

# Chafer Trailed Sprayers



**Chafer**  
*Machinery*



Chafer Machinery Ltd was established in 2000 to design and build a range of high performance trailed sprayers and demountable spray packs for professional farmers and contractors. Building on over 100 years of experience in spraying and liquid application Chafer Machinery offer custom built sprayers for each individual customer.

In 2002 Chafer Machinery Ltd acquired Horstine Farmery. Horstine Farmery is a world leader in the design and manufacture of highly accurate equipment for the application of granular pesticides, fertiliser and seeds. In the 60 years since the company was established markets have been developed in every continent and it's products have gained a well deserved reputation for accuracy and durability.

Chafer Machinery Group is in a unique position to offer tailored liquid and granular application solutions for the agricultural industry.

# Introduction to Chafer trailed sprayers

Chafer Guardian and Sentry trailed sprayers are engineered to a common design to offer huge spraying output and performance, combined with absolute precision in application and control. Every sprayer is packed with innovative features and systems to increase efficiency and spray timeliness whilst safeguarding the environment and the operator. Sprayers and sprayer operators have to work longer and harder than ever before so a range of the latest electronic control systems are available to aid operation and maximise sprayer performance.

### Model Range

| Model               | Guardian | Sentry  |
|---------------------|----------|---------|
| Tank Size           | 3-4000L  | 4-6000L |
| Twin Folding Boom   | 18-30m   | 18-30m  |
| Triple Folding Boom | N/A      | 30-40m  |

## Contents

- Page 2 Product range
- Page 4-5 Booms and boom control systems
- Page 6-7 Chassis, axle and suspension
- Page 8-9 In cab sprayer controls
- Page 10-11 GPS sprayer control
- Page 12-13 Tank and plumbing
- Page 14-15 Technical specifications
- Page 16 Contact details



Sentry 5000L, 36m, triple fold boom

# Durable booms for accurate spraying

## Twin Fold Booms

Chafer Machinery's tried and proven twin fold boom has been developed to offer superb long term durability and boom ride. Constructed of steel using a strong triangular design it can withstand the most challenging spraying conditions. Finished using tough powder coat paint and stainless steel fastenings the booms are highly corrosion resistant.

## Triple Fold Booms

Developed in 2004 to drive spraying productivity, Chafer's triple fold boom is well proven and has helped hundreds of growers to maximise their crops potential through fewer crop wheelings, minimised compaction and more timely spray applications. Folding in three sections the boom is compact in its travelling position and allows operators to spray at three different widths.

### Twin Fold Boom Specification

| Boom Width | Folding Width (m) | Break Back Width (m) | Spray Sections (m)<br>Standard Configuration |
|------------|-------------------|----------------------|--|
| 18         | 12/18             | 1.0                  | 3-6-6-3                                      |
| 20         | 12/20             | 1.5                  | 4-6-6-4                                      |
| 21         | 12/21             | 2.0                  | 4.5-6-6-4.5                                  |
| 24         | 12/24             | 2.0                  | 6-6-6-6                                      |
| 28         | 14/28             | 2.0                  | 7-7-7-7                                      |
| 30         | 15/30             | 3.0                  | 7.5-7.5-7.5-7.5                              |

### Triple Fold Boom Specification

| Boom Width | Folding Width (m) | Break Back Width (m) | Spray Sections (m)<br>Standard Configuration |
|------------|-------------------|----------------------|--|
| 30         | 12/24/30          | 2.5                  | 3-6-6-6-6-3                                  |
| 32         | 12/24/32          | 2.5                  | 4-6-6-6-6-4                                  |
| 36         | 12/24/36          | 2.5                  | 6-6-6-6-6-6                                  |
| 40         | 12/24/40          | 3.0                  | 8-6-6-6-6-8                                  |



Guardian 3500L, 24m, twin fold boom

## Boom Suspension

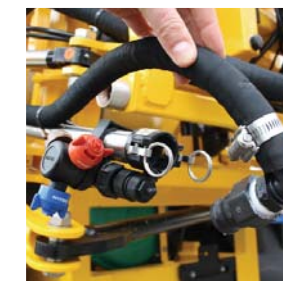
Triple stage boom suspension for bounce, tilt and yaw is fitted as standard on all Chafer booms providing a smooth and stable boom ride. This provides an extremely level spraying platform ensuring accurate chemical application across the boom width. A smooth ride protects the boom from fatigue and damage. A sliding frame carriage and mast offer robust and maintenance free height control whilst assisting sprayer balance by keeping the boom close to the back of the machine. Separate yaw and tilt suspension keep the boom stable at high forward speeds protecting the boom and crop from damage.

