
| 8. The EASA Type Certificate replaces the Romanian CAA Type Certificate No. MP-02 |  |

### **D.II. Certification Basis**

Zulassungsbasis

- |  |  |
|--|--|
| 1. Certification Basis:<br>Zulassungsbasis:                    | D. Av. C. letter nr. 34134/November 10, 1976   |
| 2. Airworthiness Requirements:<br>Lufttüchtigkeitsforderungen: | OSTIV Airworthiness Requirements for Sailplanes, issue 1971  |
| 3. Requirements elected to comply:<br>Gewählte Forderungen:    | None   |
| 4. Special Conditions:<br>Sonderforderungen:                   | None   |
| 5. Exemptions:<br>Ausnahmen:                                   | The following paragraphs are excepted from the Certification Basis:<br><br>Par. 1.5 Up to S/N 40, the maximum allowed weight for pilots is less than 180 kgf<br><br>Par. 2.71 Drag-increasing devices ensure an angle to the horizon of 25° at V <sub>NE</sub><br><br>Par. 3.251 Up to S/N 40, the maximum allowed load factor is +5,0 g<br><br>Par. 4.121 Up to S/N 30, the parts which are not manufactured of aviation approved materials are oversized, in order to provide a safety factor of at least 1,95<br><br>Par. 4.331 The ground vibration tests were not carried out |

Par. 4.332 Aero-elastic phenomena were studied only by flight tests,  
without records

Par. 5.12a

Beginning with S/N 41, the maximum allowed flight weight is  
760 kgf

- |    |   |      |
|----|---|------|
| 6. | Equivalent Safety Findings:<br>Nachweise gleichwertiger Sicherheit: | None |
| 7. | Environmental Standard<br>Lärmschutzforderungen:                    | None |

### **D.III. Technical Characteristics and Operational Limitations**

Technische Merkmale und Betriebsgrenzen

- |    |   |   |                       |
|----|---|---|-----------------------|
| 1. | Type Design Definition:<br>Musterdefinition:      | Document No. 28M2.00.0006, current issue  |                       |
| 2. | Description:<br>Beschreibung:                     | Double-seat (side-by-side) powered sailplane, metallic construction, partially retractable landing gear with dampers, "T"-tail. |                       |
| 3. | Equipment:<br>Ausrüstung:                         | Mandatory equipment according to Flight and Maintenance Manual, Chapter 2..7  |                       |
| 4. | Dimensions:<br>Abmessungen:                       | Wing Span   | 17,000 m              |
|    |   | Total Length  | 7,800 m               |
|    |   | Maximum Height  | 2,150 m               |
|    |   | Wing Area   | 18,240 m <sup>2</sup> |
|    |   | Mean aerodynamic chord  | 1,108 m               |
| 5. | Engines<br>Triebwerk                              | Model:  | Limbach SL 1700 E1    |
|    |   | Type Certificate:   | EASA.E.082            |
|    | 5.1 Engine Limits<br>Triebwerksgrenzwerte         | Maximum Take-off Power  | 50 kW at 3600 RPM     |
|    |   | Maximum continuous Power  | 44 kW at 3200 RPM     |
| 6. | Propellers<br>Propeller:                          | Hoffmann HO-V62-R/L 160BT or 160T   |                       |
| 7. | Fluids and Fluid capacities:<br>Kraftstoffmengen: | Fuselage tank<br>Rumpftank  | 40 liters             |
| 8. | Launching Hooks:<br>Schleppkupplungen:            | None  |                       |
| 9. | Weak links:<br>Sollbruchstellen:                  | None  |                       |



10.	Air Speeds: Geschwindigkeiten:	Never exceed speed $V_{NE}$	210 km/h IAS
		Maneuvering speed $V_A$	170 km/h IAS
		Maximum speed in rough air $V_B$	170 km/h IAS
		Maxim operating speed with wing flaps fully deflected $V_{FO}$	140 km/h IAS
		Maxim landing gear operating speed $V_{LO}$	210 km/h IAS
		Stalling speed in cruise configuration $V_{S1}$	75 km/h IAS
11.	Operational Capability Betriebsart	VFR-day allowed except icing condition Cloud flying prohibited Fly by night prohibited Inverted flying with engine operating prohibited	
12.	Maximum Masses: Höchstzulässige Massen:	Take-off	745 kg up to S/N 40 760 kg from S/N 41 on
13.	Centre of Gravity Range: Schwerpunktsbereich:	Datum: 2m in front of the leading edge of wing root rib Leveling means: Longitudinal axis: marked points on fuselage sides Lateral axis: marked points on left and right wing (see AFMM)	
		Forward Limit	21,4% of MAC
		Rearward Limit	35,0% of MAC
14.	Seating Capacity: Anzahl der Sitze:	2	
15.	Lifetime limitations: Lebensdauerbegrenzte Teile:	Refer to Aircraft Flight and Maintenance Manual (AFMM)	
16.	Deflection of control surfaces: Ruderausschläge	Refer to Aircraft Flight and Maintenance Manual (AFMM)	

#### **D.IV. Operating and Service Instructions**

Betriebs- und Instandhaltungsanweisungen

1. Aircraft Flight and Maintenance Manual issue 2 / Amd 31 or later amd. approved by the Agency (AFMM) for S/N 1÷40
2. Aircraft Flight and Maintenance Manual issue 2 / Amd 14 or later amd. approved by the Agency (AFMM) for S/N 41 and on

#### **D.V. Notes**

Bemerkungen

1. Current weight and balance data, loading information and a list of equipment included in empty weight must be provided for each aeroplane at the time of original certification.
2. All placards required in the approved AFMM must be installed in the appropriate location.

