TYPE-CERTIFICATE

DATA SHEET

EASA.A.606

for

VIPER SD-4

Type Certificate Holder
TOMARK, s.r.o.

Strojnícka 5
080 01 Prešov
Slovak republic

For models: Viper SD-4 RTC
Viper SD-4 Night-VFR

SECTION A: VIPER SD-4 RTC

A.I. General

1. Type/ Model/ Variant

Type:	Viper SD-4
Model:	Viper SD-4 RTC

2. Airworthiness Category:	Restricted
3. Manufacturer:	TOMARK, s.r.o. Strojnícka 5 080 01 Prešov Slovak republic
4. EASA Certification Application Date:	07 December 2012

A.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:	07 December 2012
2. Airworthiness Requirements:	Certification Specification for Light Sport Aeroplanes (CS-LSA), Amdt. 1
3. Special Conditions:	
4. Exemptions:	None
5. Deviations:	None
6. Equivalent Safety Findings:	None
7. Environmental Protection Requirements:	Chapter 10 of ICAO Annex 16, Volume I. For details see TCDSN EASA.A.606

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Master document list TOM-TC-01-MDL.A

2. Description: The Viper SD-4 RTC features:
- Conventional low wing configuration;
- Conventional tail;
- Single piston tractor engine;
- Fixed pitch propeller;
- 2 seats, side by side;
- Fixed tricycle landing gear with steerable nose wheel and streamlined wheel covers.

3. Equipment: Minimum equipment list according to flight manual (TOM-TC-01-AFM)

4. Dimensions:

Total length:	6.40	m
Maximum height:	2.20	m
Wing span:	8.34	m
Wing area:	10.45	m^2

5. Engine:

Model:	Rotax 912 ULS2/ Rotax 912 S2
Type Certificate:	Certified as part of the aircraft / EASA.E.121
Limitations:	None

6. Load factors:

+4g, -2g	(clean)	
+2g, 0g	(flapped)	(see note 1)

7. Propeller

Model:	Neuform, CR3-65-(IP)-47-101.6
Manufacturer:	Neuform Composites GmbH
Type Certificate:	Certified as part of the airplane
Number of blades:	3, ground adjustable
Diameter:	1.65 m
Sense of Rotation:	Right (in flight direction)
Weight:	5.1 kg

8. Fluids

Fuel:	see Flight Manual
Oil:	see Flight Manual
Coolant:	see Flight Manual

9. Fluid capacities

Fuel:	90 L (usable)
Oil:	3 L
Coolant system:	1.5 L (approximately)

10. Air Speeds (IAS):

V_{S0}	Stall speed flap pos. II	43 kts
V_{S1}	Stall speed clean	49 kts
V_F	Flap speed	79 kts (see note 1)
V_A	Manoeuvring speed	88 kts
V_C	Cruise speed	102 kts
V_{NE}	Never exceed speed	126 kts

11. Flight Envelope: Maximum altitude 15.500 ft

12. Approved Operations Capability: Day-VFR

13. Maximum Masses:

Maximum permissible empty mass	405 kg
Maximum take-off mass	600 kg

14. Centre of Gravity Range:

Forward CG	310 mm (24% MAC)
Aft CG limit	413 mm (32% MAC)

15. Datum (origin):

X (aft positive)	Wing leading edge
Y (right positive)	on centre line
Z (up positive).	propeller flange / centre line

16. Control surface deflections:

Aileron	27° up, 16º down (+/- 1º)
Flap	0º, 15º, 30º, (40°) down (+/- 2º) (see note 2)
Elevator	25º up, 20º down (+/- 1º)
Rudder	30º left/right (+/- 1º)

17. Levelling Means: Design level attitude is defined by a 0º inclination of the rear fuselage rivet row between tail and canopy.

18. Minimum Flight Crew:	One (1) pilot (left seat)	
19. Maximum Passenger Seating Capacity:	One (1) passenger	
20. Baggage/ Cargo Compartments:	Maximum 15 kg baggage placed behind the seats inside closable containers (each 7.5 kg).	
21. Wheels and Tyres:	Main wheel	4.00 – 6 (Kaspar K-226A-000 6'')
	Main wheel tyre	Kaspar Sava 6''
	Nose wheel	4.00 – 6 (Kaspar K-106A-000 6'')
	Nose wheel tyre	Kaspar Sava 6''

A.IV. Operating and Service Instructions

1. Flight Manual	TOM-TC-01-AFM, 1st edition or later approved revision
2. Maintenance Manual	TOM-TC-01-AMM, 1st edition or later approved revision
3. Structural Repair Manual	N.A.
4. Weight and Balance Manual	TOM-TC-01-AFM, 1st edition or later approved revision
5. Illustrated Parts Catalogue	N.A.

A.V. Notes

Note 1: In case of spin recovery, it may happen that the published load factors and V_{FE} are exceeded. The aeroplane has been proven to withstand such exceedance. Corresponding instructions are provided in the AFM.

Note 2: The conditions for use of Flap position III (40°) are described in AFM.

SECTION B: VIPER SD-4 NIGHT-VFR

B.I. General

1. Type/ Model/ Variant

Type:	Viper SD-4
Model:	Viper SD-4 Night-VFR

2. Airworthiness Category: Normal

3. Manufacturer: TOMARK, s.r.o.
Strojnícka 5
080 01 Prešov
Slovak republic

4. EASA Certification
Application Date: 07 December 2012

B.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:	07 December 2012
2. Airworthiness Requirements:	Certification Specification for Light Sport Aeroplanes (CS-LSA), Amdt. 1
3. Special Conditions:	SC-OLSA-div-01 – Night VFR Operation for LSA
4. Exemptions:	None
5. Deviations:	None
6. Equivalent Safety Findings:	None
7. Environmental Protection Requirements:	Chapter 10 of ICAO Annex 16, Volume I. For details see TCDSN EASA.A.606

B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Master document list TOM-TC-15-MDL.A

2. Description: The Viper SD-4 RTC features:
- Conventional low wing configuration;
- Conventional tail;
- Single piston tractor engine;
- Fixed pitch propeller;
- 2 seats, side by side;
- Fixed tricycle landing gear with steerable nose wheel and streamlined wheel covers.