## Spray line prime and purge

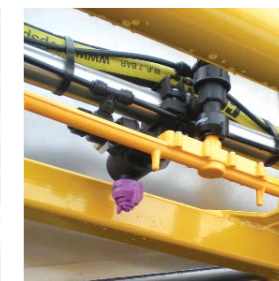
Chafer's spray line prime and purge system recirculates chemical through the spray lines prior to spraying to ensure even chemical application across the full boom width. Clean water can be purged through the spray line thoroughly rinsing out any residual chemical minimising any chance of cross contamination between tank mixes. No more chemical can be trapped at the end of the spray line!

## Draining Points

In frosty conditions the sprayer and boom can be quickly and easily drained via a series of quick release draining points. Anti freeze is not required since all liquid can be drained from the machine saving time and expense.



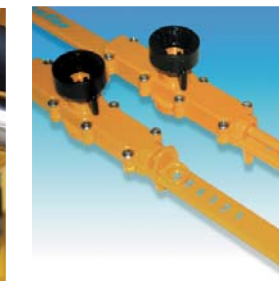
Spray line quick release drain point



Dual nozzle bodies fitted to twin fold boom



Triple nozzle with air shut off



Chafer Streambar MR

## Triple Nozzle Bodies

All booms are fitted as standard with triple outlet anti drip nozzle bodies to facilitate quick and convenient nozzle changes. Quin outlet nozzles are available as an option.

## Air Shutoff

Air shutoff is an optional extra on all Chafer trailed sprayers. These spring off, air open, air valves enable extremely rapid spray response times when the whole boom or an individual boom section is switched on or off. High pressure purging is also available with air shutoff offering rapid chemical priming of the spray lines and aggressive purging with clean water. Air shutoff also enables multiple spray sections to be specified in any configuration across the boom which is essential to gain the maximum benefit from GPS controlled automatic boom section shutoff.

## Dual Nozzle Bodies

Dual nozzle bodies can be used to hold Chafer Streambar MR fertiliser jets without the need to fit an additional spray line. Switching between either lines of nozzles is controlled easily by a switch in the cab. This offers rapid turn around when changing between chemical and fertiliser application plus the operator doesn't have to leave the cab! This system can also be used to quickly change between different spray nozzles offering rapid changes in spray pattern and application rate as spraying conditions change.

## Chafer 'Contour' Boom Levelling

Chafer Contour, designed and developed by Chafer Machinery, enables sprayer booms to follow ground contours without the need for adjustment from the operator. Working automatically using ultrasonic sensors mounted on the boom, Chafer Contour can help to minimise operator fatigue and ensures spraying accuracy by maintaining a consistent boom height. Booms fitted with independent boom tilt also benefit from Contour's headland lift facility. This innovative system automatically raises each side of the boom when the master spray switch is turned off. This protects the boom as the sprayer travels around the headland and once the spray switch is turned on again the boom returns to its normal spraying position.

## So how does Contour work?

Although a complex computer program runs the system, the only input required from the operator is to switch Contour on. Everything from then on works automatically. When the operator drives into the field and deploys the boom to its correct working height the ultrasonic sensors take a reference measurement and maintain the boom at the reference position above the crop by automatically adjusting the boom hydraulics.

## Contour benefits:

- Reduced operator fatigue
- Enhanced spray accuracy
- Boom headland management minimises chance of boom damage





Guardian 3500L, 28m, twin fold boom

# Smooth suspension, stable tracking

## Air Suspension

All Chafer trailed sprayers come fitted as standard with load compensating air suspension. Air springs are located between the sprayer chassis and suspension sub frame giving a smooth and even ride. A load compensating system ensures that the suspension offers the same smooth ride regardless of tank contents. The air suspension system can be fed via an on board 12v compressor or direct from the towing tractor. An on board system is fitted as standard to give flexibility in the choice of tractor.

- Smooth road and field travel
- Minimised chassis and boom fatigue
- Safer and faster transit between fields

## Braking

Hydraulic axle braking is fitted to all Chafer trailed sprayers. For sprayers being pushed to their limits of performance load compensating air brakes are available as an option across the range. To further enhance towing performance, the steering axle has been fitted with a hydraulically engaged axle-locking system that can be operated from the cab. This system adds an extra level of security especially when towing at high speed.