## **Section E: IS-28M2/80HP**

### **E.I. General**

Allgemeines

- |   |  |
|---|--|
| 1. Data Sheet No.:<br>Kennblatt-Nr.   | EASA.A.453 (since 23.08.2016 before A.454)   |
| 2. a) Type: (Muster)<br>b) Variant: (Baureihe)                                    | IS-28M2<br>IS-28-M2/80HP   |
| 3. Airworthiness Category:<br>Lufttüchtigkeitskategorie :                         | Powered Sailplane, OSTIV – Utility “U”   |
| 4. Type Certificate Holder:<br>Halter der Musterzulassung                         | Aeroclubul Romaniei<br>Bd.Lascar Catargiu, Nr.54, cod: 010673<br>Sector 1, Bucharest<br>Romania  |
| 5. Manufacturer:<br>Hersteller  | S.C. Constructii Aeronautice S.A<br>Str. Aeroportului Nr. 1<br>507075 Ghimbav, Brasov<br>Romania |
| 6. Certification Application Date:<br>Datum der Antragstellung                    | July 3, 1981   |
| 7. Romanian CAA Certification Date:   | September 30, 1981   |
| 8. The EASA Type Certificate replaces the Romanian CAA Type Certificate No. MP-04 |  |

### **E.II. Certification Basis**

Zulassungsbasis

- |  |   |
|--|---|
| 1. Certification Basis:<br>Zulassungsbasis:                            | D.Av. C. letter nr. 11223/July 25, 1981   |
| 2. Airworthiness Requirements:<br>Lufttüchtigkeitsforderungen:         | Airworthiness Requirements NTAZ Part 2 “Sailplanes and powered sailplanes”, Issue 1978 / OSTIV Issue 1976   |
| 3. Requirements elected to comply:<br>Gewählte Forderungen:            | None  |
| 4. Special Conditions:<br>Sonderforderungen:                           | None  |
| 5. Exemptions:<br>Ausnahmen:   | Paragraph 5.1.2.3.(a) – “Maximum weight” from NTAZ 2, 1978 / OSTIV, 1976 has been replaced with JAR-22.1(a)(2)  |
| 6. Equivalent Safety Findings:<br>Nachweise gleichwertiger Sicherheit: | CESZ-044 In regard of NTAZ Part 2, 1978 /OSTIV, 1976 par. 2.7.1 – Air brakes capability<br>CESZ-045 In regard of NTAZ Part 2, 1978 /OSTIV, 1976 par. 4.3.3 – Aeroelastic phenomena<br>CESZ-048 In regard of NTAZ Part 2, 1978 /OSTIV, 1976 par. 5.3.2 – Propeller clearance |
| 7. Environmental Standard<br>Lärmschutzforderungen:                    | Noise: Acoustical certification standard STAS 10922/1-77 (similar with ICAO Annex 16 Third Edition, 1993, Part 2, Vol. 1, Chapter 6 )   |

### **E.III. Technical Characteristics and Operational Limitations**

Technische Merkmale und Betriebsgrenzen

- |     |   |  |                       |
|-----|---|--|-----------------------|
| 1.  | Type Design Definition:<br>Musterdefinition:      | Document No. 28M2.00.0006, current issue   |                       |
| 2.  | Description:<br>Beschreibung:                     | Double-seat (side-by-side) powered sailplane, metallic construction, partially retractable landing gear with dampers, "T"- tail.                 |                       |
| 3.  | Equipment:<br>Ausrüstung:                         | Mandatory equipment according to Aircraft Flight and Maintenance Manual, Chapter 2.7   |                       |
| 4.  | Dimensions:<br>Abmessungen:                       | Wing Span  | 17,000 m              |
|     |   | Total Length   | 7,800 m               |
|     |   | Maximum Height   | 2,150 m               |
|     |   | Wing Area  | 18,240 m <sup>2</sup> |
|     |   | Mean aerodynamic chord   | 1,108 m               |
| 5.  | Engines<br>Triebwerk                              | Model:   | Limbach L 2000 EO1    |
|     |   | Type Certificate:  | EASA.E.083            |
|     | 5.1 Engine Limits<br>Triebwerksgrenzwerte         | Maximum Take-off Power   | 59 kW at 3400 RPM     |
|     |   | Maximum continuous Power   | 58 kW at 2900 RPM     |
| 6.  | Propellers<br>Propeller:                          | Hoffmann HO-V62-R/L 160BT or 160T  |                       |
| 7.  | Fluids and Fluid capacities:<br>Kraftstoffmengen: | Fuselage tank  | 55 liters             |
|     |   | Rumpftank  |                       |
| 8.  | Launching Hooks:<br>Schleppkupplungen:            | None   |                       |
| 9.  | Weak links:<br>Sollbruchstellen:                  | None   |                       |
| 10. | Air Speeds:<br>Geschwindigkeiten:                 | Never exceed speed $V_{NE}$<br>IAS   | 220 km/h              |
|     |   | Maneuvering speed $V_A$<br>IAS   | 190 km/h              |
|     |   | Maximum speed in rough air $V_B$<br>IAS  | 190 km/h              |
|     |   | Maxim operating speed with<br>wing flaps fully deflected $V_{FO}$<br>IAS   | 140 km/h              |
|     |   | Maxim landing gear operating speed $V_{LO}$<br>IAS   | 220 km/h              |
|     |   | Stalling speed in cruise configuration $V_{S1}$<br>IAS   | 75 km/h               |
| 11. | Operational Capability<br>Betriebsart             | VFR-day allowed except icing condition<br>Cloud flying prohibited<br>Fly by night prohibited<br>Inverted flying with engine operating prohibited |                       |
| 12. | Maximum Masses:<br>Höchstzulässige Massen:        | Take-off:  | 760kg                 |

