TYPE-CERTIFICATE

DATA SHEET

NO. EASA.A.512

for
EB28

Type Certificate Holder
Binder Motorenbau GmbH

Alter Frickenhäuser Weg 15
D-97645 Ostheim/Rhön
Germany

For models: EB28
EB28 edition

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Contents

Section A: EB28

A.I General

1.	Type/ Model/ Variant	
	1.1 Type:	EB28
	1.2 Model:	EB28
2.	Airworthiness Category	utility
3.	Manufacturer	Binder Motorenbau GmbH Alter Frickenhäuser Weg 15 D-97645 Ostheim/Rhön
4.	EASA Type Certification Application Date	02 December 2005
5.	EASA Type Certification Date	10 June 2008

A.II EASA Certification Basis

1.	Reference Date for determining the applicable requirements	01.05.2008
2.	Airworthiness Requirements	Certification Specifications for Sailplanes and Powered Sailplanes, issued 14 November 2003 (CS-22, Issue 14.11.2003)
3.	Special Conditions	None
4.	Exemptions	None
5.	Equivalent Safety Findings	22.335(f)
6.	Requirements elected to comply	Standards for Structural Substantiation of Sailplane and Powered Sailplane Components consisting of Glass or Carbon Fibre Reinforced Plastics, issued July 1991 Guideline for the analysis of the electrical system for powered sailplanes, I334-MS 92, issued 15. September 1992
7.	Environmental Protection	ICAO Annex 16 for details see TCDSN EASA.A.512

A.III Technical Characteristics and Operational Limitations

1.	Type Design Definition	Drawing list EB28, dated 12. March 2008
2.	Description	Double seater, self supporting shoulder-winged, conventional T-type tail-plane, constructed from GFRP, CFRP and AFRP, spring mounted retractable central landing gear, fixed or optionally steerable tail wheel, wing flaps, Schempp-Hirth airbrakes on upper wing surface, retractable powerplant, water ballast tanks in wing and vertical tail.
3.	Equipment	Min. Equipment: 1 Air speed indicator (up to 300 km/h) 1 Altimeter 1 Magnetic compass 1 Dataplate and Trimsheet, Cockpit Placards, Flight Manual 1 VHF Transmitter/Receiver incl. ear protecting Headphones 1 Engine control unit (ILEC) featuring: - RPM indicator - Fuel quantity indicator - Coolant temperature indicator - Engine hour meter 1 Rear view mirror 1 Engine fire warning 2 4-Point harness (Symmetrical) 1 Parachute or back cushion (per occupant)
4.	Dimensions	Span: 28,0 m Wing area 16,8 m² Length 9,10 m Height 1,70 m
5.	Engine	
	5.1 Model	Solo Type 2625 02
	5.2 Type Certificate	EASA TCDS No. E.218
	5.3 Maximum Continuous Power	47,0 kW at 6500 RPM
	5.4 Max. Revs	6700 RPM

6. Propeller

6.1 Propeller Type 1

6.1.1 Model	Binder Type BM-G1-160-R-120
6.1.2 Type Certificate	EASA TCDS No. P.500
6.1.3 Number of blades	2
6.1.4 Diameter	160 cm (+/- 0,5 cm)

6.2 Propeller Type 2

6.2.1 Model	Technoflug Type KS-1G-160-R-120
6.2.2 Type Certificate	EASA TCDS No. P.115
6.2.3 Number of blades	2
6.2.4 Diameter	160 cm (+/- 0,5 cm)

7. Fluids:

7.1 Fuel:

Tank in the fuselage	19,5 l
Tank in right wing	18,0 l
Tank in left wing	18,0 l
Non-usable fuel	1,25 l
None-usable fuel (with left wing tank)	2,25 l

Note: Wingtanks removeable, flexible tanks

8. Launching Hooks: Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2 in the nose for aero-tow and optionally in front of landing gear for winch tow