- Minimal stopping distance
- Safe road travel
- Fast towing speeds

## Chassis

The unique heavy duty chassis has been designed to cope with the toughest field conditions. Its stepped design allows the stainless steel tank to sit low into the chassis reducing the centre of gravity. Baffles inside the tank reduce the amount of liquid moving from side to side further improving stability while at the same time preventing liquid surge when braking sharply on the road. For extra ground clearance to minimise crop damage a continental hitch can be specified across the range.

- Low centre of gravity for stability
- Excellent ground clearance minimises crop damage
- Robust design reduces structural fatigue



## Automatic Axle Tracking

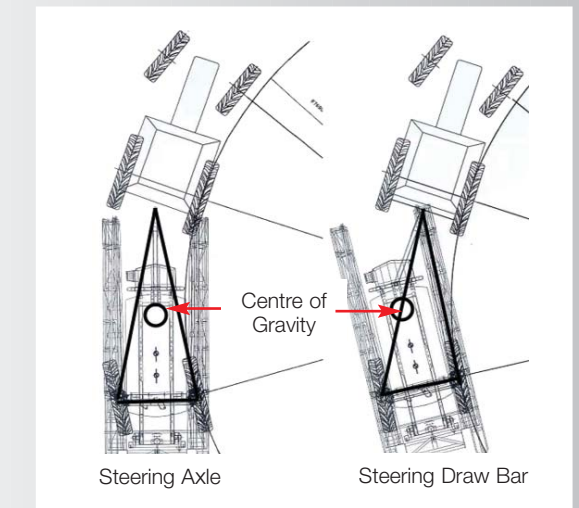
Accurate headland turns are achieved using a tracking axle system. Precise measurements are made of the tractors turning angle, the Chafer Traxle system then adjusts the sprayer wheels to follow perfectly behind the rear tractor wheels. This reduces the number of wheelings in the crop, soil compaction and improves crop yield.

- Highly stable tracking on hillsides
- Accurate tracking minimises crop damage
- Minimal wearing parts and maintenance

## Steering Stability

Steering systems on trailed sprayers have a big impact on stability. All Chafer trailed sprayers are fitted with a steering axle to improve stability compared to steering draw bar alternatives.

The diagram below clearly shows the advantage of a steering axle. When turning, the points of balance, the two wheels and pick hitch do not move. This means the centre of gravity does not move making the machine stable in comparison to the steering draw bar system.



# Precision application and sprayer control

All Chafer trailed sprayers are fitted as standard with an automatic rate controller. The Chafer sprayer controller offers spraying advantages not found in other controllers. Designed with simplicity in mind, computer controlled spraying has never been so easy. Simply set your target application rate and the unique display helps select the right spray tip for the

application. Once spraying begins, the large display shows application rate, volume sprayed, system pressure, sprayer speed, and area covered.

The built in planning tool automatically displays the speed needed to achieve the target rate with the specified tip. It will also calculate the pressure necessary for achieving the target application rate when speed is entered.



## Rate controller functions

### REGULATION MODE

- Pressure sensor
- Flow sensor
- Pressure and flow

### DISPLAY INFORMATION DURING SPRAYING

- Target application rate (L/ha)
- Actual application rate (L/ha)
- Speed (km/h)
- Spray pressure (bar)
- Volume sprayed (L)
- Hectares covered (ha)
- Nozzle selected
- Tank volume (L)
- Remaining sprayable area in tank (ha)

### SPRAYING CONTROL

- Electronic nozzle calculator
- Colour coded nozzle selection and target rate
- Five programmable nozzles
- Boost mode ( $\pm$  10%) of target rate
- Variable rate control
- Fertiliser specific gravity correction
- Working width correction

### CALIBRATION/TESTING

- Automatic calibration of wheel speed sensors
- Flow meter auto calibration (if flow meter is fitted)
- Nozzle flow rate adjustment
- Simulated ground speed for stationary sprayer testing
- Sensor functionality testing

### ALARMS

- Application error (10% discrepancy between target and actual rate for more than three seconds)
- No pressure alarm

### MEMORY COUNTERS

- Total memory
- Individual field memories (Maximum of nine)
- Sprayed volume (L)
- Sprayed area (ha)

| Standard | Optional |
|----------|----------|
| •        | ○        |

Both the Guardian and Sentry are fitted with a simple and compact in cab switch box to control all hydraulic and electronic systems on the sprayer. Connected to the sprayer by a single quick release plug the switch boxes are simple and easy to install.



