

# T50/T25 Spreading System

## User Guide

v1.0 2024.04





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# Warnings

1. The T50/T25 Spreading System is only compatible with the DJI AGRAS™ T50/T25 aircraft when the firmware of the aircraft supports the spreading system. Refer to the Specifications section for more information about compatibility. DO NOT use it with other products or for non-agricultural purposes.
2. The spreading system is compatible with dry materials that have a diameter between 0.5 to 5 mm. DO NOT use with other materials. If used with other materials, the operating performance will be negatively affected and the spreading system may be damaged. All materials must be used in strict accordance with the instructions for those materials.
3. The max load of the spread tank depends on the takeoff weight of the aircraft. DO NOT overload. Refer to the Specifications section for more information.
4. When connecting the cables, make sure the connection is correct and secure. Operate with caution to avoid damaging the cables.
5. Make sure that the hopper gate and spinner disk function normally before each use.
6. Operate with caution to avoid injury caused by sharp or moving mechanical parts.
7. While spreading, maintain a safe distance from the spreading system to avoid injury.
8. DO NOT attempt to disassemble any part of the spreading system that has already been mounted prior to shipping. Unless this user guide states that part may be detached. Otherwise, the ingress protection performance will be affected.
9. Under stable laboratory conditions, the spreading system has a protection rating of IP67 (IEC standard 60529). This protection rating is not permanent and may reduce over an extended period of time due to aging and wear. The product warranty does not cover water damage.

The protection rating of the spreading system mentioned above may decrease in the following scenarios:

- If there is a collision and the seal structure is deformed.
- If the seal structure of the shell is cracked or damaged.
- If the waterproof covers are not properly secured.

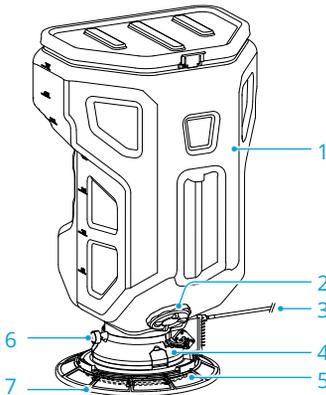
## Introduction

The T50/T25 Spreading System is compatible with the Agras T50/T25 aircraft with spread tanks of 75 L and 35 L, respectively, and offers efficient and reliable spreading.

The spreading system is equipped with the all-new spinner disk to spread the material more evenly. The control module on the spreading system and the weight sensors on the aircraft monitor the remaining weight of the material in the spread tank in real-time to improve the accuracy of the spread rate control and empty tank warnings. The updated fenders can block the spreading material that flies upward to prevent it from damaging the propellers. The quick-release hopper gate allows for easy maintenance and can be replaced easily with the small flow hopper gate when spreading materials with a small flow or diameter.

Users can configure spreading settings in the DJI Agras app and create specific templates for different materials in order to meet different requirements. The app also provides warning prompts for an empty tank as well as for abnormalities in rotational speed, temperature, and hopper outlet size.

## Overview



1. Spread Tank
2. Material Discharge Outlet
3. Cable
4. Spreader
5. Spinner Disk
6. Spreader Lock Knob
7. Fender

# Installation

- ⚠️ • Make sure to remove the Intelligent Flight Battery from the aircraft before installation.
- Operate with caution to avoid injury caused by sharp or moving mechanical parts.
- Check the parts on the aircraft and spreading system after installation to make sure that the spinner disk will not damage the cables or any other part during operation.

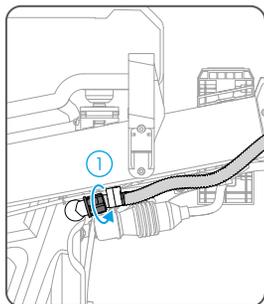
The T50 and T25 Spreading Systems are similar in appearance and operations. Unless otherwise specified, the illustrations in this document use the T50 Spreading System as an example.

1. Locate the hoses on either side of the spray tank on the aircraft. Loosen the nut on the hose ① and detach the hose and nut.

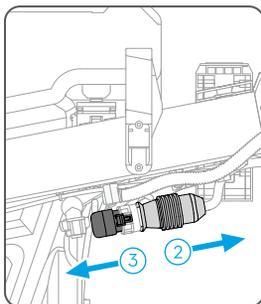
Note: After the hose is removed, make sure to tighten the hose nut on the spray tank hose connector to avoid losing the nut.

2. Locate the spraying system cable on the rear left landing gear of the aircraft. Remove the protective rubber casing on the cable ② and unplug the cable from the connector ③. Operate with caution to avoid damaging the cable.
3. Lift and remove the spray tank from the aircraft.