9. Weak Links: Ultimate Strength:
- for aero-tow max 935 daN
- for winch-tow max 1100 daN

10. Load Factors: +5,3 / -2,65 (up to V_A)
+4,0 / -1,5 (up to V_{NE})

11. Air Speeds

11.1 Manoeuvring speed	V_A	180 km/h
11.2 Never exceed speed	V_{NE}	275 km/h
11.3 Maximum permitted speeds		
- in strong turbulence	V_{RA}	180 km/h
- in aero-tow	V_T	180 km/h
- in winch-launch	V_W	140 km/h
- for gear operation	V_{LO}	180 km/h
- for extracting/retracting engine	$V_{PO,max}$	115 km/h
- with extended engine	V_{PE}	160 km/h
- with wing flaps at pos. -2,-1,0	$V_{FE\ -2-1,0}$	270 km/h
- with wing flaps at pos. +1,+2	$V_{FE\ +1,+2}$	180 km/h
- with wing flaps at pos. L	$V_{FE\ L}$	140 km/h

12. Approved Operations Capability		VFR Day only Cloud flying not permitted Aerobatic manoeuvres not permitted	
13. Launch methods		Aero tow Winch launch if equipped with launching hook in front of landing gear Self-launch	
14. Maximum Masses			
	14.1 Maximum Take-off Mass	850 kg	
	14.2 Max. Mass of non-lifting parts	440 kg	
15. Centre of Gravity Range		Forward Limit	230 mm aft of datum
		Rearward Limit	400 mm aft of datum
16. Datum		wing leading edge at wing root rib	
17. Levelling Means		upper side of rear fuselage boom horizontal	
18. Control Surface Deflections		Refer to Maintenance Manual	
19. Minimum Flight Crew		1	
20. Maximum Passenger Seating Capacity		1	
21. Baggage/ Cargo Compartments		Refer to Flight Manual	
22. Lifetime limitations		Refer to Maintenance Manual	

A.IV Operating and Service Instructions

1. Flight Manual	Flight Manual for the Motorglider EB28, issue 17 March 2008, EASA approved or Flughandbuch für den Motorsegler EB28, Ausgabe 17 März 2008, EASA-anerkannt
2. Maintenance Manual	Maintenance Manual for the Motorglider EB28, issue 17 March 2008 or Wartungshandbuch für den Motorsegler EB28, Ausgabe 17 März 2008
3. Operating Manual and Maintenance Manual for Propeller Type 1	Operation and Maintenance Manual for Binder propeller Type BM-G1-160-R-120, latest approved version or Betriebs- und Wartungshandbuch für Binder Propeller BM-G1-160-R-120 in der jeweils gültigen Fassung
4. Operating Manual and Maintenance Manual for Propeller Type 2	Operation and Maintenance Manual for Technoflug propeller Type KS-1G-160-R-120, latest approved version or Betriebs- und Wartungshandbuch für Technoflug Propeller KS-1G-160-R-120 in der jeweils gültigen Fassung
5. Operating Manual for the Launching Hooks	Operation and Maintenance Manual for Tost tow hook Type Europa G 88, latest approved version or Betriebs- und Wartungshandbuch für Tost Schleppkupplung Europa G 88 in der jeweils gültigen Fassung

A.V Notes

1. Manufacturing is confined to industrial production.
2. All parts of the airframe, exposed to sun radiation – except the areas for markings and registration as specified by the manufacturer – must have a white colour surface
3. Installation of optional steerable tail wheel permitted according to technical note TM AB-01
4. Installation of optional winch tow hook permitted according to technical note TM EB28-B2

Section B: EB28 EDITION

B.I General

1.	Type/ Model/ Variant	
	1.1 Type:	EB28
	1.2 Model:	EB28 edition
2.	Airworthiness Category	utility
3.	Manufacturer	Binder Motorenbau GmbH Alter Frickenhäuser Weg 15 D-97645 Ostheim/Röhn Germany
4.	EASA Type Certification Application Date	15 January 2009
5.	EASA Type Certification Date	09 February 2011

B.II EASA Certification Basis

1.	Reference Date for determining the applicable requirements	01.05.2008
2.	Airworthiness Requirements	Certification Specifications for Sailplanes and Powered Sailplanes, issued 14 November 2003 (CS-22, Issue 14. 11.2003)
3.	Special Conditions	None
4.	Exemptions	None
5.	Deviations	None
6.	Equivalent Safety Findings	22.335(f)
7.	Requirements elected to comply	Standards for Structural Substantiation of Sailplane and Powered Sailplane Components consisting of Glass or Carbon Fibre Reinforced Plastics, issued July 1991 Guideline for the analysis of the electrical system for powered sailplanes, I334-MS 92, issued 15. September 1992
8.	Environmental Protection	ICAO Anex 16 for details see TCDSN EASA.A.512