Guardian Switch Box



Sentry Switch Box

## In Cab Switch Boxes

|                                     | Guardian & Sentry<br>Twin Fold Boom | Sentry<br>Triple Fold Boom |
|-------------------------------------|-------------------------------------|----------------------------|
| Boom Lift                           | •                                   | •                          |
| Boom Tilt                           | •                                   | •                          |
| Independent Tilt Left & Right       | ○                                   | •                          |
| Whole Boom Fold                     | •                                   | •                          |
| Independent Left & Right Outer Fold | ○                                   | •                          |
| 12/24m Fold                         |                                     | •                          |
| 0/12m Fold                          |                                     | •                          |
| Spray On/Off                        | •                                   | •                          |
| Spray Sections On/Off               | Up to 8 section switches            | Up to 10 section switches  |
| Pump On/Off                         | •                                   | •                          |
| Boom Prime and Purge                | •                                   | •                          |
| Jet Flush                           | ○                                   | ○                          |
| Axle Lock                           | •                                   | •                          |
| Auto/Manual Steering                | •                                   | •                          |
| Manual Steering                     | •                                   | •                          |
| Chafer Contour                      | ○                                   | ○                          |
| Chafer Spray Line Switching         | ○                                   | ○                          |
| Foam Marker                         | ○                                   | ○                          |



# Solutions for intellegent spraying

When you need to take your spraying accuracy to the next level Chafer trailed sprayers can be fitted a choice of two intelligent sprayer control packages from Topcon. Replacing the standard application rate control with a single Topcon sprayer control terminal allows the operator access to numerous sprayer control functions through one easy to use terminal. There are numerous advantages to utilising this fast developing technology.

- Cost savings through reduced chemical and fertiliser usage
- Accurate spraying records
- Minimised under lap and overlap
- Reduced environmental impact of spray applications
- Traceability of spray applications
- Simple and easy record keeping
- One display frees up room in the cab
- Investment can be spread by using the same terminal on different implements

## Topcon System 110

Topcon System 110 is a rugged and compact sprayer control terminal that can control everything from spray rate control through to field guidance and automatic boom section control. It can easily be swapped between different tractors and implements spreading the initial cost of investment.



## Topcon X20

For growers requiring absolute control of spray applications the Topcon X20 meets and surpasses these requirements. In addition to the functionality of the System 110 the Topcon X20 can be used for variable sprayer rate control, data recording and is also compatible with Yara's Nitrogen Sensor.



| Functionality              | Chafer Topcon System 110  | Chafer Topcon X20   |
|----------------------------|---|---|
| Sprayer rate control       | •   | •   |
| Guidance                   | •   | •   |
| Auto steer                 |   | ○   |
| Spray coverage mapping     | •   | •   |
| Automatic section control  | • – Up to 10 sections   | • – Up to 20 sections   |
| Variable Rate Control      |   | ○   |
| Data keeping and recording | •   | •   |
| Multi Product Control      |   | •   |
| Yara N Sensor Control      |   | •   |
| GPS Compatibility          | Marine Beacon,<br>EGNOS, Omnistar VBS or HP,<br>Starfire or RTK | Marine Beacon,<br>EGNOS, Omnistar VBS or HP,<br>Starfire or RTK |

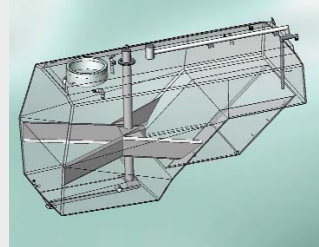
Standard | Optional  
 • | ○



### Robust Stainless Steel Tank

All Chafer trailed sprayer tanks are constructed of extremely durable stainless steel. This non porous material facilitates quick and easy cleaning between tank mixes and minimises the risk of cross contamination. Baffles within the tank prevent liquid surge under braking and whilst spraying on sloping ground. Sprayer stability is further improved by the low profile tank design which significantly reduces the sprayer's centre of gravity.