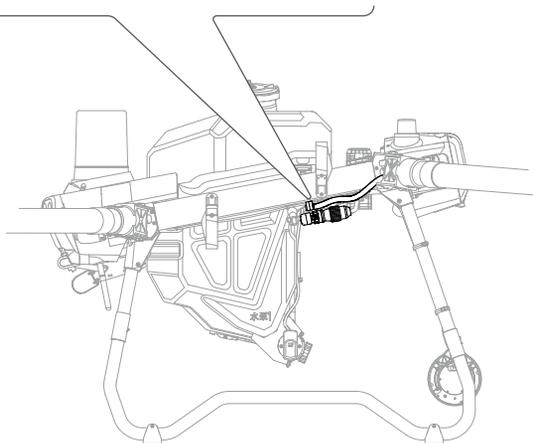
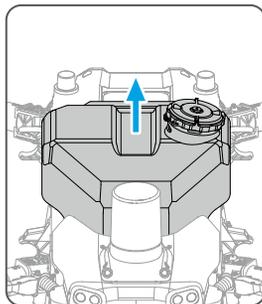
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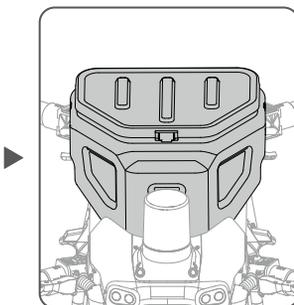
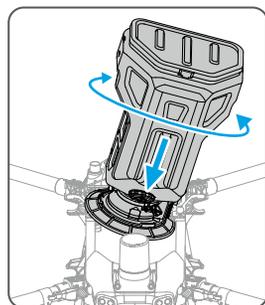


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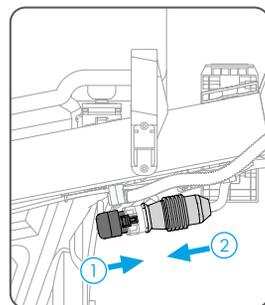


- Tilt the spreading system to the side with the cable, insert the spreading system into the aircraft and rotate. The spreading system needs to be inserted at an angle. DO NOT insert by force.
- Connect the spreading system cable to the connector in step 2 ①, ensure a firm and accurate connection, and then place the protective rubber at the end of cable ②.

4.



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## Calibration

### Tare Calibration

Make sure to perform tare calibration before first time use. Otherwise, the weighing accuracy may be adversely affected. Tare calibration is required if the spread tank is empty but the weight detected is not zero.

- Empty the spread tank and place the aircraft on a flat surface. Power on the remote controller and aircraft.
- Go to Operation View in the app, select ⚙️, then 🍴, and tap Calibrate.
- Tap Calibrate and calibration will start automatically. If the calibration is successful, tap Confirm to complete the calibration.

### Empty Tank Calibration

The spreading system has been calibrated before delivery. There is no need to calibrate before first time use. Calibration is required if the app incorrectly displays an empty tank warning or when the app is unable to detect when the tank is empty.

- Empty the spread tank and place the aircraft on a flat surface. Power on the remote controller and aircraft.
- Go to Operation View in the app, tap ⚙️, then 🍴, and tap Calibrate.
- Tap Calibrate and calibration will start automatically. If the calibration is successful, tap Confirm to complete the calibration.



• To ensure the operation accuracy, it is recommended to perform tare calibration and empty tank calibration after switching the spraying system to spreading system.

## Flow Calibration

There are several templates for typical spreading materials in the spreading settings of the DJI Agras app. Users can start spreading operations directly when using any of the templates. Users can also create templates if the performance of the templates in the app are not satisfactory or if other spreading materials are being used. Flow calibration is required when creating a new template. Refer to the Usage section for more information about creating templates.



• Calibration is required after replacing the hopper gate to ensure the operation accuracy.

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## Usage

### Creating Templates

If the performance of the existing templates are unsatisfactory or other materials are being used, users can create a new template as follows:

1. Disassemble the spinner disk according to the instructions in the Maintenance section. Make sure to store the removed pin, nut, and washer carefully.
2. Place the aircraft on a flat surface. It is recommended to place a plastic sheet or film below the hopper outlet to collect the dispensed material. Add the used material into the spread tank and close the cover. It is recommended to add more than 15 kg of the material.
3. Make sure the spreading system cable is connected and then power on the remote controller and aircraft.
4. Go to Operation View in the app, tap , then , and tap Materials Management. Select Add New Material and then set the type of the hopper outlet in use.