- |     |  |  |
|-----|--|--|
| 13. | Centre of Gravity Range:<br>Schwerpunktsbereich:     | Datum: 2m in front of the leading edge of wing root rib<br>Leveling means:<br>Longitudinal axis: marked points on fuselage sides<br>Lateral axis: marked points on left and right wing (see AFMM)<br>Forward Limit           21,4% of MAC<br>Rearward Limit         35,0% of MAC |
| 14. | Seating Capacity:<br>Anzahl der Sitze:               | 2  |
| 15. | Lifetime limitations:<br>Lebensdauerbegrenzte Teile: | Refer to Aircraft Flight and Maintenance Manual (AFMM)   |
| 16. | Deflection of control surfaces:<br>Ruderausschläge   | Refer to Aircraft Flight and Maintenance Manual (AFMM)   |

#### **E.IV. Operating and Service Instructions**

Betriebs- und Instandhaltungsanweisungen

1. Aircraft Flight and Maintenance Manual issue 1 / Amd 12 or later amd. approved by the Agency (AFMM)

#### **E.V. Notes**

Bemerkungen

1. The Type Certificate No. MP-04 was initially issued on 30.09.1981, for Intreprinderea de Construcții Aeronautice Braşov, which has changed its name in S.C. IAR S.A. Braşov since January 1991. Since December 2004, this Type Certificate has been transferred to its present Holder, S.C. Construcții Aeronautice S.A. Braşov.

## **Section F: IS-28M2/G**

### **F.I. General**

Allgemeines

- |   |  |
|---|--|
| 1. Data Sheet No.:<br>Kennblatt-Nr.   | EASA.A.453 (since 23.08.2016 before A.454)   |
| 2. a) Type: (Muster)<br>b) Variant: (Baureihe)                                    | IS-28M2<br>IS-28M2/G   |
| 3. Airworthiness Category:<br>Lufttüchtigkeitskategorie :                         | Powered Sailplane, OSTIV – Utility “U”   |
| 4. Type Certificate Holder:<br>Halter der Musterzulassung                         | Aeroclubul Romaniei<br>Bd.Lascar Catargiu, Nr.54, cod: 010673<br>Sector 1, Bucharest<br>Romania  |
| 5. Manufacturer:<br>Hersteller  | S.C. Constructii Aeronautice S.A<br>Str. Aeroportului Nr. 1<br>507075 Ghimbav, Brasov<br>Romania |
| 6. Certification Application Date:<br>Datum der Antragstellung                    | February 13, 1995  |
| 7. Romanian CAA Certification Date:   | June 25, 1995  |
| 8. The EASA Type Certificate replaces the Romanian CAA Type Certificate No. MP-04 |  |

### **F.II. Certification Basis**

Zulassungsbasis

- |  |   |
|--|---|
| 1. Certification Basis:<br>Zulassungsbasis:                            | AACR letter nr. 7445/June 5, 1995   |
| 2. Airworthiness Requirements:<br>Lufttüchtigkeitsforderungen:         | Airworthiness Requirements NTAZ Part 2 “Sailplanes and powered sailplanes”, Issue 1978 / OSTIV Issue 1976   |
| 3. Requirements elected to comply:<br>Gewählte Forderungen:            | JAR-22 “Sailplanes and Powered Sailplanes”, issue 1980, Amdt. 3, for: Subpart A – General, Subpart B – Flight, Subpart C – Structure and the following paragraphs: 22.595, 22.629, 22.671, 22.697(c), 22.777(c)(6), 22.785(d) and (e), 22.787, 22. 807, 22.905, 22.925(a), 22.1041, 22.1047, 22.1149, 22.1307, 22.1505, 22.1529, 22.1581, 22.1583, 22.1585. |
| 4. Special Conditions:<br>Sonderforderungen:                           | None  |
| 5. Exemptions:<br>Ausnahmen:   | from NTAZ 2 /OSTIV 1976: par. 5.1.2.3.(a) – “Maximum weight of powered sailplanes” has been replaced with JAR-22.1(a)(2)<br><br>no exemption from JAR-22  |
| 6. Equivalent Safety Findings:<br>Nachweise gleichwertiger Sicherheit: | For NTAZ 2/OSTIV 1976   |