B.III Technical Characteristics and Operational Limitations

1.	Type Design Definition	Drawing list EB28, dated 12 March 2008 and Drawing list EB28 edition, dated 20 August 2010
2.	Description	Double seater, self supporting shoulder-winged, conventional T-type tail-plane, constructed from GFRP, CFRP and AFRP, spring mounted retractable central landing gear, optional mechanical or electrical landing gear retraction, fixed or optionally steerable tail wheel, wing flaps, Schempp-Hirth airbrakes on upper wing surface, retractable powerplant, water ballast tanks in wing and vertical tail
3.	Equipment	Min. Equipment: 1 Air speed indicator (up to 300 km/h) 1 Altimeter 1 Magnetic compass 1 Dataplate and Trimsheet, Cockpit Placards, Flight Manual 1 VHF Transmitter/Receiver incl. ear protecting Headphones 1 Engine control unit (ILEC) featuring: - RPM indicator - Fuel quantity indicator - Coolant temperature indicator - Engine hour meter 1 Rear view mirror 1 Engine fire warning 2 4-Point harness (Symmetrical) 1 Parachute or back cushion (per occupant
4.	Dimensions	Span 28,3 m 25,3 m *) Wing area 16,5 m² 15,4 m² *) Length 9,10 m Height 1,70 m *) Remark: Optional wing tips according to technical note TM EB28-B1, see Note 4 in B.V
5.	Engine	
	5.1 Model	Solo Type 2625 02
	5.2 Type Certificate	EASA TCDS No. E.218
	5.3 Maximum Continuous Power	47,0 kW at 6500 RPM
	5.4 Max. Revs	6700 RPM

6. Propeller

6.1 Propeller Type 1

6.1.1 Model	Binder Type BM-G1-160-R-120
6.1.2 Type Certificate	EASA TCDS No. P.500
6.1.3 Number of blades	2
6.1.4 Diameter	160 cm (+/- 0,5 cm)

6.2 Propeller Type 2

6.2.1 Model	Technoflug Type KS-1G-160-R-120
6.2.2 Type Certificate	EASA TCDS No. P.115
6.2.3 Number of blades	2
6.2.4 Diameter	160 cm (+/- 0,5 cm)

7. Fluids:

7.1 Fuel:

Tank in the fuselage	19,5 l
Tank in right wing	18,0 l
Tank in left wing	18,0 l
Non-usable fuel	1,25 l
None-usable fuel (with left wing tank)	2,25 l

Note: Wingtanks removeable, flexible tanks

8. Launching Hooks: Safety hook „Europa G 88“, LBA Datasheet No. 60.230/2 in the nose for aero-tow and optionally in front of landing gear for winch tow

9. Weak Links: Ultimate Strength:
- for aero-tow max 935 daN
- for winch-tow max 1100 daN

10. Load Factors: +5,3 / -2,65 (up to V_A)
+4,0 / -1,5 (up to V_{NE})

11. Air Speeds

11.1 Manoeuvring speed	V_A	180 km/h
11.2 Never exceed speed	V_{NE}	275 km/h
11.3 Maximum permitted speeds		
- in strong turbulence	V_{RA}	180 km/h
- in aero-tow	V_T	180 km/h
- in winch-launch	V_W	140 km/h
- for gear operation	V_{LO}	180 km/h
- for extracting/retracting engine	$V_{PO,max}$	115 km/h
- with extended engine	V_{PE}	160 km/h
- with wing flaps at pos. -2,-1,0	$V_{FE\ -2-1,0}$	270 km/h
- with wing flaps at pos. +1,+2	$V_{FE\ +1,+2}$	180 km/h
- with wing flaps at pos. L	$V_{FE\ L}$	140 km/h

