



Civil Aviation Authority United Kingdom

TYPE-CERTIFICATE DATA SHEET ANNEX 1

UK.TC.A.00133

for

STEMME PROPELLER

Type Certificate Holder

Stemme GmbH

Flugplatzstrasse F2 Nr. 7

15344 STRAUSBERG

Germany

Models: 10 AP-N
10 AP-V
11 AP-V
10 AP-F

Issue: 1

Date of issue: 27 March 2025

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SECTION 1 ANNEX 1 Stemme Propeller**I. General****1. Type / Variant / Model**

- a) Type: STEMME PROPELLER
 b) Variant or Model:

Variant	10AP-N	10AP-V	11AP-V	10AP-F
Date of Application	30. May 1985	03 February 1992	16 August 1996	23 January 2001

Note: All Applications were made to LBA before EASA has been established.

2. EASA Certification Date

Variant	10AP-N	10AP-V	11AP-V	10AP-F
Certification Date	31 December 1990	16 September 1994	15 August 1997	11. November 2003

Note: The individual propeller variants have been certified as part of the Powered Sailplane Stemme S10 variants.

This TCDS replaces: LBA TDS No 32.100/1 (10AP-N), LBA TDS No 32.100/2 (10AP-V), LBA TDS No 32.100/3 (11AP-V), LBA TDS No 32.100/4 (10AP-F).

II. Certification Basis**1. Reference Date for determining the applicable airworthiness requirements**

Variant	10AP-N	10AP-V	11AP-V	10AP-F
Reference Date	12 June 1985	21 July 1994	14 April 1997	13 February 2003

2. Certification Basis**2.1. Airworthiness Standards**

- 10AP-N: Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22) Subpart J, effective on June 27, 1989 (Change 4 of the English Original Issue)

Note:

Initial airworthiness standard was JAR 22, Subpart J, effective 13.09.82 (Change 2 of the English Original Issue) including Amendment 22/84/1.

- 10AP-V: Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22) Subpart J, effective on June 27, 1989 (Change 4 of the English Original Issue)

Note:

Initial airworthiness standard was JAR 22, Subpart J, 15 Mar 1982, Rev. 15 December 1982 (Change 3 of the English Original Issue) including Amendment 22/84/1.

- 11AP-V: EASA Certification Specifications for Sailplanes and Powered Sailplanes CS-22, Subpart J, Amendment 1, 24 September 2008 (effective 1 October 2008)

Note:

Initial airworthiness standard was JAR 22, Subpart J, 27 June 1989 (Change 4 of the English Original Issue) including Amendment 22/84/1.

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10AP-F: Joint Airworthiness Requirements for Sailplanes and Powered Sailplanes (JAR 22) Subpart J, effective on June 27, 1989 (Change 4 of the English Original Issue) including Amendment 22/84/1.

Note: First applications were made to LBA-Germany before EASA was established. The applicable airworthiness standards were established in accordance with the rule in Germany at the time of application.

2.2. Special Conditions (SC)

None

2.3. Equivalent Safety Findings (ESF)

None

2.4. Deviations

None

2.5. Elect To Comply (EtC)

10AP-N: Standards for Structural Substantiation of Sailplane and Powered Sailplane Components Consisting of Glass or Carbon Fiber Reinforced Plastics, Issue 1991

10AP-V: NPA 22E-XX (amendment to JAR 22 for Variable Pitch Propeller) issue: 25 Mar 1993; Standards for Structural Substantiation of Sailplane and Powered Sailplane Components Consisting of Glass or Carbon Fiber Reinforced Plastics, Issue 1991

11AP-V: NPA 22E-XX (amendment to JAR 22 for Variable Pitch Propeller) issue: 25 Mar 1993; Standards for Structural Substantiation of Sailplane and Powered Sailplane Components Consisting of Glass or Carbon Fiber Reinforced Plastics, Issue 1991

10AP-F: Standards for Structural Substantiation of Sailplane and Powered Sailplane Components Consisting of Glass or Carbon Fiber Reinforced Plastics, Issue 1991

III. Technical Characteristic and Operating Limitations

1. Design Definition

10AP-N:	"Normalpropeller"	
	Assembly Drawing Doc.-No.:	A12-10AP-N Rev 30a ^[1]
	Parts List Doc.-No.:	A20-10AP-N Rev 14a ^[1]
10AP-V:	"Verstellpropeller"	
	Assembly Drawing Doc.-No.:	P304-10AP-V Rev 20 ^[1]
	Parts List Doc.-No.:	P307-10AP-V Rev 20 ^[1]
11AP-V:	"Verstellpropeller"	
	Assembly Drawing Doc.-No.:	P304-10AP-V Rev 20 ^[1]
	Parts List Doc.-No.:	P307-11AP-V Rev 20 ^[1]
10AP-F:	"Fix-Pitch Faltpropeller"	
	Assembly Drawing Doc.-No.:	A12-10AP-F-01 Rev 01b ^[1]
	Assembly Drawing Doc.-No.:	A12-10AP-F-02 Rev 03a ^[1]
	Parts List Doc.-No.:	A21-10AP-F Rev 03b ^[1]

[1] or later approved revisions

2. Description

10AP-N: 2-blade-jointed fix-pitch propeller; the propeller blades are foldable, Hub and blade suspension made of aluminum; blades in FRP construction.

10AP-V: 2-blade-jointed variable-pitch propeller with take-off and cruise position, the propeller blades are foldable, Mechanical pitch control by electrical heated thermo-expansion actuators and

spring forced return mechanism, Hub and blade suspension are made by aluminum, blades in FRP construction.

11AP-V: 2-blade-jointed variable-pitch propeller with take-off and cruise position, the propeller blades are foldable, Mechanical pitch control by electrical heated thermo-expansion actuators and spring forced return mechanism, Hub and blade suspension are made by aluminum, blades in FRP construction.