- CESZ-044 In regard of NTAZ Part 2, 1978 /OSTIV, 1976 par. 2.7.1 – Air brakes capability
- CESZ-045 In regard of NTAZ Part 2, 1978 /OSTIV, 1976 par. 4.3.3 – Aeroelastic phenomena
- For JAR-22
- CESZ-044 In regard of JAR 22.73 – Descent, high speed
- CESZ-045 In regard of JAR 22.629 - Flutter
- CESZ-046 In regard of JAR 22.161 ( c )( 2 )( i ) - Trim
- CESZ-047 In regard of JAR 22.411 ( a ) – Control system stiffness and stretch
7. Environmental Standard  
Lärmschutzforderungen: Noise: LBA – noise requirement (LSL), chapter VI /01.01.1991

### **F.III. Technical Characteristics and Operational Limitations**

Technische Merkmale und Betriebsgrenzen

1. Type Design Definition:  
Musterdefinition: Document No. 28M2.00.0006, current issue
2. Description:  
Beschreibung: Double-seat (side-by-side) powered sailplane, metallic construction, partially retractable landing gear with dampers, "T"- tail.
3. Equipment:  
Ausrüstung: Mandatory equipment according to Aircraft Flight Manual, Chapter 2.11
4. Dimensions:  
Abmessungen:
- |                        |                       |
|------------------------|-----------------------|
| Wing Span              | 17,000 m              |
| Total Length           | 7,500 m               |
| Maximum Height         | 2,150 m               |
| Wing Area              | 18,240 m <sup>2</sup> |
| Mean aerodynamic chord | 1,108 m               |
5. Engines  
Triebwerk
- |                   |                    |  |
|-------------------|--------------------|--|
| Model:            | Limbach L 2000 EO1 |  |
| Type Certificate: | EASA.E.083         |  |
- 5.1 Engine Limits  
Triebwerksgrenzwerte
- |                          |                   |
|--------------------------|-------------------|
| Maximum Take-off Power   | 59 kW at 3400 RPM |
| Maximum continuous Power | 58 kW at 2900 RPM |
6. Propellers  
Propeller: Hoffmann HO-V62-R/L 160T-10
7. Fluids and Fluid capacities:  
Kraftstoffmengen: Fuselage tank 55 liters  
Rumpftank
8. Launching Hooks:  
Schleppkupplungen: None
9. Weak links:  
Sollbruchstellen: None

10.	Air Speeds: Geschwindigkeiten:	Never exceed speed $V_{NE}$	220 km/h IAS
		Maneuvering speed $V_A$	190 km/h IAS
		Maximum speed in rough air $V_B$	190 km/h IAS
		Maxim operating speed with wing flaps fully deflected $V_{FO}$	140 km/h IAS
		Maxim landing gear operating speed $V_{Lo}$	220 km/h IAS
		Stalling speed in cruise configuration $V_{S1}$	75 km/h IAS
11.	Operational Capability Betriebsart	VFR-day allowed except icing condition Cloud flying prohibited Fly by night prohibited Inverted flying with engine operating prohibited	
12.	Maximum Masses: Höchstzulässige Massen:	Take-off: 780kg	
13.	Centre of Gravity Range: Schwerpunktsbereich:	Datum: 2m in front of the leading edge of wing root rib Leveling means: Longitudinal axis: marked points on fuselage sides Lateral axis: marked points on left and right wing (see AFM) Forward Limit 21,4% of MAC Rearward Limit 35,0% of MAC	
14.	Seating Capacity: Anzahl der Sitze:	2	
15.	Lifetime limitations: Lebensdauerbegrenzte Teile:	Refer to Aircraft Flight Manual (AFM)	
16.	Deflection of control surfaces: Ruderausschläge	Refer to Aircraft Flight Manual (AFM)	

#### **F.IV. Operating and Service Instructions**

Betriebs- und Instandhaltungsanweisungen

1. Aircraft Flight Manual issue 3 / Amd 3 or later amd. approved by the Agency (AFM)
2. Aircraft Maintenance Manual issue 1 / Amd 2 or later amd. approved by the Agency (AMM)

#### **F.V. Notes**

Bemerkungen

1. The Type Certificate No. MP-04 was initially issued on 30.09.1981, for Intreprinderea de Construcții Aeronautice Braşov, which has changed its name in S.C. IAR S.A. Braşov since January 1991. Since December 2004, this Type Certificate has been transferred to its present Holder, S.C. Construcții Aeronautice S.A. Braşov

