



**GOVERNMENT OF INDIA
DIRECTORATE GENERAL OF CIVIL AVIATION
DRONE DIRECTORATE**

TYPE CERTIFICATE

No. : T12220000007

*This certificate, issued to **M/s Marut Dronetech Private Limited, Hyderabad** certifies that the Unmanned Aircraft System*

“AG 365”,

*its technical specifications and operating limitations for which are contained in Datasheet No. **T12220000007**, dated the **27th December, 2022** is of proper design, material, specification, construction and performance for safe operation based on the recommendation of **M/s UL 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 : 27th December, 2022

Director General of Civil Aviation

Datasheet No. T1222000007 dated 27th December, 2022

Technical Specifications of M/s Marut Dronetech Pvt Ltd.'s UAS model AG 365

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| Manufacturer's Name | Marut Dronetech Pvt Ltd |
| Address | T-Hub Foundation, Door no: 2-53/23/2/1, Himalaya Block -D, IIIT, Gachibowli, Hyderabad, 500032, Telanagana, India |
| UAS Model Name. | AG 365 |
| Description | AG 365 is a hexacopter remote piloted aircraft system (RPAS) of medium class rotorcraft with vertical take-off and landing (VTOL) capability is designed and developed with agricultural spraying, direct seeding and afforestation payload. |
| UAS Details | |
| Category/Sub-Category | Rotorcraft / RPAS |
| Class | Medium |
| Maximum all-up-weight (including payload) in kg | 29.45 Kg |
| Overall dimensions (l x b x h) in mm | L: 1998, B: 1802 H: 580 |
| Payload Details | |
| Details of each Compatible Payload (including Manufacturer Name, Payload Specifications with Model No., Intended Applications) | Configuration 1: Sprayer with 11Ltrs liquid capacity Configuration 2: Direct Seeding payload Configuration 3: Afforestation payload |
| Variable Load/Consumables (Like fluid etc., if any) | Configuration 1: Spraying payload –11Ltrs tank capacity Configuration 2: Direct Seeding payload -5Kg seed capacity Configuration 3: Afforestation payload – 5.5Kg Seed Balls capacity |
| Power plant Details | |
| Engine details (Manufacturer details, Model No.) | NA |
| Engine/Motor | BLDC Motor |
| Power Rating | 1750 W |
| No. of Engines/ Motors | 06 |

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| Total fuel capacity (kg)/ Battery capacity (mAh) | Total Battery capacity: 22000mAh |
| Propeller details (Diameter, Max RPM) | Diameter- 23 inches, Pitch- 8.8 inch & Max RPM- 6400 |
| Equipment Details | |
| GNSS | Available |
| Autonomous Flight Termination System or Return Home (RH) | Available |
| Flashing anti-collision strobe lights | Available |
| RFID and GSM SIM Card | Not Available |
| Flight control Module | Available |
| SSR transponder (Mode 'C' or 'S') or ADS-B OUT equipment(if applicable) | 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) | Available |
| Remote Pilot Station | |
| Ground Control Station Model No. | Laptop based AeroGCS software |
| GCS App. Version | V2.2 |
| C2 Link | |
| Equipment details | Skydroid T12 |
| Frequency Band | 2420-2480 MHz |
| ETA issued by WPC Wing, DoT | ETA Cert. No.: ETA-SD-20190702917 dated 25-07-2019 |
| Performance Details | |
| Maximum Endurance (hr/m) | 22 minutes |
| Maximum Range (in km) | 2 km |
| Maximum Speed (in m/s) | 15 m/s |
| Maximum Height attainable/ Maximum Ceiling Height (in ft) | 328 ft |
| Operating Altitude (in ft) | 98.5 ft (as per approved Flight Manual) |

Datasheet No. T1222000007 dated 27th December, 2022

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| Operational Envelope | VLOS Operations only (within the operations / performance limitations specified in the frozen manuals mentioned below) |
| Engine limits (Maximum RPM) / Max. Battery Temperature (in deg C) | 55 degree Celsius |
| Propeller limits | 6400 RPM |
| Documents / Manuals | |
| Manufacturer's Operating Manual (as applicable) | Flight Manual Rev 11.0 dated 21 st December, 2022 |
| Manufacturer's Maintenance guidelines (as applicable) | User Manual Rev 6.0 dated 21 st December, 2022 |
| Maintenance Inspection Schedule/ Overhaul interval | Maintenance Manual Rev 5.0 dated 22 nd November, 2022 |
| Maintenance Log Book | Log Book Rev 4.0 dated 2 nd November, 2022 |
| Flight Log Book | Log Book Rev 4.0 dated 2 nd November, 2022 |
| User Guide/ Self Explanatory Information Booklet for end users | User Manual Rev 6.0 dated 21 st December, 2022 |
| Intended Applications | |
| Intended Applications | AG 365 is designed for following applications 1. Agriculture Spraying 2. Direct Seeding 3. Afforestation payload for rapid dispersal of seed balls across forests. |

Limitations & Conditions to M/s Marut Dronetech Pvt Ltd
for manufacturing of UAS model 'AG 365'

1. Manufacturer shall comply the regulations, requirements and 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/Datasheet, the manufacturer shall approach through Authorised Testing Entity for up-dation of the Type Certificate/Data Sheet.
3. Manufacturer shall ensure that UAS is not tampered at the time of sale and also at the time of maintenance. Manufacturer shall monitor the same as and when required.
4. Manufacturer shall maintain list of their vendors, bill of materials, inventory of UAS including end user details etc. and access to the same shall be provided to DGCA during surveillance and as & when requested for.
5. Manufacturer shall ensure that operations is restricted to Visual Line of Sight Operations only and within the operations/performance limitations specified in the frozen manuals.
6. Manufacturer shall affix fireproof plate for indicating UIN, Manufacturer's name, model no. and serial no. in all the UAS manufactured.
7. Manufacturer shall intimate DGCA about any violations, defects, faults, malfunctions, incidents and accidents involving the subject UAS model quarterly and as when sought for.
8. Manufacturer shall be responsible for rights related to design and development of the UAS model "AG 365" and DGCA shall not be party to any dispute arising due to proprietary right issues.
9. Manufacturer shall abide by the IT Act 2000 and any subsequent revision.
10. 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.