

# GOVERNMENT OF INDIA DIRECTORATE GENERAL OF CIVIL AVIATION DRONE DIRECTORATE

#### TYPE CERTIFICATE

No.: T08240000023

This certificate, issued to *M/s PAVAMAN AVIATION PRIVATE LIMITED* certifies that the Unmanned Aircraft System

#### "TEJAS"

its technical specifications and operating limitations for which are contained in Datasheet No **T08240000023** dated **8th August, 2024** is of proper design, material, specification, construction and performance for safe operation based on the recommendation of **SGS India Private Limited** as required by the Certification Scheme for Unmanned Aircraft Systems notified by the Ministry of Civil Aviation vide S.O. 347(E) dated the 26th of January, 2022.

This Type Certificate is issued under the provision of Rule 8 and Rule 9 (3) of the Drone Rules 2021.

This certificate shall remain valid until suspended or cancelled.

Date: 8th August, 2024 Director General of Civil Aviation

## Technical Specifications Of M/S PAVAMAN AVIATION PRIVATE LIMITED'S UAS Model TEJAS

Manufacturer Name	PAVAMAN AVIATION PRIVATE LIMITED	
Address	15th FLOOR SURVEY NO 115/1 KAPIL TOWERS NANAKRAMGUDA, K.V.Rangareddy, TELANGANA, 500032, INDIA	
UAS Model Name	TEJAS	
Description	TEJAS UAS is rotorcraft (Hexa-copter) having a spray system with maximum allowed capacity of 8 liters tank for agrochemical spraying.	
UAS Details		
Category/Sub-Category	Rotorcraft (RPAS)	
Class	SMALL	
Maximum all-up-weight(including payload) in kg	24.9	
Overall dimensions (I x b x h) in mm	2037.0 x 1844.0 x 581.0	
Payload Details		
Details of each Compatible Payload (including Manufacturer Name, Payload Specifications with Model No., Intended Applications)	Sprayer tank with maximum allowed capacity of 8 liters for spraying mode.	
Variable Load/Consumables (Like fluid etc., if any)	Pesticides, Fertilizers, Plant nutrients (Agrochemicals)	
Power plant Details		
Engine details (Manufacturer details, Model No.)	NA , NA	
Engine/Motor	Hobbywing X6 Plus	
Power Rating	2399 watts	
No. of Engines/ Motors	6	
Total fuel capacity (kg)/ Battery capacity (mAh)	16000.0 mAh	
Propeller details (Diameter, Max RPM)	Diameter - 24 inches , Pitch - 8 , Max RPM - 5411	
Equipment Details		
GNSS	Available	
Autonomous Flight Termination System or Return Home (RH)	Available  Available	
Flashing anti-collision strobe lights	Not Available	
RFID and GSM SIM Card	RFID- Not Available  GSM SIM Card- Not Available	
Flight control Module	Available	
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SSR transponder (Mode 'C' or 'S') or ADS-B OUT equipment (if applicable)	Not Available  Not Available	
Barometric equipment (with capability for remote sub-scale setting) (if applicable)	Not Available	
Geo-fencing Capability	Available	
Detect and Avoid Capability (if applicable)	Not Available	
Remote Pilot Station		
Ground Control Station Model No.	AeroGCS Green	
GCS App. Version	V1.39	
C2 Link		
Equipment details	T-12	
Frequency Band	2420- 2480 MHz	
ETA issued by WPC Wing, DoT	Details- ETA-SD-20190702917 dated 25th July 2019	
Performar	nce Details	
Maximum Endurance (hr/m)	9 minutes	
Maximum Range (in km)	0.5 Km	
Maximum Speed (in m/s)	8.0 m/sec	
Maximum Height attainable/ Maximum Ceiling Height (in ft)	98.43 ft	
Operating Altitude (in ft)	98.43 ft	
Operational Envelope	VLOS   Day	
Engine limits (Maximum RPM) / Max. Battery Temperature (in deg C)	55.0 deg C	
Propeller limits (Maximum)	5411	
Document	s / Manuals	
Manufacturer's Operating Manual (as applicable)	Flight Manual Ver. 1.9 dated 22nd July, 2024	
Manufacturer's Maintenance guidelines (as applicable)	Maintenance Manual Ver. 1.3 dated 15th May, 2024	
Maintenance Inspection Schedule/Overhaul interval	Maintenance Manual Ver. 1.3 dated 15th May, 2024	
Maintenance Log Book	Maintenance Logbook Ver. 1.1 dated 27th October, 2023	
Flight Log Book	UAS Operational Log Book Ver. 1 dated 12th September, 2023	
User Guide/ Self Explanatory Information Booklet for end users	Flight Manual Ver. 1.9 dated 22nd July, 2024	

Datasheet No.: T08240000023 dated: 8th August, 2024

Intended Applications	
Intended Applications	Agrochemical spraying for agricultural purposes.

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### <u>Limitations & Conditions to PAVAMAN AVIATION PRIVATE LIMITED for manufacturing of</u> UAS Model TEJAS

- 1. **M/s PAVAMAN AVIATION PRIVATE LIMITED, Hyderabad** henceforth referred as manufacturer in this documents shall comply with the applicable Rules, Regulations & Requirements issued from time to time. The manufacturer shall comply with mandatory safety features (if any) as and when mandated by Ministry of Civil Aviation/DGCA.
- 2. Design documents and manuals submitted shall be frozen and controlled. Any changes effecting to the Type Certificate/Data sheet, the manufacturer shall approach through Authorised Testing Entity for up-dation of the Type Certificate/Data Sheet issued there under.
- 3. Manufacturer shall be responsible for all UAS Model "**TEJAS**" produced by them conforms to this type certificate & data sheet and shall issue a certificate of conformity for each UAS produced.
- 4. Manufacturer shall ensure that their UAS is not tampered at the time of sale and also at the time of maintenance. Manufacturer shall monitor the same and notified to DGCA as and when required.
- 5. Manufacturer shall maintain list of their vendors, bill of materials, inventory of UAS including buyer details with configurations sold to them etc. and access to the same shall be provided to DGCA during surveillance and as & when requested for. It shall be the responsibility of the manufacturer to ensure that their UAS are sold to bonafide customers.
- 6. Manufacturer shall ensure that operations is restricted to Visual Line of Sight & for day operations only and within the operations/ performance limitations specified in the frozen manuals.
- 7. Manufacturer shall affix fireproof plate for indicating UIN, Manufacturer's name, model no. and serial no. in all the UAS manufactured before it is transferred to the buyer.
- 8. Manufacturer shall intimate DGCA about any violations, defects, faults, malfunctions, incidents and accidents involving the subject UAS model quarterly and as when sought for.
- 9. UAS Model "TEJAS" can be used for intended applications only. Manufacturer shall ensure that the drone is flown away (30m) from uninvolved people and not flown over the crowd/ uninvolved people.
- 10. The manufacturer shall be responsible for ensuring applicable conditions and educate end users accordingly.
- 11. Manufacturer shall be responsible for rights related to design and development of the UAS model "TEJAS" and DGCA shall not be party to any dispute arising due to proprietary right issues.
- 12. Manufacturer shall abide by the IT Act 2000 and any subsequent revision.
- 13. In case of violation of any of the above mentioned conditions and/ or operating requirements & restrictions specified in this Type Certificate, penal action shall be initiated in line with the Drone Rules, 2021.