## **Section G: IS-28M2/GR**

### **G.I. General**

Allgemeines

- |   |  |
|---|--|
| 1. Data Sheet No.:<br>Kennblatt-Nr.   | EASA.A.453 (since 23.08.2016 before A.454)   |
| 2. a) Type: (Muster)<br>b) Variant: (Baureihe)                                    | IS-28M2<br>IS-28M2/GR  |
| 3. Airworthiness Category:<br>Lufttüchtigkeitskategorie :                         | Powered Sailplane, OSTIV – Utility “U”   |
| 4. Type Certificate Holder:<br>Halter der Musterzulassung                         | Aeroclubul Romaniei<br>Bd.Lascar Catargiu, Nr.54, cod: 010673<br>Sector 1, Bucharest<br>Romania  |
| 5. Manufacturer:<br>Hersteller  | S.C. Constructii Aeronautice S.A<br>Str. Aeroportului Nr. 1<br>507075 Ghimbav, Brasov<br>Romania |
| 6. Certification Application Date:<br>Datum der Antragstellung                    | June 5, 1996   |
| 7. Romanian CAA Certification Date:   | November 07, 1997  |
| 8. The EASA Type Certificate replaces the Romanian CAA Type Certificate No. MP-04 |  |

### **G.II. Certification Basis**

Zulassungsbasis

- |  |   |
|--|---|
| 1. Certification Basis:<br>Zulassungsbasis:                    | A.A.C.R. letter nr. 8479/ June 6, 1996  |
| 2. Airworthiness Requirements:<br>Lufttüchtigkeitsforderungen: | Airworthiness Requirements NTAZ Part 2 “Sailplanes and powered sailplanes”, Issue 1978 / OSTIV Issue 1976   |
| 3. Requirements elected to comply:<br>Gewählte Forderungen:    | JAR-22 “Sailplanes and Powered Sailplanes”, issue 1980, Amdt. 3, for: Subpart A – General, Subpart B – Flight, Subpart C – Structure, Subpart H - Engine and the following paragraphs : 22.601, 22.603, 22.607, 22.609, 22.611, 22.613, 22.619, 22.627, 22.629, 22.671, 22.697(c), 22.777(c)(6), 22.779, 22.785(d) and (e), 22.787, 22.807, 22.831, 22.901, 22.902, 22.903, 22.905, 22.925(a), 22.955, 22.993, 22.1011, 22.1013, 22.1015, 22.1017, 22.1041, 22.1047, 22.1091, 22.1093, 22.1103, 22.1105, 22.1121, 22.1125, 22.1141, 22.1145, 22.1149, 22.1163, 22.1165, 22.1193, 22.1301, 22.1305, 22.1307, 22.1321, 22.1337, 22.1365, 22.1501, 22.1505, 22.1521, 22.1529, 22.1545, 22.1549, 22.1553, 22.1557, 22.1581, 22.1583, 22.1585.<br><br>JAR 22.857 from JAR-22, Change 4, 1987;<br><br>JAR-P “Propellers” Change 7 |
| 4. Special Conditions:<br>Sonderforderungen:                   | according to FPC-A4 – Exhaust system heat exchangers  |
| 5. Exemptions:<br>Ausnahmen:                                   | from NTAZ 2 /OSTIV 1976: par. 5.1.2.3.(a) – “Maximum weight of powered sailplanes” has been replaced with JAR-22.1(a)(2)  |



- no exemption from JAR-22
6. Equivalent Safety Findings:  
Nachweise gleichwertiger Sicherheit:
- CESZ-044 In regard of NTAZ Part 2, 1978 /OSTIV, 1976 par. 2.7.1 – Air brakes capability
- CESZ-045 In regard of NTAZ Part 2, 1978 /OSTIV, 1976 par. 4.3.3 – Aeroelastic phenomena
- For JAR-22
- CESZ-044 In regard of JAR 22.73 – Descent, high speed
- CESZ-045 In regard of JAR 22.629 - Flutter
- CESZ-046 In regard of JAR 22.161 ( c )( 2 )( i ) - Trim
- CESZ-047 In regard of JAR 22.411 ( a ) – Control system stiffness and stretch
7. Environmental Standard  
Lärmschutzforderungen:
- Noise: LBA – noise requirement (LSL), chapter VI /01.01.1991

### **G.III. Technical Characteristics and Operational Limitations**

Technische Merkmale und Betriebsgrenzen

1. Type Design Definition:  
Musterdefinition: Document No. 28M2.00.0006, current issue
2. Description:  
Beschreibung: Double-seat (side-by-side) powered sailplane, metallic construction, partially retractable landing gear with dampers, "T"- tail.
3. Equipment:  
Ausrüstung: Mandatory equipment according to Aircraft Flight Manual, Chapter 2.11
4. Dimensions:  
Abmessungen:
- |                        |                       |
|------------------------|-----------------------|
| Wing Span              | 17,000 m              |
| Total Length           | 7,700 m               |
| Maximum Height         | 2,150 m               |
| Wing Area              | 18,240 m <sup>2</sup> |
| Mean aerodynamic chord | 1,108 m               |
5. Engines  
Triebwerk
- |                   |                |
|-------------------|----------------|
| Model:            | Rotax 912F3/A3 |
| Type Certificate: | EASA.E.121     |
- 5.1 Engine Limits  
Triebwerksgrenzwerte
- |                          |                     |
|--------------------------|---------------------|
| Maximum Take-off Power   | 59,6 kW at 5800 RPM |
| Maximum continuous Power | 58 kW at 5500 RPM   |
6. Propellers  
Propeller: Hoffmann HO-V-352F-S1/S 170FQ
7. Fluids and Fluid capacities:  
Kraftstoffmengen: Fuselage tank 55 liters  
Rumpftank
8. Launching Hooks:  
Schleppkupplungen: None
9. Weak links:  
Sollbruchstellen: None