12. Approved Operations Capability		VFR Day only Cloud flying not permitted Aerobatic manoeuvres not permitted	
13. Launch methods		Aero tow Winch launch if equipped with launching hook in front of landing gear Self-launch	
14. Maximum Masses			
	14.1 Maximum Take-off Mass	850 kg	
	14.2 Max. Mass of non-lifting parts	440 kg	
15. Centre of Gravity Range		Forward Limit	230 mm aft of datum
		Rearward Limit	400 mm aft of datum
16. Datum		wing leading edge at wing root rib	
17. Levelling Means		upper side of rear fuselage boom horizontal	
18. Control Surface Deflections		Refer to Maintenance Manual	
19. Minimum Flight Crew		1	
20. Maximum Passenger Seating Capacity		1	
21. Baggage/ Cargo Compartments		Refer to Flight Manual	
22. Lifetime limitations		Refer to Maintenance Manual	

B.IV Operating and Service Instructions

1. Flight Manual	Flight Manual for the Motorglider EB28 edtion, issue 20. August 2010, EASA approved or Flughandbuch für den Motorsegler EB28 edition, Ausgabe 20. August 2010, EASA-anerkannt
2. Maintenance Manual	Maintenance Manual for the Motorglider EB28 edition, issue 20. August 2010 or Wartungshandbuch für den Motorsegler EB28 edition, Ausgabe 20. August 2010
3. Operating Manual and Maintenance Manual for Propeller Type 1	Operation and Maintenance Manual for Binder propeller Type BM-G1-160-R-120, latest approved version or Betriebs- und Wartungshandbuch für Binder Propeller BM-G1-160-R-120 in der jeweils gültigen Fassung
4. Operating Manual and Maintenance Manual for Propeller Type 2	Operation and Maintenance Manual for Technoflug propeller Type KS-1G-160-R-120, latest approved version or Betriebs- und Wartungshandbuch für Technoflug Propeller KS-1G-160-R-120 in der jeweils gültigen Fassung
5. Operating Manual for the Launching Hooks	Operation and Maintenance Manual for Tost tow hook Type Europa G 88, latest approved version or Betriebs- und Wartungshandbuch für Tost Schleppkupplung Europa G 88 in der jeweils gültigen Fassung

B.V Notes

1. Manufacturing is confined to industrial production.
2. All parts of the airframe, exposed to sun radiation – except the areas for markings and registration as specified by the manufacturer – must have a white colour surface
3. A conversion by Binder Motorenbau GmbH of the powered glider EB28 into model EB28 edition is possible using work plan „Modification EB28 edition“.
4. Installation of optional wing tips permitted according to technical note TM EB28-B1.
5. Installation of optional steerable tail wheel permitted according to technical note TM AB-01
6. Installation of optional winch tow hook permitted according to technical note TM EB28-B2
7. Serial no. 901 of EB28 edition carries the designation „EB28 edition XB“ and has following described TCDS amendments:

B.III Technical Characteristics and Operational Limitations

1. Type Design Definition Drawing list EB28 edition XB, dated 10 April 2025

7.1 Fuel:

Tank in the fuselage	19,5 l
Tank in vertical tail	15,0 l
Non-usable fuel	0,25 l

Note: Vertical tail tank feeds into fuselage tank

8. Launching Hooks no certification for winch or aero-tow
(affects also 9. Weak Links, 11.3 Maximum speeds for aero-tow & winch-launch and 13. Launch methods)

B.IV Operating and Service Instructions

1. Flight Manual: Flughandbuch für den Motorsegler EB28 edition XB, Ausgabe Februar 2024, EASA-anerkannt
2. Maintenance Manual: Wartungshandbuch für den Motorsegler EB28 edition XB, Ausgabe Februar 2024
5. Operating Manual for the launching hooks: not applicable, no launching hooks

Section C: Administrative Section

C.I Acronyms & Abbreviations

C.II Type Certificate Holder Record

Binder Motorenbau GmbH
Alter Frickenhäuser Weg 15
D-97645 Ostheim/Rhön, Germany

C.III Change Record

Issue	Date	Changes	TC Issue No. & Date
01	10 June 2008	Initial Issue	10 June 2008
02	09 February 2011	Introduction of new model EB28 edition; Transfer into new TCDS format	09 February 2011
03	01 August 2012	Introduction of optional wing tip extensions to model EB28 edition	
04	23 May 2025	Introduction of optional steerable tail wheel and winch tow hook to models EB 28 and EB28 edition, New remark describing EB28 edition s/n 901 Transfer into new TCDS format	

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