



A Legacy of Quality / Winter 2024

Swathmaster

WINGMAN

METERATE™

CP NOZZLES

SATLOC®



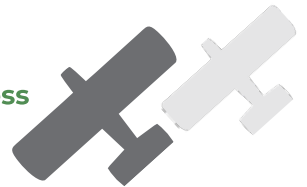
Transland
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Transland Electric Gate

Transland Electric Gates are available in 5" and 7 1/2" Gate Boxes. Plus, we offer a seamless transition from hydraulic and manual gates with our convenient conversion kits.



Designed for compatibility, our electric gate connects effortlessly with Satloc Falcon & Satloc G4 systems. This integration simplifies the cockpit experience, requiring only one screen, enhancing pilot focus and operational safety.

Precision is critical in aerial spraying, and our electric gate delivers an impressive 1/32" door accuracy with our Satloc controllers. This level

of control ensures that materials are dispensed efficiently, reducing waste and saving costs.

Adaptable to various application needs, our electric gate supports variable rate applications and offers wet (latched) and dry lock (soft-latched) door position settings. This versatility ensures that our gate can be adjusted to meet specific application requirements.

Ease of use and maintenance have been central to the design of our electric gate. Features like the manual clean-out and adjustable door speed make operation straightforward and ensure that maintaining peak performance is hassle-free.

Safety is paramount in aerial application.

Our electric gate's jettison over-ride capability, manual operation option with a dump handle, jam detection, adjustable door speed, and arm switch features provide pilots with essential control and safety mechanisms, ensuring peace of mind during operations.

The shift to a total electric system eliminates the complexities and maintenance demands associated with hydraulics, offering a cleaner, more reliable, and environmentally friendly solution.

Choosing Transland's Electric Gate means investing in and enhancing your aerial application operations.

Contact your local Dealer for ordering information.

Low Cost. High Impact. Why Not?

In collaboration with industry experts, Transland performed tests on aircraft with and without fingers in spreader vanes, door vanes, and straightening vanes for fairings. The results showed that these accessories allowed more airflow through the spreader. The testers saw reduced drag, wider swath width, and a better co-efficient pattern. The most important result is the aerial applicator performed higher-quality work.

1

Door Vanes

To produce more consistency in dry work, adding door straightening vanes to the gate box door and the fairing located in front of the gate is recommended. It's important to note that most spreaders maintain a consistent pattern and swath width up to 250 lbs of material per acre. Beyond this point, an increase in pounds per acre may lead to a reduction in swath width. Another aspect of this is the more the door is opened, the airflow is reduced. The vanes in the throat of the spreader are adjustable. Remember, the setting from the factory is based on testing, in conjunction with Dennis Gardisser and Mike Lee, for the optimal setting for the best overall performance of Transland Spreaders and SwathMasters.

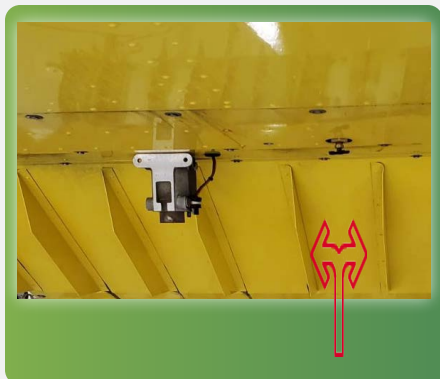


Door Straightening Vanes PN	Fits Gate Box Type(s)
50025	25" Gate Box, 5" Gate Door
50038	38" Gate Box, 5" Gate Door
50041	41" Gate Box, 5" Gate Door
51037	38" Gate Box, 7 1/2" Gate Door
51038	38" Gate Box, 10" Gate Door
51041	41" Gate Box, 10" Gate Door

2

Fairing Straightening Vanes

Straightening Vanes (PN 16999) for fairings are aerodynamic components used on crop duster planes to streamline airflow and reduce drag. This is particularly important for crop dusters, as they often fly at low altitudes and slower speeds than other aircraft, making them more susceptible to aerodynamic inefficiencies. The Straightening Vanes for fairings are designed to smooth the airflow around the plane's gate box, reducing turbulence and drag. This allows for more airflow through the spreader.



For more information, visit Transland's website to view the [Spreader](#) and [Swathmaster](#) pages.

Contact your local dealer to order these low cost, high impact accessories.



What are pilots saying about the Falcon?



New Technology

"We have always run Satloc, and we nervously took a chance on the new Satloc Falcon and went with it. It's great and very dependable."

- Cory Hunt, Kansas



Convenience

"I used to have to save the work to a USB drive from the GPS and then get it to our secretary 30 miles away. Now, I don't have to do anything; I just hit complete job on the Falcon, and she gets it. Using the Satloc Cloud, I get out of the airplane, and I'm done."

- Lance Avera, Georgia



Workload

"It's half the workload to reconfigure the GPS for a new field. In the Satloc Falcon, it is 3-4 taps; it used to be 9."

- Matt Woolard, Arkansas



ADS-B In

"The ADS-B In is awesome. I see planes I never would have seen. That is a huge plus for the safety of all Ag Pilots."