10. Air Speeds: Geschwindigkeiten:	Never exceed speed $V_{NE}$ IAS	220 km/h
	Maneuvering speed $V_A$ IAS	190 km/h
	Maximum speed in rough air $V_B$ IAS	190 km/h
	Maxim operating speed with wing flaps fully deflected $V_{FO}$ IAS	140 km/h
	Maxim landing gear operating speed $V_{Lo}$ IAS	220 km/h
	Stalling speed in cruise configuration $V_{S1}$ IAS	75 km/h
11. Operational Capability Betriebsart	VFR-day allowed except icing condition Cloud flying prohibited Fly by night prohibited Inverted flying with engine operating prohibited	
12. Maximum Masses: Höchstzulässige Massen:	Take-off: 780kg	
13. Centre of Gravity Range: Schwerpunktsbereich:	Datum: 2m in front of the leading edge of wing root rib Leveling means: Longitudinal axis: marked points on fuselage sides Lateral axis: marked points on left and right wing (see AFM) Forward Limit 21,4% of MAC Rearward Limit 35,0% of MAC	
14. Seating Capacity: Anzahl der Sitze:	2	
15. Lifetime limitations: Lebensdauerbegrenzte Teile:	Refer to Aircraft Flight Manual (AFM)	
16. Deflection of control surfaces: Ruderausschläge	Refer to Aircraft Flight Manual (AFM)	

#### **G.IV. Operating and Service Instructions**

Betriebs- und Instandhaltungsanweisungen

1. Aircraft Flight Manual issue Aug. 1997 / Amd 5 or later amd. approved by the Agency (AFM)
2. Aircraft Maintenance Manual issue Aug. 1997 / Amd 5 or later amd. approved by the Agency (AMM)

#### **G.V. Notes**

Bemerkungen

1. The Type Certificate No. MP-04 was initially issued on 30.09.1981, for Intreprinderea de Construcții Aeronautice Braşov, which has changed its name in S.C. IAR S.A. Braşov since January 1991. Since December 2004, this Type Certificate has been transferred to its present Holder, S.C. Construcții Aeronautice S.A. Braşov

## **Section H: IS-30**

### **H.I. General**

Allgemeines

- |   |  |
|---|--|
| 1. Data Sheet No.:<br>Kennblatt-Nr.   | EASA.A.453   |
| 2. a) Type: (Muster)<br>b) Variant: (Baureihe)                                    | IS-28B2<br>IS-30   |
| 3. Airworthiness Category:<br>Lufttüchtigkeitskategorie :                         | Sailplane, OSTIV aerobatic "A" and utility "U"   |
| 4. Type Certificate Holder:<br>Halter der Musterzulassung                         | Aeroclubul Romaniei<br>Bd.Lascar Catargiu, Nr.54, cod: 010673<br>Sector 1, Bucharest<br>Romania  |
| 5. Manufacturer:<br>Hersteller  | S.C. Constructii Aeronautice S.A<br>Str. Aeroportului Nr. 1<br>507075 Ghimbav, Brasov<br>Romania |
| 6. Certification Application Date:<br>Datum der Antragstellung                    | November 4, 1979   |
| 7. Romanian CAA Certification Date:   | May 18, 1981   |
| 8. The EASA Type Certificate replaces the Romanian CAA Type Certificate No. PN-10 |  |

### **H.II. Certification Basis**

Zulassungsbasis

- |  |   |
|--|---|
| 1. Certification Basis:<br>Zulassungsbasis:                            | D. Av. C. letter nr. 21746/November 22, 1979  |
| 2. Airworthiness Requirements:<br>Lufttüchtigkeitsforderungen:         | OSTIV Airworthiness Requirements for Sailplanes, issue 1971   |
| 3. Requirements elected to comply:<br>Gewählte Forderungen:            | None  |
| 4. Special Conditions:<br>Sonderforderungen:                           | None  |
| 5. Exemptions:<br>Ausnahmen:   | The following paragraphs are excepted from the Certification Basis:<br><br>Par.1.5 the minimum flight weight cannot be defined according to OSTIV 1971 requirements. For one seat occupied it is obtained with a pilot of 70 kg. For pilots below 70 kg, removable ballast has to be used.<br><br>Par.3.54 the elasticity of elevator and rudder control systems is over the allowed values of 50%.<br><br>Par.4.331 ground vibration tests have not been performed.<br><br>Par.4.332 aero-elastic phenomena were checked only by flight tests, without records |
| 6. Equivalent Safety Findings:<br>Nachweise gleichwertiger Sicherheit: | None  |

