





AVADEX APPLICATION

PRECISION APPLICATION TO ENSURE THE BEST WEED CONTROL

Introducing a different mode of action when compared to commonly used herbicides, Avadex has provided reliable grass weed control for over 50 years. Supplied in granular form, Avadex has come back into favour in recent years thanks to its proven ability to help in the fight against a range of grass and broad leaved weeds in common rotations. The increased efficacy of the granular product when compared to the liquid counterpart has resulted in growers looking for efficient and accurate ways to apply Avadex during the establishment of their crops. Having been involved in Avadex application from the beginning, Horstine is ideally placed to provide a range of applicators to meet and exceed grower's expectations.

ACCURATE DISTRIBUTION



All Horstine applicators are designed to ensure the application rate is uniform across the full spread width of the machine. Utilising a single metering rotor to supply each individual distribution outlet, all Horstine applicators remove the possibility of under/over dosing. Other systems such as distribution heads open up the possibility of miss application, leading to weed control issues or even crop damage.

PNEUMATIC PRODUCT DELIVERY



Horstine's range of Avadex application machinery all utilise pneumatic delivery of granules. This allows hoppers to be centrally mounted for convenient filling, but more importantly ensures the spread pattern from each of the distribution outlets can be carefully controlled. Each outlet uses a venturi to ensure a pressure differential exists under the rotor, preventing airflow affecting rotor filling.

VERSATILE APPLICATORS



Avadex granules should be applied post drilling and rolling to ensure they are not incorporated into the soil profile. That doesn't mean application options are limited however, with Horstine offering applicators that can be mounted onto drills, rolls and existing booms, as well as stand alone equipment. Nor are these applicator limited to just Avadex application, with most able to apply forms of fertilisers, slug pellets and small seeds.

APPLICATION CONTROL



Automatic rate controllers allow very precise control of product application in relation to the forward speed of the applicator. This guarantees the 15 kg/ha rate of Avadex is correctly applied at all times. Where spot applications of Avadex have been mapped in advance, Horstine applicators can be specified to receive this signal and will only apply the granules where required.

CASCADE

Horstine Cascade offers growers a precision applicator for a wide range of products such as Avadex, slug pellets, granular fertilisers and a range of small seeds, at widths of up to 24 metres. Utilising Horstine's individual metering system, each broadcast outlet is fed by its own metering rotor, guaranteeing consistent application across the full width of the boom. The RDS ISOcan controller is ISObus compatible with optional Automatic Section Control available to further increase application accuracy.

INDIVIDUAL METERING

Like all Horstine applicators, the Cascade uses individual rotors to feed each distribution outlet, guaranteeing application accuracy. The outlets are set at one metre spacings ensuring excellent coverage from the double overlap pattern. Cascade features four separate metering cassettes each controlled by an individual hydraulic motor. This allows the boom to operate in four application sections to further increase accuracy. A 70l/min oil supply is required to operate the four metering motors and fan.

VERTICAL FOLDING BOOM

Cascade features a vertical folding steel boom, operated from the tractor's hydraulic. The structure of the boom is made up of a number of steel product delivery pipes, with additional plastic delivery pipes used to reduce the weight of the boom. Tilt control is available to ensure the boom remains parallel to the surface when operating on side slopes, with a transport lock in place to ensure safe travel on the road. The whole Cascade applicator folds to a width of 2.9 metres.

HIGH CAPACITY PNEUMATIC SYSTEM

A high capacity hydraulically driven pneumatic fan is fitted to the Cascade, providing air flow to the individual venturis. Each venturi (one per outlet) pulls the metered product from the rotor before propelling it down the boom to the distribution outlet. Between the venturi and the outlet there are no bends just a perfectly straight flow, allowing granules to flow freely to the outlets. This system reduces the time taken for product to reach the outlet, improving accuracy when using GPS controlled auto shut off.

ISOBUS CONTROL SYSTEM

The RDS ISOcan controller provides automatic rate control of the Cascade, controlling each of the four metering cassettes. An optional Topcon X25 controller can be specified, allowing growers to take advantage of guidance and auto section control systems, adding additional application accuracy. All Cascade applicators are ISObus ready so can be plugged into the back of an ISObus tractor, allowing control from the tractor terminal.



