

TCDS No.: EASA.A.606 Issue:3



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





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Viper SD-4



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

Reference Date for determining

the applicable requirements: 07 December 2012

2. Airworthiness Requirements: Certification Specification for Light Sport Aeroplanes

(CS-LSA), Amdt. 1

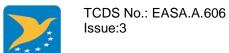
3. Special Conditions:

4. Exemptions: None5. Deviations: None6. Equivalent Safety Findings: None

7. Environmental Protection

Requirements: Chapter 10 of ICAO Annex 16, Volume I. For details

see TCDSN EASA.A.606



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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 m²

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



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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): Vso Stall speed flap pos. II 43 kts

V_{S1} Stall speed clean 49 kts

V_F Flap speed 79 kts (see note 1)

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VA Manoeuvring speed 88 kts
VC Cruise speed 102 kts
VNE 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, 16° down (+/- 1°)

Flap 0° , 15° , 30° , (40°) down $(+/-2^{\circ})$ (see note 2)

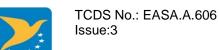
Elevator 25° up, 20° down (+/- 1°)

Rudder 30° left/right (+/- 1°)

17. Levelling Means Design level attitude is defined by a 0° inclination of

the rear fuselage rivet row between tail and canopy.





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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

Flight Manual
 Maintenance Manual
 TOM-TC-01-AFM, 1st edition or later approved revision
 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.

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SECTION B: VIPER SD-4 NIGHT-VFR

B.I. <u>General</u>

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: None5. Deviations: None6. 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 m²

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



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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)

VA Manoeuvring speed 88 kts
 VC Cruise speed 102 kts
 VNE 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. 16° down (+/- 1°)

Flap 0°, 15°, 30°, 35° down (+0°/- 2°) (see note 2

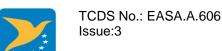
and 3)

Elevator 25° up, 20° down (+/- 1°)

Rudder 30° left/right (+/- 1°)



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17. Levelling Means Design level attitude is defined by a 0° 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

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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

Flight Manual
 Maintenance Manual
 TOM-TC-15-AFM, issue A or later approved
 TOM-TC-15-AMM, issue A or later approved

3. Structural Repair Manual N.A.

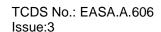
4. Weight and Balance Manual TOM-TC-15-AFM, issue A or later approved

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.



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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 applicableSC Special Condition

TCDSN Type Certificate Datasheet Noise

VFR Visual Flight Rules

II. Type Certificate Holder Record

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

III. Change Record

Issue	Date	Changes
Issue 1	22.03.2016	Initial Issue
Issue 2	12.04.2016	Correction to model designation
Issue 3	01.04.2019	Section B: Add model Viper SD-4 Night-VFR. Section 1: Specified designation "S2" for engines, plus some minor corrections