10AP-F: 2-blade-jointed fix-pitch propeller; the propeller blades are foldable, Hub and blade suspension made of aluminum; blades in FRP construction.

3. Equipment

N/A

4. Dimensions

Diameter:

	Operating Position	Folded Position
10AP-N	1610 ±2mm	760 mm
10AP-V	1630 ±3mm	750 mm
11AP-V	1630 ±3mm	750 mm
10AP-F	1630 ±3mm	750 mm

5. Weight

Variant	10AP-N	10AP-V	11AP-V	10AP-F
Weight	appr. 5,2 kg	appr. 8,6 kg	appr. 9,5 kg	appr. 4,8 kg

6. Hub/Blade-Combinations

	Hub (P/N)	Blade (P/N)
10AP-N	10AP-N03	10AP-NB
10AP-V	10AP-V01	10AP-VB
11AP-V	10AP-V01	11AP-VB ^[2] or 012101 ^[2]
10AP-F	10AP-F01	10AP-VB

[2] The usage in the propeller is allowed only in set of equal Part Numbers.

7. Control System

N/A

8. Adaptation to Engine

Hubs designed for installation on the propeller flange of the Stemme propeller gear box (6 bolts M8x100-10.9 on a circular pitch of 86 mm).

9. Direction of Rotation

In flight direction: Counterclockwise

IV. Operating Limitations

Model	Maximum Take-Off Power and Speed		Maximum Continuous Power and Speed	
	[kW]	[1/min]	[kW]	[1/min]
10AP-N	69	2900	62	2550
10AP-V	69	2900	62	2550
11AP-V	85	2900	74	2550
10AP-F	69	2900	62	2550

V. Operating and Service Instructions

10AP-N: (Maintenance Instructions are included in the associated Aircraft Maintenance Manual)

Wartungshandbuch „Stemme S10“ Dok.-Nr.: A40-10-020 Rev 19 (EASA Deutsch)^[3]

Maintenance Manual “Stemme S10” Doc.-No.: A40-10-021 Rev 19 (EASA English) ^[3]

Maintenance Manual “Stemme S10” Doc.-No.: A40-10-022 Rev 19 (FAA English) ^[3]

Prüfprogramm “Normalpropeller 10AP-N” Doc.-No. D40-10AP-N Rev 02.b (German) ^[3]

10AP-V: (Maintenance Instructions are included in the associated Aircraft Maintenance Manual)

Wartungshandbuch „Stemme S10-V“ Dok.-Nr.: A40-10-120 Rev 21 (EASA Deutsch) ^[3]

Maintenance Manual “Stemme S10-V” Doc.-No.: A40-10-121 Rev 21 (EASA English) ^[3]

Maintenance Manual “Stemme S10-V” Doc.-No.: A40-10-122 Rev 21 (FAA English) ^[3]

Prüfprogramm Verstellpropeller 10AP-V Doc.-No: P901-900141 Rev 01 (German & English) ^[3]

11AP-V:

Component Maintenance Manual “Propeller 11AP-V” Doc.-No.: P500-912860 Rev 01 (English) ^[3]

Component Overhaul Manual “Propeller 11AP-V” Doc.-No.: P500-912861 Rev 00 (English) ^[3]

10AP-F:

Wartungsanweisung „Propeller 10AP-F für Baureihe S10-V“ Dok.-Nr.: A35-10-067 Rev 01a (Deutsch) ^[3]

Maintenance Instruction “Propeller 10AP-F for model S10-V” Doc.-No.: A35-10-067E Rev 01.a (English) ^[3]

Prüfprogramm “Festpropeller für Baureihe S10-V” Doc.-No. D40-10AP-F Rev 01.a (German) ^[3]

[3] or later approved revisions

VI. Notes

1. The Stemme propellers are designed and certified for use in Stemme Aircrafts only.
2. The suitability of the propeller for usage in a specific powered sailplane/engine-combination has been demonstrated in the type certification of the powered sailplane.

The following combinations are approved:

	Stemme Gearbox (gear ratio) / Engine Combination
10AP-N	10AG (1,18 : 1) / Limbach L2400 EB1.AD
	10AG(V) (1,25 : 1) / Limbach L2000 EB1.AD ^[4]
10AP-V	10AG (1,18 : 1) / Limbach L2400 EB1.AD
11AP-V	11AG (1 : 1,09) / ROTAX 914 F2/S1
10AP-F	10AG (1,18 : 1) / Limbach L2400 EB1.AD

[4] This combination is only approved for Stemme S10 S/N 10-V02.

3. The maximum permitted lifetime of the propeller or its subparts according to the aircraft associated Maintenance Manual chapter 4.
4. Propeller / Propeller Blade designation system

10AP-N	10AP-N / R / Z / MMY	10AP-NB / R / Z / MMY
10AP-V	10AP-V / Z / MMY	10AP-VB / Z / B
11AP-VB	11AP-V / Z / MMY	11AP-VB / Z / B
		012101 / C
10AP-F	10AP-F / Z / MMY	10AP-VB / Z / MMY

B sequential number within one Production Order Number

C sequential serial number (starting with S/N 0015)

R Revision of the associated Assembly Drawing (2 digits)

Z Production Order Number (4 or 5 digits)

MM Month of production

YY Year of Production

SECTION 2 ADMINISTRATION

I. Amendment Record

Annex Issue No.	Annex Issue Date	Changes
1	27 Mar 2025	Introduction of a new Annex 1 to Type Certificate Data Sheet UK.TC.A.00133 for "Stemme Propeller". All data taken from EASA.A.054 'Annex 1'.

-END OF ANNEX-

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