1500L HOPPER



RDS ISOcan CONTROLLER



ONE METRE SPACINGS



BOOMS FROM 12 - 24 METRES

**STANDARD SPECIFICATION**

- 1500L Polyethylene Hopper with Sieves
- 24m Vertical Folding Boom (4 Sections)
- 24 Distribution Outlets
- Hydraulically Driven Pneumatic Fan
- Hydraulically Driven Metering
- RDS ISOcan Controller (ISObus Ready)
- ISO Speed Cable
- Hopper Low Level Sensors

OPTIONAL SPECIFICATION

- 12m Vertical Folding Booms (2 Sections)
- 14-20m Vertical Folding Booms (4 Sections)
- GPS Speed Sensor
- Radar Speed Sensor

TRACTOR REQUIREMENTS

- 4 Hydraulic Spools - 1 constantly pumping, 3 double acting, free flow return & case drain

TMA4

Featuring the same fundamental ideas as the larger Cascade, TMA4 is a proven applicator for Avadex, slug pellets and other granular chemicals. Ideal for growers looking to take Avadex application “in house” the TMA4 can be tractor mounted or trailed behind a quad or ATV, offering a very low ground pressure solution. A Horstine Wizard automatic rate controller and 12 metre manually folding booms are standard, but mounted machines can be upgraded to a hydraulic folding system if required.

INDIVIDUAL METERING

Like all Horstine applicators, the TMA4 uses individual rotors to feed each distribution outlet, guaranteeing application accuracy. Each outlet applies product over a 1.5 meter width, with the spread pattern kept consistent thanks to rigid bends before each outlet ensuring granules are delivered to the splash plate correctly. The outer sections of the boom can be rotated whilst folded to prevent damage to the rigid bends during transport.

MOUNTING OPTIONS

TMA4 is a versatile piece of equipment. It can be mounted on the front or rear of a tractor, fitted to a drill or set of rolls, or pulled by an ATV on a purpose built trailer with its own 6.5hp petrol engine to power the fan. Trailed TMA4's feature an alternator and battery to ensure reliable starting and control of electric systems. This versatility gives growers a variety of different ways to apply product, ensuring application is in a timely and efficient manner.

HIGH CAPACITY PNEUMATIC SYSTEM

A high capacity hydraulically driven pneumatic fan is fitted to the TMA4, requiring a 30 l/min hydraulic supply. The two four outlet metering systems are driven by a single high torque electric motor, which is controlled by an automatic rate controller removing the requirement for a land wheel drive. When the TMA4 is mounted on a trailer, the hydraulic motor is substituted for an engine driven fan.

AUTOMATIC RATE CONTROL

The Horstine Wizard application controller is used to precisely adjust metering rotation speed to compensate for changes in forward speed, ensuring the applicator is always putting on the correct amount. There are three options of speed sensor, ISO cable, GPS and radar, with growers also having the option of fitting a hopper low level sensor.



TRAILED TMA4



HIGH FLOW PNEUMATIC SYSTEM



1.5M SPACINGS



INDIVIDUAL METERING



STANDARD SPECIFICATION

- 380L Polyethylene Hopper with Sieves
- 12m Manually Folding Boom
- 8 Distribution Outlets
- 3 Point Linkage Mounted with Hydraulically Driven Pneumatic Fan
- Trailer Mounted with Engine Driven Pneumatic Fan
- Electrically Driven Metering
- RDS Wizard Controller
- ISO Speed Cable

OPTIONAL SPECIFICATION

- Hydraulically Folding Boom
- Hopper Low Level Sensors
- GPS Speed Sensor
- Radar Speed Sensor

TRACTOR REQUIREMENTS

- 1 Constantly pumping spool, 1 Free Flow Return, 1 Fan Case Drain Return
- 30 lpm Hydraulic Supply

TWIN AIR

Twin Air is a versatile applicator that can be mounted on a variety of implements to provide precision Avadex application. Featuring a 450 litre stainless steel hopper, hydraulically driven fan and metering systems, Twin Air is a heavy duty applicator designed for high work loads. Applicators can be mounted to rolls, drills or multiple units to sprayer booms in widths of up to 36 metres, with Horstine individual metering ensuring a consistent application across the full application width.

METERING CONFIGURATION

Like the complete Horstine range, Twin Air utilises one rotor for each distribution outlet, with up to sixteen per applicator. The rotors are housed in four separate cassettes which can be easily swapped when moving between products, with recalibration a simple and accurate process. Twin Air is available with either a single metering hydraulic metering motor or a twin version. Where twin motors are specified the applicator can be used as two separate application sections, increasing application accuracy.

MOUNTING OPTIONS

Twin Air is designed to be mounted to a wide range of implements, with single applicators being used in widths of up to 18 metres. Where a wider application width is required, two units can be used to apply Avadex granules across a full 36m width (see main image). Where two applicators are used, a single high capacity fan is used to supply the airflow required for both units.