- Non porous surface enables easy cleaning
- Rugged and durable construction
- Tank baffles aid braking performance and stability



### High Performance Pump

Fast filling of the spray tank through Chafer's high flow self priming hydraulically driven centrifugal pump can significantly improve work rates especially in liquid fertiliser applications. Tank filling rates of up to 400L/min are achievable with the standard 2" pump. Customers wishing to further enhance spraying filling rates can specify an additional fast fill pump which can boost flow rates to 900L/min. Unlike some centrifugal systems the Chafer pump can spray in excess of 7 bars, more than enough pressure for spraying and rinsing operations. The simple and efficient design of the pump ensures no routine maintenance is required significantly reducing downtime and expense compared to diaphragm pumps. For higher output fertiliser application, a range of custom built pump and plumbing solutions are available.

- High pressure for all spraying and rinsing operations
- High flow rates for minimal filling downtime
- Minimal routine maintenance



### Quick Connection to tractor

Chafer trailed sprayers are designed to be rapidly connected and disconnected to the tractor releasing the tractor for other uses throughout the year. All hydraulic functions are driven by one tractor spool. A priority flow valve ensures the hydraulically driven pump always receives a constant flow of oil while the steering and boom hydraulics are fed with oil on demand. This reduces heat and wear in the hydraulic system. All electric functions are connected to the tractor using a single plug and trailer light socket. On board compressors have a dedicated power supply direct from the tractor battery. Chafer trailed sprayers do not require a PTO shaft to drive pump. This has significant benefits for operator safety, connection speed and long term maintenance costs.

- Rapid electrical and hydraulic connection
- Compatible with tractors with load sensing hydraulics
- No PTO shaft to connect



## Simple Plumbing

## Maximum Performance



### User Friendly Valves

Controlling the flow of liquid through the sprayer could not be easier through the use of two 5 way rotary valves. These two valves, one for liquid suction source the other for liquid destination, allows the operator to control every spraying function from tank fill to tank rinse. The valves are marked by simple to follow diagrams allowing operators unfamiliar with the machine to use the sprayer with confidence. For growers requiring cab operated controls 'Jet Flush' can be specified to spray clean water through the spray lines at the flick of a switch.

- Simple to operate
- Low maintenance
- Long term reliability



### Large Chemical Hopper

A 35L stainless steel chemical induction hopper is fitted with a high pressure venturi allowing the hopper to be emptied rapidly even when filled with powdered chemical formulations. The hopper can be easily rinsed by the wash ring and bottles cleaned out with an aggressive high pressure rotating can rinse nozzle. Where complex tank mixes require the use of multiple small chemical containers the chemical hopper can be upgraded to include a draining lid which allows two cans to be drained while another is being washed. The liquid collected from this draining lid is then discharged into the hopper and sucked into the tank. Once the hopper is closed the entire surface area of the hopper is thoroughly rinsed by the rotating rinsing nozzle.

- High capacity hopper for bulky chemicals
- Rapidly inducts powdered chemicals
- Optional draining lid simplifies can rinsing



### Easy access filter

All Chafer Trailed sprayers are fitted as standard with a pressure filter mounted for easy cleaning on the boom carriage. This filter is fitted with a flushing valve so that residue in the filter can be regularly discharged. An isolation valve above the filter allows the operator to remove the filter bowl and element for cleaning without having to drain the sprayer. The Chafer centrifugal pump is undamaged by sediment or solid contamination from storage tanks or bowsers. As a result no suction filter is fitted as standard. However to minimise tank contamination a suction filter can be fitted.

- Simple plumbing means there is only one filter to clean
- Isolation valve enables easy filter cleaning
- Optional suction filter helps reduce tank contamination