• When using the standard hopper gate that is pre-mounted on with the spreading system, make sure to set the hopper outlet type to Hopper Outlet 1. When using the small flow hopper gate that is sold separately, make sure to set the hopper outlet type to Hopper Outlet 2. Refer to the Replacing Hopper Gate section to learn how to replace the hopper gate and the recommended materials.

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5. Tap Calibrate and the spreading system will start working during the calibration.
6. Set the material amount, spinner disk speed, and flight speed after calibration and tap Save.
7. Power off the aircraft and remount the spinner disk.

## Operation Procedure

1. Power on the remote controller and then the aircraft. Enter Operation View in the DJI Agras app.
2. Open the cover, add the compatible material, and close the cover. The DJI Agras app will intelligently recommend the payload weight limit for the spread tank according to the current status and surroundings of the aircraft. DO NOT exceed the recommended payload weight limit when adding material to the tank. Otherwise, the flight safety may be affected.
3. Select the operation mode to Route mode. Plan a field or select a field in the field list and enter Edit mode to set the route parameters. Then tap Save to save the field.

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-  Adjust the line spacing according to the flight altitude and spinner disk speed. It is recommended to set the line spacing between 5 to 7 m. (within 6 m for materials, such as rice seed)
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4. Tap  on the left side of the screen to select the operation field and tap Use to set the spreading parameters. Select the required material and set the parameters as needed. The adjustable parameters vary between different operation modes.

Route: Set the material amount, spinner disk speed, flight speed, and height relative to the vegetation.

M+: Set the material amount, spinner disk speed, flight speed, line spacing, and height relative to the vegetation.

M: There is no need to select the spreading materials. Set the hopper outlet size, spinner disk speed, max. flight speed, and height relative to the vegetation. It is recommended to follow the instructions below when spreading 45 kg/ha of materials:

- Adjust the hopper outlet size so that the spreading amount is 8 kg/min.
- Adjust the spinner disk speed so that the spreading range is 4.5-7 m.
- Maintain a flight speed of approximately 5-7 m/s.

5. Start the operation. The operations of the spreading system vary depending on the operation mode.

### Route Operation Mode

**Route (Field) Operation:** Tap Start after completing the spreading parameters. The aircraft will then ascend to the preset takeoff altitude and the spinner disk will start to rotate. When the aircraft reaches the starting point of the route, the hopper gate opens and the aircraft flies along the route and spreads material automatically. Spreading cannot be started or stopped manually.

**Route (A-B) Operation:** Tap Start after completing the spreading settings. Switch to A-B operation mode after the aircraft has reached the takeoff altitude and the spinner disk will start to rotate. After Point A is recorded, the hopper gate opens automatically and will start spreading when the aircraft flies from Point A to Point B. Spreading cannot be started or stopped manually.

**Using the operation resumption function:** Once the operation is paused, the hopper gate closes automatically to stop spreading, while the spinner disk continues to spin. After operation is resumed, the aircraft returns to the breakpoint or projection point and continues spreading.

## Manual Operation

**M+:** Switch to M+ mode and set the spreading parameters. After manually controlling the aircraft to reach the operation field, click Start and the spreading disk will start to rotate and materials will be spread automatically.

**M:** Switch to M mode and set the parameters, tap Start after take off. Users can press the Spray/Spread button on the remote controller to start or stop spreading manually.

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- 💡 • In all operation modes except Manual operation mode, when the aircraft flies along the connecting routes between the spreading flight routes, the hopper gate closes automatically to stop spreading while the spinner disk continues to spin. The hopper gate opens automatically to start spreading when the aircraft flies along a spreading flight route.
  - The spreading operation is more precise when the hopper outlet size is set between 30 to 65%.
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## Replacing Hopper Gate

The small flow hopper gate can be used to spread materials with a small flow or diameter, to provide a more accurate flow control for more precise spreading operations. It is recommended to replace the standard hopper gate with the small flow hopper gate if the hopper outlet size is 30% or less or the diameter of the spreading material is 2 mm or less.

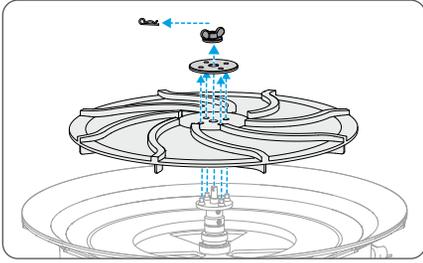
## Installation

Follow the illustrations to remove the standard hopper gate and install the small flow hopper gate.