- Ryan Turner, Arkansas



Simple or Advanced

"This unit can be for a guy who just wants to run the field, all the way up to the guy who wants to have his polys sent to him. It can be as simple or advanced as you want it to be."

- Keith Anderson, Tennessee



Live Map

"The live map is wonderful and probably one of the most useful aspects of the Falcon. It is also much faster than the previous model."

- Fred Meise, Washington

Contact your local Dealer for ordering information.



Change to an IF3 from an IF2 with an Upgrade Kit



IntelliFlow 3 Upgrade Kits offer a convenient and cost-effective alternative to purchasing an entirely new IntelliFlow 3 system. These kits include components that allow people to upgrade to our new flow control technology. This approach enables aerial applicators to save money when they are looking for a way to cut expenses.

Contact your local dealer for ordering information.

Flow Meter Sizing Calculator located at www.Satloc.com/flow-meter-sizing-calculator/.

Flow Meter Sizing Calculator

☒ Imperial ☐ Metric

Width (ft):

Speed (mph):

Target GPA Min:

Target GPA Max:



Need a Flow Meter or Valve Repair Kit?

Extend the life of your flow meter or valve and save on costly replacements!! Don't let malfunctions ground you during the season. For a cost-effective solution, purchase one of Satloc's Flow Meter or Valve Repair Kits.

Flow Meter Repair Kits

- 711-0002-01 - Flowmeter Repair Kit, Turbine 1.5"
- 711-0011-01 - Flowmeter Repair Kit, Trimec 2"
(for 752-0011-01 OR 750-0094-222)

Valve Repair Kits

- 710-0120-000 - Valve Repair Kit, 2" Sharpe Valve
- 710-0132-000 - Valve Repair Kit, 2" KZ Valve
- 710-0140-000 - Valve Repair Kit, 1.5" Sharpe Valve



PN: 711-0002-01
FLOWMETER
REPAIR KIT
TURBINE 1.5" **SATLOC**

Employee Spotlight

A Good Blend of Professionalism and Personality



Sweet and Sassy, or is it Sassy and Sweet? Those words describe our purchasing ladies, Chasity and Yuri. They are sweet to work with yet sassy enough not to get pushed around by all the men in our company!

This industrious and fun-loving team is at the heart of Transland's purchasing department. Yuri and Chasity are dedicated to their roles, consistently finding the best vendors, ensuring

timely supply shipments, and diligently monitoring prices to keep our costs competitive.

Chasity and Yuri make a great team because they bounce ideas off each other, aren't afraid to ask the other for help and allow the other to jump in when she struggles with a work task. They are definitely "work-besties," which is what they call each other. Are they all work and no play? Absolutely not.

Yuri is an avid traveler, yet her deepest passion right now is spending time with her baby grandson. She also loves spending time with her daughters and her companion, Reno. Yuri and Reno enjoy exploring new places, eating tasty food, and experiencing different cultures. Her desire to try new things enhances her work skills through her willingness to learn new things and master those skills.

With four girls in his family, it's a wonder that Chasity's husband, Dallas, has any

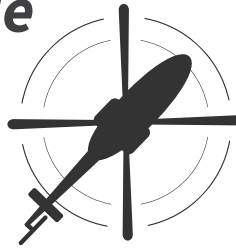
money left at the end of the month (a statement Chasity knows Dallas will love)! All kidding aside, Chasity and Dallas value faith and family. They are committed parents who are raising three beautiful girls. Their family is active in church, sports, and other aspects of the community. Chasity's ability to manage a busy family and a career is a testament to her exceptional organizational skills.

Both Yuri and Chasity enjoy exploring the art walk in downtown Wichita Falls and have a shared passion for quality food. Their similar interests in spending wisely align perfectly with their roles at Transland.

Transland is proud to have Yuri and Chasity on board. Their dedication, skill, and positive attitudes significantly contribute to our company's success, proving that a blend of professionalism and personality is one key to a thriving workplace.

Choosing an Accu-Flo Nozzle

The CP Quick Calculator, Accu-Flo GPM Chart, and Accu-Flo Adapter & Restrictor Chart, which are all referenced in this article, are located at www.CPNozzles.com.



Step One

The first step is to decide the type of cap and needle needed for your application. The CP Quick Calculator can assist in this decision. The nozzle cap options are detailed at the bottom of the calculator page. Below is an expanded explanation of the calculations needed for determining which Accu-Flo Nozzle setup is best for an applicator's setup.

- **Determining Acres Per Minute (APM):** The APM is calculated using the formula: $APM = MPH \times \text{swath} \times 0.0020202$. For instance, with a speed range of 46 to 58 mph and a swath width of 50' to 55', the average APM is approximately 5.25.
- **Gallons Per Minute Per Boom (GPM/Boom):** This is calculated by multiplying APM by the desired gallons per acre (GPA). For example, $5.25 \text{ APM} \times 10 \text{ GPA} = 52.5 \text{ GPM/Boom}$.
- **GPM per Nozzle:** If a boom uses 26 nozzles, the GPM per nozzle is found by dividing the total GPM by the number of nozzles ($52.5 \div 26 \approx 2.02 \text{ GPM/nozzle}$).