# Technical Specifications

| Model<br>Boom Type<br>Tank Size   | Guardian<br>Twin Fold<br>3000 | Guardian<br>Twin Fold<br>3500 | Guardian<br>Twin Fold<br>4000 | Sentry<br>Twin Fold<br>4000 | Sentry<br>Twin Fold<br>5000 | Sentry<br>Twin Fold<br>6000 | Sentry<br>Triple Fold<br>4000 | Sentry<br>Triple Fold<br>5000 | Sentry<br>Triple Fold<br>6000 |
|---|-------------------------------|-------------------------------|-------------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------------|-------------------------------|-------------------------------|
| <b>Chassis and Axle</b>   |                               |                               |                               |                             |                             |                             |                               |                               |                               |
| Rigid drawbar with hook pick up and stowage point for drawbar stand     | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Tank access platform with steps   | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Hydraulically braked axle with parking brake (1.93m/76" hub to hub)     | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| 12v air compressor  | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Load compensating air suspension (Number of air bags)                   | • (2)                         | • (2)                         | • (2)                         | • (3)                       | • (3)                       | • (3)                       | • (3)                         | • (3)                         | • (3)                         |
| Automatic tracking axle   | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Hydraulically operated axle lock  | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Height and width adjustable mudguards                                   | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Twin storage lockers  | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Road traffic lights   | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| <b>Stainless steel tank</b>   |                               |                               |                               |                             |                             |                             |                               |                               |                               |
| Nominal tank volume   | 3000L                         | 3500L                         | 4000L                         | 4000L                       | 5000L                       | 6000L                       | 4000L                         | 5000L                         | 6000L                         |
| Actual tank volume  | 3150L                         | 3675L                         | 4200L                         | 4200L                       | 5250L                       | 6300L                       | 4200L                         | 5250L                         | 6300L                         |
| Clean water tank volume   | 400L                          | 400L                          | 400L                          | 500L                        | 500L                        | 500L                        | 500L                          | 500L                          | 500L                          |
| Hand wash water tank  | 25L                           | 25L                           | 25L                           | 25L                         | 25L                         | 25L                         | 25L                           | 25L                           | 25L                           |
| Dry sight gauge   | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Dual tank rinse nozzles   | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Adjustable tank agitation system  | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| <b>Boom</b>   |                               |                               |                               |                             |                             |                             |                               |                               |                               |
| 18-30m Twin Fold  | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| 30-40m Triple Fold  |                               |                               |                               |                             |                             |                             | •                             | •                             | •                             |
| Independent boom levelling  | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | •                             | •                             | •                             |
| Electro hydraulic control of boom lift, tilt, independent tilt and fold | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Stainless steel spray line, nominal bore                                | 3/4" or 1"                    | 3/4" or 1"                    | 3/4" or 1"                    | 3/4" or 1"                  | 3/4" or 1"                  | 3/4" or 1"                  | 3/4" or 1"                    | 3/4" or 1"                    | 3/4" or 1"                    |
| Nozzle spacing  | 50cm                          | 50cm                          | 50cm                          | 50cm                        | 50cm                        | 50cm                        | 50cm                          | 50cm                          | 50cm                          |
| Triple nozzle bodies  | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Spray line prime and purge  | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Electric ball valve boom section shutoff                                | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Number of manually controlled boom sections (max)                       | 4 (8)                         | 4 (8)                         | 4 (8)                         | 4 (10)                      | 4 (10)                      | 4 (10)                      | 6 (10)                        | 6 (10)                        | 6 (10)                        |
| Number of automatically controlled boom sections (max) - if fitted      | 4 (20)                        | 4 (20)                        | 4 (20)                        | 4 (20)                      | 4 (20)                      | 4 (20)                      | 6 (20)                        | 6 (20)                        | 6 (20)                        |
| <b>Plumbing</b>   |                               |                               |                               |                             |                             |                             |                               |                               |                               |
| Hydraulically driven centrifugal pump (Free flow L/min)                 | 650L/min                      | 650L/min                      | 650L/min                      | 650L/min                    | 650L/min                    | 650L/min                    | 650L/min                      | 650L/min                      | 650L/min                      |
| Stainless steel chemical hopper with spinning can rinse optic           | 35L                           | 35L                           | 35L                           | 35L                         | 35L                         | 35L                         | 35L                           | 35L                           | 35L                           |
| Rotary suction and pressure control valves                              | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Pressure filtration system with isolation valve and flushing valve      | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Retractable hose reel and wash gun                                      | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Pump inlet with male quick release coupler and blanking cap             | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| <b>In cab controls</b>  |                               |                               |                               |                             |                             |                             |                               |                               |                               |
| TeeJet 844 rate controller (Pressure sensor)                            | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| Boom, steering and pump command box                                     | •                             | •                             | •                             | •                           | •                           | •                           | •                             | •                             | •                             |
| <b>Weights and Dimensions*</b>  |                               |                               |                               |                             |                             |                             |                               |                               |                               |
| Length (m)  | 7.20                          | 7.20                          | 7.20                          | 7.65                        | 7.65                        | 7.65                        | 7.65                          | 7.65                          | 7.65                          |
| Height (m)  | 3.60                          | 3.60                          | 3.60                          | 3.80                        | 3.80                        | 3.80                        | 3.80                          | 3.80                          | 3.80                          |
| Width (m)   | 2.85                          | 2.85                          | 2.85                          | 2.57                        | 2.57                        | 2.57                        | 2.57                          | 2.57                          | 2.57                          |
| Wheelbase (m)   | 4.85                          | 4.85                          | 4.85                          | 5.10                        | 5.10                        | 5.10                        | 5.10                          | 5.10                          | 5.10                          |
| Ground Clearance Under Axle (m)   | 0.72                          | 0.72                          | 0.72                          | 0.86                        | 0.86                        | 0.86                        | 0.86                          | 0.86                          | 0.86                          |
| Unladen Weight (t)  | 3.90                          | 3.95                          | 4.05                          | 4.64                        | 4.74                        | 4.84                        | 5.09                          | 5.19                          | 5.29                          |