VERSATILE PRODUCT APPLICATION

As well as Avadex application, Twin Air can be utilised to apply a variety of product's such as small seeds and slug pellets. A partition can be supplied for the hopper to allow the application of two products in a single pass, with growers able to apply slug pellets during rape establishment, ensuring the crop is protected from the moment it is planted. Twin Air's versatility allows users to spread the cost of ownership whilst improving the efficacy of the product being applied.

AUTOMATIC RATE CONTROL

The Horstine Wizard application controller is used to precisely adjust metering rotation speed to compensate for changes in forward speed, ensuring the applicator is always putting on the correct amount. Where twin motors are specified the upgraded Apollo controller is required. For growers utilising two Twin Air applicators the ISOcan system from Cascade can be used, offering ISObus compati



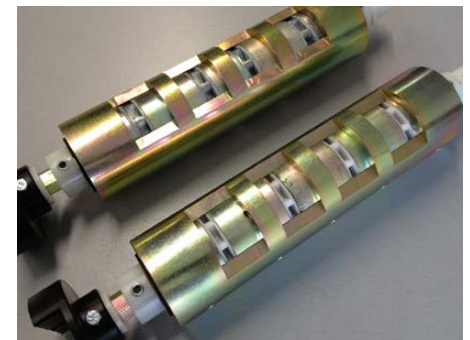
STAINLESS STEEL HOPPER



HIGH FLOW PNEUMATIC SYSTEM



DISTRIBUTION OUTLETS



INDIVIDUAL METERING



STANDARD SPECIFICATION

- 450L Stainless Steel Hopper
- Up to 16 Outlets
- High Capacity Hydraulically Driven Pneumatic Fan
- Hydraulically Driven Metering System
- RDS Wizard Controller
- ISO Speed Cable

OPTIONAL SPECIFICATION

- RDS Apollo Controller
- Hopper Low Level Sensors
- GPS Speed Sensor
- Radar Speed Sensor

TRACTOR REQUIREMENTS

- 1 Constantly pumping spool, 1 Free Flow Return, 1 Fan Case Drain Return
- 70 lpm Hydraulic Supply

TMAir

Horstine TMAir is used to accurately apply Avadex on drills, rolls or smaller mounted applicators. All TMAir systems utilise a high capacity fan unit to distribute product to broadcast outlets, fitted on implements up to 10m wide. Using air to transmit product allows the hopper units to be mounted in an easily accessible position, making filling and calibration easier and safer. TMAirs can be mounted directly onto implements or on optional three point linkage frames, allowing fitment in all situations.

SAFE & EASY FILLING

Horstine TMAir applicators come with low level hoppers, improving access and making them extremely easy to fill. TMAirs are available with single or twin hoppers, in 70, 100 and 150 litre capacities ensuring TMAir is suitable for a wide variety of tasks that demand varying application rates. These large hoppers are constructed from translucent polyethylene which enables the operator to easily monitor hopper levels. Where hoppers cannot be seen from the cab, low levels sensors can be fitted to warn the operator.

VERSATILE

As well as Avadex, the TMAir is commonly used for nematicide applications during potato and vegetable crop establishment. Much like Avadex these chemicals require precision control to guarantee maximum efficacy and ensure environmental safeguards. TMAir can also be used for establishing oilseed rape crops and broadcasting other small seeds.

HIGH CAPACITY PNEUMATIC SYSTEM

TMAir uses a 12 volt high capacity fan, operated from inside the cab to distribute product. This air is fed from the fan, into a splitter box, then down to individual venturis underneath each product metering rotor. As product is precisely metered from the hopper, it is pulled into the airstream by the venturi, and delivered to the distribution outlet. This system ensures that product is evenly distributed to each outlet, eliminating the possibility of variation across the implements width.

AUTOMATIC RATE CONTROL

The Horstine Wizard application controller is used to precisely adjust metering rotation speed to compensate for changes in forward speed, ensuring the applicator is always putting on the correct amount. There are three options of speed sensor, ISO cable, GPS and radar, with growers also having the option of fitting a hopper low level sensor and headland cutout switches.



INDIVIDUAL METERING



HIGH FLOW PNEUMATIC SYSTEM



MULTIPLE APPLICATIONS



HORSTINE WIZARD



STANDARD SPECIFICATION

- 2x 100L Polyethylene Hoppers
- Up to 12 Distribution Outlets
- Electrically Driven Fan
- Electrically Driven Metering
- RDS Wizard Controller
- ISO Speed Cable

OPTIONAL SPECIFICATION

- Hydraulically Driven Fan
- Hopper Low Level Sensors
- GPS Speed Sensor
- Radar Speed Sensor
- Headland Lift Switch



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