7. Environmental Standard  
Lärmschutzforderungen: None

### **H.III. Technical Characteristics and Operational Limitations**

Technische Merkmale und Betriebsgrenzen

- |  |  |                       |          |
|--|--|-----------------------|----------|
| 1. Type Design Definition:<br>Musterdefinition:      | Document No. 30-0001, current issue                                  |                       |          |
| 2. Description:<br>Beschreibung:                     | double-seat (tandem) sailplane, metallic construction, "T"-tail      |                       |          |
| 3. Equipment:<br>Ausrüstung:                         | Mandatory equipment according to Aircraft Flight Manual, Chapter 3.3 |                       |          |
| 4. Dimensions:<br>Abmessungen:                       | Wing Span  | 17,000m               |          |
|  | Total Length   | 8,450 m               |          |
|  | Maximum Height   | 2,27 m                |          |
|  | Wing Area  | 18,240 m <sup>2</sup> |          |
| 5. Engines<br>Triebwerk                              | N/A  |                       |          |
| 5.1 Engine Limits<br>Triebwerksgrenzwerte            | N/A  |                       |          |
| 6. Propellers<br>Propeller:                          | N/A  |                       |          |
| 7. Fluids and Fluid capacities:<br>Kraftstoffmengen: | N/A  |                       |          |
| 8. Launching Hooks:<br>Schleppkupplungen:            | Nose and center of gravity tow hooks TOST „E72G“/“E73G“              |                       |          |
| 9. Weak links:<br>Sollbruchstellen:                  | For winch launching or aero-tow: 500daN                              |                       |          |
| 10. Air Speeds:<br>Geschwindigkeiten:                | Never exceed speed $V_{NE}$<br>IAS                                   |                       | 225 km/h |
|  | Maneuvering speed $V_A$<br>IAS                                       |                       | 166 km/h |
|  | Maximum speed in gust ( $\pm 15$ m/s) $V_B$<br>IAS                   |                       | 160 km/h |
|  | Stalling speed $V_S$<br>CAS  |                       | 75 km/h  |
|  | Maximum aerotow speed $V_T$<br>IAS                                   |                       | 140 km/h |
|  | Maximum winch launching speed $V_W$<br>IAS                           |                       | 125 km/h |
|  | Maximum allowed speed $V_B$<br>IAS<br>with airbrake extended         |                       | 225 km/h |

11. Operational Capability Betriebsart	Approved for VFR - day Cloud flying approved according to Aircraft Flight Manual (AFM) Chapter 3.3. Fly by night prohibited.	
12. Maximum Masses: Höchstzulässige Massen:	Take-off – aerobatic category “A” kg Take-off – utility category “U” kg	520  610
13. Centre of Gravity Range: Schwerpunktsbereich:	Datum: first fuselage panel Leveling means: Longitudinal axis: marked points on fuselage sides Lateral axis: marked points on left and right wing (see AFM) Forward Limit           22% of MAC Rearward Limit         47% of MAC	
14. Seating Capacity: Anzahl der Sitze:	2	
15. Lifetime limitations: Lebensdauerbegrenzte Teile:	Refer to Aircraft Flight Manual (AFM) Siehe Wartungshandbuch	
16. Deflection of control surfaces: Ruderausschläge	Refer to Aircraft Flight Manual (AFM) Siehe Wartungshandbuch	

#### **H.IV. Operating and Service Instructions**

Betriebs- und Instandhaltungsanweisungen

1. Aircraft Flight Manual issue 2 / Amd 3 or later amd. approved by the Agency (AFM)
2. Aircraft Maintenance Manual issue 2 / Amd 8 or later amd. approved by the Agency (AMM)

#### **H.V. Notes**

Bemerkungen

1. The Type Certificate No. PN-10 was initially issued on 18.05.1981, for Intreprinderea de Construcții Aeronautice Braşov, which has changed its name in S.C. IAR S.A. Braşov since January 1991. Since December 2004, this Type Certificate has been transferred to its present Holder, S.C. Construcții Aeronautice S.A. Braşov.

## **Section I: IS-32A**

### **I.I. General**

Allgemeines

- |   |  |
|---|--|
| 1. Data Sheet No.:<br>Kennblatt-Nr.   | EASA.A.453   |
| 2. a) Type: (Muster)<br>b) Variant: (Baureihe)                                    | IS-28B2<br>IS-32A  |
| 3. Airworthiness Category:<br>Lufttüchtigkeitskategorie :                         | Sailplane, BCAR-E utility "U"  |
| 4. Type Certificate Holder:<br>Halter der Musterzulassung                         | Aeroclubul Romaniei<br>Bd.Lascar Catargiu, Nr.54, cod: 010673<br>Sector 1, Bucharest<br>Romania  |
| 5. Manufacturer:<br>Hersteller  | S.C. Constructii Aeronautice S.A<br>Str. Aeroportului Nr. 1<br>507075 Ghimbav, Brasov<br>Romania |
| 6. Certification Application Date:<br>Datum der Antragstellung                    | January 16, 1979   |
| 7. Romanian CAA Certification Date:   | October 13, 1984   |
| 8. The EASA Type Certificate replaces the Romanian CAA Type Certificate No. PN-12 |  |