3. Equipment: Minimum equipment list according to flight manual TOM-TC-15-AFM

4. Dimensions:

Total length:	6.47 m
Maximum height:	2.27 m
Wing span:	8.34 m
Wing area:	10.45 m^2

5. Engine:

Model:	Rotax 912 S2
Type Certificate:	EASA.E.121
Limitations:	None

6. Load factors:

+4g, -2g	(clean)
+2g, 0g	(flapped) (see note 1)

7. Propeller:

Model:	H-FSH_3-D-R_I_RX_C/FSH-D-R_I_C
Manufacturer:	DUC Hélices
Type Certificate:	EASA.P.038
Number of blades:	3; ground adjustable
Diameter:	1.73 m
Sense of Rotation:	Right (in flight direction)
Weight:	5.26 kg

Blade pitch:	23.5° measured at a distance of 250 mm from the tip of the blade at intrados side (flat).

8. Fluids

Fuel:	see Flight Manual
Oil:	see Flight Manual
Coolant:	see Flight Manual

9. Fluid capacities

Fuel:	90 L (usable)
Oil:	3 L
Coolant system:	1.5 L (approximately)

10. Air Speeds (IAS):

V_{S0}	Stall speed flap pos. II	43 kts
V_{S1}	Stall speed clean	49 kts
V_F	Flap speed	79 kts (see note 1)
V_A	Manoeuvring speed	88 kts
V_C	Cruise speed	102 kts
V_{NE}	Never exceed speed	126 kts

11. Flight Envelope: Maximum altitude 15.500 ft

12. Approved Operations

Capability: Day-VFR, Night-VFR

13. Maximum Masses:

Maximum permissible empty mass	405 kg
Maximum take-off mass	600 kg

14. Centre of Gravity Range:

Forward CG	310 mm (24% MAC)
Aft CG limit	413 mm (32% MAC)

15. Datum (origin):

X (aft positive)	Wing leading edge
Y (right positive)	on centre line
Z (up positive).	propeller flange / centre line

16. Control surface deflections:

Aileron	27° up, 16º down (+/- 1º)
Flap	0º, 15º, 30º, 35° down (+0°/- 2º) (see note 2 and 3)
Elevator	25º up, 20º down (+/- 1º)
Rudder	30º left/right (+/- 1º)

17. Levelling Means	Design level attitude is defined by a 0º inclination of the rear fuselage rivet row between tail and canopy.	
18. Minimum Flight Crew:	One (1) pilot (left seat)	
19. Maximum Passenger Seating Capacity:	One (1) passenger	
20. Baggage/ Cargo Compartments:	Maximum 15 kg baggage placed behind the seats inside closable containers (each 7.5 kg).	
21. Wheels and Tyres:	Main wheel	4.00 – 6 (Kaspar K-226A-000 6'')
	Main wheel tyre	Kaspar Sava 6''
	Nose wheel	4.00 – 6 (Kaspar K-106A-000 6'')
	Nose wheel tyre	Kaspar Sava 6''

B.IV. Operating and Service Instructions

1. Flight Manual	TOM-TC-15-AFM, issue A or later approved
2. Maintenance Manual	TOM-TC-15-AMM, issue A or later approved
3. Structural Repair Manual	N.A.
4. Weight and Balance Manual	TOM-TC-15-AFM, issue A or later approved
5. Illustrated Parts Catalogue	N.A.

B.V. Notes

Note 1: In case of spin recovery, it may happen that the published load factors and V_{FE} are exceeded. The aeroplane has been proven to withstand such exceedance. Corresponding instructions are provided in the AFM.

Note 2: The conditions for use of Flap position III (35°) are described in AFM.

ADMINISTRATIVE SECTION

I. Acronyms & Abbreviations

AFM	Airplane Flight Manual
Amdt.	Amendment
AMM	Airplane Maintenance Manual
CG	Centre of Gravity
CS-LSA	Certification specification for Light Sport Aeroplanes
DWN	down
EASA	European Aviation Safety Agency
IAS	Indicated Airspeed
ICAO	International Civil Aviation Organization
kg	kilograms
km/h	kilometres per hour
MAC	Mean Aerodynamic Chord
N.A.	Not applicable
SC	Special Condition
TCDSN	Type Certificate Datasheet Noise
VFR	Visual Flight Rules

II. Type Certificate Holder Record

TC Holder	Period
TOMARK, s.r.o. Strojnícka 5 080 01 Prešov Slovak Republic Contracted DOA Holder based on 21.A.2: **AEROSERVIS, s.r.o.** Letiště Brno-Tuřany 904/1 627 00 Brno Czech Republic EASA.21J.094	Since 22 March 2016 Since 01 November 2022

III. Change Record

Issue	Date	Changes
Issue 1	22-MAR-2016	Initial Issue
Issue 2	12-APR-2016	Correction to model designation
Issue 3	01-APR-2019	Section B: Add model Viper SD-4 Night-VFR. Section 1: Specified designation “S2” for engines, plus some minor corrections
Issue 4	18-MAR-2025	Recording of contracted DOA holder for demonstration of capability according to 21.A.14(a)