Choosing the Right Nozzle

Using the provided calculations, operators can select the appropriate Accu-Flo nozzle. For instance, the .028-64 nozzle at about 26 PSI or the .033-48 nozzle at about 28 PSI could be suitable for a setup requiring 2.02 GPM per nozzle. However, it's crucial to ensure that the 2.02 GPM requirement does not sit at the extreme top or bottom of the nozzle's flow rate capabilities. This consideration is important because variations in chemical viscosity can slightly alter flow rates from those determined in static conditions with a single nozzle.

Step Two

Determine whether the Accu-Flo nozzle will be attached to a TeeJet or a boom. For a TeeJet, the 8360-ADP Assembly or the 2CV Assembly is required. For a boom, an M-30 Assembly is needed.

Step Three

Choose the preferred restrictor size by referencing the Accu-Flo GPM Chart for available options.

Step Four

The adapter size is determined by how the nozzle is attached to a TeeJet or a boom. The Accu-Flo Adapter and Restrictor Chart provides detailed information on this.

Application Guidelines

Swath Calculation for Helicopters: A general rule of thumb is $SWATH = ALTITUDE \times 50\% + BOOM \text{ WIDTH}$. Swath width is typically about twice the boom width. Larger droplets fall faster, reducing cushion effect and swath width. Higher altitude increases swath width, with maximum effectiveness around 50' to 60' above the canopy.

Pattern Testing

Operation S.A.F.E. clinics offer Pattern Deposition Analysis to help guide and calibrate equipment to optimum performance. These clinics help you find optimal swath and droplet size. Also, the clinics help solve equipment problems before starting a new season.

BEFORE SPRAYING WITH NOZZLES, TRANSLAND RECOMMENDS PATTERN TESTING WHENEVER CHANGES ARE MADE TO EQUIPMENT. ULTIMATELY, EACH APPLICATOR IS RESPONSIBLE FOR CHOOSING THE CORRECT SETUP FOR HIS/HER APPLICATION NEEDS.

ACCU-FLO
NOZZLE

Installing & Using Accu-Flo Nozzles

Nozzle Orientation

- **Positioning for Clean Air:** Keep nozzles in the cleanest air possible.
- **Airfoil Boom Setup:** For airfoil booms with toe mounting, nozzles should point straight back, directly behind the boom.
- **Belly Mount or Round Boom:** Use 3" to 6" drop-down tubes with 90-degree elbows to move nozzles out of boom turbulence. Adjust placement to avoid turbulence from pumps or other belly-mounted equipment.

Check Valve Design

- **Internal Check Valve:** Accu-Flo nozzles feature an internal check valve for optimal aerodynamics and effective shut-off, avoiding external air disturbances.

The Good, The Bad, The Ugly of Nozzle Application

In liquid application work, the right nozzle is the most important thing between the crop and your boom. Choosing the correct nozzle and proper maintenance will result in better applications. Let's take a look at the good, the bad, and the ugly of applications.



The Good



The Bad



The Ugly

Clogged Nozzles Can Cause Streaking

Streaking in liquid crop dusting can be caused by several factors related to the equipment, environmental conditions, and application techniques. One reason for streaking is clogged nozzles. To prevent clogged nozzles, it's important to use clean water, ensure proper mixing of chemicals, regularly clean and maintain them, and store them properly when not in use. Regular inspections and timely replacements of worn-out nozzles are also crucial for maintaining the efficiency of aerial spraying equipment. Aerial nozzles can get clogged due to various reasons.

Here are some common causes of clogging in aerial nozzles:

1. Storing nozzles with residue inside or in environments where they can get dirty can lead to clogging.
2. Over time, nozzles can wear out, leading to changes in the spray pattern and potential clogging issues.
3. Dirt, dust, or rust particles in the spray solution can clog nozzles. These particles can originate from unclean water, contaminated products, or even from the internal corrosion of the spray system components.
4. If the spray mixture is not mixed correctly or if certain products do not fully dissolve, they can precipitate and form solids that clog the nozzles.
5. Some chemical mixtures can react with each other or with the water used to create insoluble compounds. These residues can accumulate and block the nozzle openings.
6. If the spray equipment is not cleaned correctly after use, chemical residues can dry and harden inside the nozzles, leading to clogs.
7. Some oil-based products may leave a residue that can build up over time and clog the nozzles.
8. During application, nozzles can also get clogged by external environmental debris like leaves, insects, or other small particles, especially in areas with dense vegetation.



This nozzle is clogged!!!!

Tips for Cleaning Nozzles

1

WEAR PROTETIVE GEAR

Always wear appropriate personal protective equipment (PPE) such as gloves, goggles, and long sleeves to protect yourself from exposure to chemicals.

2

INSPECTION

Before cleaning, inspect the nozzles for any visible signs of damage or wear. If the nozzles are damaged, they may need to be replaced rather than cleaned.

3

CLEAN NOZZLES

Flush out system with water. If needed, spray or wipe off the outer part of the nozzles to remove any chemicals or debris.