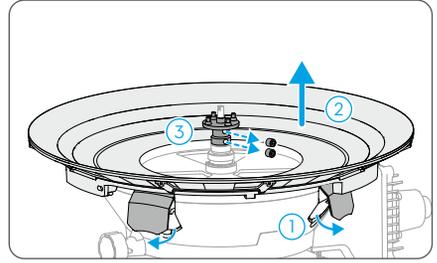
1. Remove the pin, nut, washer, and spinner disk at the bottom of the spreader.
2. Open the locks to remove the base. Remove the screw on the flange using a 2mm hex key and then remove the flange and bearing sleeve.
3. Remove the circlip using circlip pliers. Rotate the gate to the max hopper outlet size and then remove the standard hopper gate.
4. Mount the small flow hopper gate. Make sure to align the mark on the side of the hopper gate and the mark on the gear of the servo at the bottom of the spreader before remounting the circlip.
5. Remount the bearing sleeve, flange and tighten the flange screw. Mount the base and fasten the locks.
6. Remount the spinner disk and secure it using the washer, nut, and pin.

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- 💡 • Watch the tutorial video on the official DJI website for more details.
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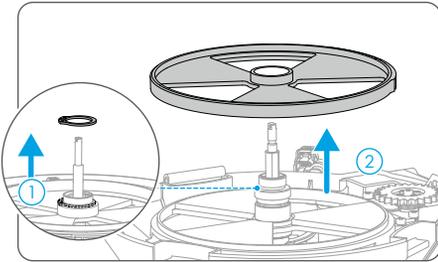
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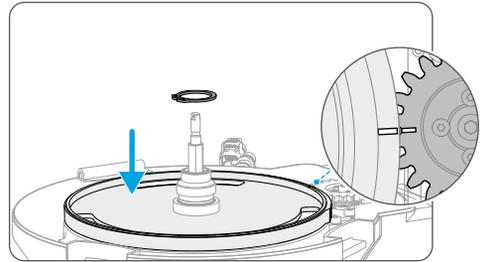
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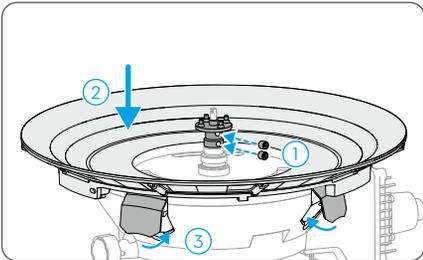
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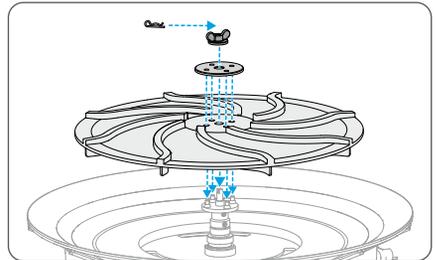
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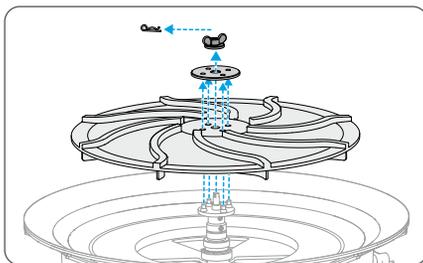


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# Maintenance

1. Cleaning the spreader: After spreading, clean the residue in the spread tank and spreader immediately. Make sure to dry the system afterwards.
2. Replacing the spinner disk: The spinner disk is a consumable part. Follow the steps below to replace the spinner disk if there are obvious signs of wear.
  - a. Make sure that the aircraft is powered off.
  - b. Remove the pin, nut, washer, and spinner disk at the bottom of the spreader. Mount a new spinner disk and secure it using the washer, nut, and pin.



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-  • Refer to the Replacing Hopper Gate section to disassemble and clean the inside of the spreader.
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## Specifications

Specifications	T50 Spreading System	T25 Spreading System
Compatible Aircraft <sup>[1]</sup>	Agras T50	Agras T25
Spreading System Weight (inc. spread tank and fenders)	6.0 kg	3.9 kg
Spread Tank Volume	75 L	35 L
Spread Tank Internal Load <sup>[2]</sup>	50 kg	25 kg
Compatible Material Diameter	0.5-5 mm	
Spreading Range	Varies according to the material diameter, spinner disk rotational speed, hopper outlet size, and flight altitude. For optimal performance, it is recommended to adjust the corresponding variables to achieve a spreading range of 4.5-7 meters.	

- [1] The aircraft firmware must support the spreading system. Check the release notes of the corresponding aircraft on the official DJI website.
- [2] The DJI Agras app will intelligently recommend the payload weight limit for the spread tank according to the current status and the surroundings of the aircraft. DO NOT exceed the recommended payload weight limit when adding the material to the spread tank. Otherwise, flight safety may be affected.



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