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# 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





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## **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, latest approved revision)
4. Dimensions:
- |                 |       |                |
|-----------------|-------|----------------|
| Total length:   | 6.40  | m              |
| Maximum height: | 2.20  | m              |
| Wing span:      | 8.34  | m              |
| Wing area:      | 10.45 | m <sup>2</sup> |
5. Engine:
- |                   |  |
|-------------------|--|
| Model:            | Rotax 912 ULS / Rotax 912 S                    |
| 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:	MOGAS EN 228 Super / EN 228 Super plus
<i>Alternative:</i>	AVGAS 100 LL = ASTM D910-76 = MIL-G5772
Oil:	see Rotax Operation Manual and applicable information (see SI-912-010)
Coolant:	see Rotax Operation Manual and applicable information (SB-912-043)

## 9. Fluid capacities

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

## 10. Air Speeds (IAS):

V <sub>S0</sub>	Stall speed flap pos. II	43 kts
V <sub>S1</sub>	Stall speed clean	49 kts
V <sub>F</sub>	Flap speed	79 kts (see note 1)
V <sub>A</sub>	Manoeuvring speed	88 kts
V <sub>C</sub>	Cruise speed	102 kts
V <sub>NE</sub>	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°) (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.
18. Minimum Flight Crew:	One (1) pilot (left seat)
19. Maximum Passenger Seating Capacity:	One (1) passenger
20. Baggage/ Cargo Compartments:	Maximum 15kg baggage placed behind the seats inside closable containers (each 7.5kg).
21. Wheels and Tyres:	Main wheel 4.00 – 6 (Kaspar K-226A-000 6") Main wheel tyre Kaspar Sava6" Nose wheel 4.00 – 6 (Kaspar K-106A-000 6") Nose wheel tyre Kaspar Sava6"

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

1. Flight Manual	TOM-TC-01-AFM, 1 <sup>st</sup> edition or later approved revision
2. Maintenance Manual	TOM-TC-01-AMM, 1 <sup>st</sup> edition or later approved revision
3. Structural Repair Manual	N.A.
4. Weight and Balance Manual	TOM-TC-01-AFM, 1 <sup>st</sup> 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<sub>FE</sub> 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.





## **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**

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### **III. Change Record**

<b>Issue</b>	<b>Date</b>	<b>Changes</b>
Issue 1	22.03.2016	Initial Issue
Issue 2	12.04.2016	Correction to model designation