### **I.II. Certification Basis**

Zulassungsbasis

- |  |   |
|--|---|
| 1. Certification Basis:<br>Zulassungsbasis:                            | D. Av. C. letter nr. 1697/January 31, 1979  |
| 2. Airworthiness Requirements:<br>Lufttüchtigkeitsforderungen:         | BCAR-E Airworthiness Requirements for Sailplanes, issue 2, 1960   |
| 3. Requirements elected to comply:<br>Gewählte Forderungen:            | None  |
| 4. Special Conditions:<br>Sonderforderungen:                           | None  |
| 5. Exemptions:<br>Ausnahmen:   | The landing gear is design according to OSTIV 1971, without static strength tests.<br><br>The safety belts are not of an approved type, according to British standards.<br><br>The aileron – flap control stretch is 47% in stead of 25% admitted |
| 6. Equivalent Safety Findings:<br>Nachweise gleichwertiger Sicherheit: | The drawings are according to Romanian norms and not according to British standards.<br><br>The instruments are PZL type and the wheels are Tost (German manufacturer).   |
| 7. Environmental Standard<br>Lärmschutzforderungen:                    | None  |

### **I.III. Technical Characteristics and Operational Limitations**

#### Technische Merkmale und Betriebsgrenzen

1.	Type Design Definition: Musterdefinition:	Document No. 32-0001, current issue	
2.	Description: Beschreibung:	double-seat (tandem) sailplane, metallic construction, partial retractable landing gear, "T"- tail	
3.	Equipment: Ausrüstung:	Mandatory equipment according to Aircraft Flight and Maintenance Manual, Chapter 6.4.7	
4.	Dimensions: Abmessungen:	Wing Span	20,000m
		Total Length	8,360 m
		Maximum Height	1,550 m
		Wing Area	14,680 m <sup>2</sup>
5.	Engines Triebwerk	N/A	
	5.1 Engine Limits Triebwerksgrenzwerte	N/A	
6.	Propellers Propeller:	N/A	
7.	Fluids and Fluid capacities: Kraftstoffmengen:	N/A	
8.	Launching Hooks: Schleppkupplungen:	Nose and center of gravity tow hooks TOST „E 72G”/”E73G”	
9.	Weak links: Sollbruchstellen:	For winch launching or aero-tow: 500daN	
10.	Air Speeds: Geschwindigkeiten:	Never exceed speed $V_{NE}$ IAS	195 km/h
		Maxim speed with wing flaps fully deflected $V_F$ IAS	140 km/h
		Maximum landing gear extension speed $V_L$ IAS	140 km/h
		Maximum aerotow speed $V_T$ IAS	140 km/h
		Maximum speed in gust ( $\pm 15$ m/s) $V_B$ IAS	172 km/h
		Stalling speed in landing configuration $V_{SO}$ CAS	80 km/h
11.	Operational Capability Betriebsart	Approved for VFR - day Aerobatics prohibited. Cloud flying prohibited. Fly by night prohibited.	
12.	Maximum Masses: Höchstzulässige Massen:	Take-off	590 kg

- |  |   |
|--|---|
| 13. Centre of Gravity Range:<br>Schwerpunktsbereich:     | Datum: leading edge of wing root rib<br>Leveling means:<br>Longitudinal axis: marked points on fuselage sides<br>Lateral axis: marked points on left and right wing (see AFMM)<br>Forward Limit           19,3% of MAC<br>Rearward Limit         44,1% of MAC |
| 17. Seating Capacity:<br>Anzahl der Sitze:               | 2   |
| 18. Lifetime limitations:<br>Lebensdauerbegrenzte Teile: | Refer to Aircraft Flight and Maintenance Manual (AFMM)<br>Siehe Wartungshandbuch  |
| 19. Deflection of control surfaces:<br>Ruderausschläge   | Refer to Aircraft Flight and Maintenance Manual (AFMM)<br>Siehe Wartungshandbuch  |

#### **I.IV. Operating and Service Instructions**

Betriebs- und Instandhaltungsanweisungen

1. Aircraft Flight and Maintenance Manual issue 1 / Amd 17 (AFMM)

#### **I.V. Notes**

Bemerkungen

1. The Type Certificate No. PN-12 was initially issued on 13.10.1984, for Intreprinderea de Construcții Aeronautice Braşov, which has changed its name in S.C. IAR S.A. Braşov since January 1991. Since December 2004, this Type Certificate has been transferred to its present Holder, S.C. Construcții Aeronautice S.A. Braşov.



## **Administrative section**

### I. Acronyms

N/A

### II. Type Certificate Holder Record

Aeroclubul Romaniei  
Bd.Lascar Catargiu, Nr.54, cod: 010673  
Sector 1, Bucharest  
Romania

### III. Change Record

<b>Issue</b>	<b>Date</b>	<b>Changes</b>
01	28 March 2007	Initial release, transfer from Romanian TCDS
02	21 October 2016	TCDS A452 and A454 included, general format changed