| Model<br>Boom Type<br>Tank Size                                 | Guardian<br>Twin Fold<br>3000 | Guardian<br>Twin Fold<br>3500 | Guardian<br>Twin Fold<br>4000 | Sentry<br>Twin Fold<br>4000 | Sentry<br>Twin Fold<br>5000 | Sentry<br>Twin Fold<br>6000 | Sentry<br>Triple Fold<br>4000 | Sentry<br>Triple Fold<br>5000 | Sentry<br>Triple Fold<br>6000 |
|---|-------------------------------|-------------------------------|-------------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------------|-------------------------------|-------------------------------|
| <b>Tyre Options</b>   |                               |                               |                               |                             |                             |                             |                               |                               |                               |
| Kleber 300/95 R46 Super 3                                       |                               |                               |                               |                             |                             |                             |                               |                               |                               |
| Michelin 320/90 R50 Agribib Rowcrop                             | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Michelin 340/85 R46 Agribib Rowcrop                             | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Michelin 380/85 R46 Agribib Rowcrop                             | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Michelin 16.9 x 38 Agribib                                      | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Michelin 420/80 R46 Agribib                                     | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Alliance 18.4 X 34  | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Michelin 480/80 R46 Agribib                                     | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Michelin 600/60 R38 Xeobib                                      | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Michelin 750/65 R26 Megaxbib                                    | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Michelin 800/65 R32 Megaxbib                                    | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| <b>Optional Equipment</b>                                       |                               |                               |                               |                             |                             |                             |                               |                               |                               |
| Topcon System110 Sprayer Controller                             | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Topcon X20 Sprayer Controller                                   | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Chafer Contour automatic boom levelling - boom tilt only        | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Chafer Contour automatic boom levelling - boom independent tilt | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Independent boom levelling                                      | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | •                             | •                             | •                             |
| Boom tip fold back  | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Load compensating air brakes (Tractor air supply required)      | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Air shutoff nozzles   | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Five outlet nozzle bodies                                       | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Additional boom sections - electric ball valves (max)           | ○ (6)                         | ○ (6)                         | ○ (6)                         | ○ (6)                       | ○ (6)                       | ○ (6)                       | ○ (6)                         | ○ (6)                         | ○ (6)                         |
| Additional boom sections - air shutoff (max)                    | ○ (20)                        | ○ (20)                        | ○ (20)                        | ○ (20)                      | ○ (20)                      | ○ (20)                      | ○ (20)                        | ○ (20)                        | ○ (20)                        |
| Additional stainless steel spray line 1" bore                   | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Dual nozzle bodies for Streambar MR system                      | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Dual nozzle bodies for boom frame mounted Streambar MR system   | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Jet flush system  | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| 25l foam marker   | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| 75l foam marker (Tractor air supply required)                   | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Suction filter  | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Fast filling port with isolation valve                          | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Hydraulically driven 2" fast fill pump (900L / min free flow)   | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Hydraulically driven 3" sprayer pump (900L / min free flow)     | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Automatic tank fill   | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Sided mounted storage cage or box                               | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Rear flashing light   | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Boom lights   | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Continental hitch   | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |
| Chemical hopper with draining lid                               | ○                             | ○                             | ○                             | ○                           | ○                           | ○                           | ○                             | ○                             | ○                             |

\* Weights and dimensions based on  
Guardian fitted with Michelin 340/85 R46 with 24m boom  
Sentry fitted with Michelin 480/80 R46 with 36m boom

**Hydraulic Requirements**  
One single acting spool with free flow return. Requires 3/4 inch female quick release fitted to tractor.  
Hydraulic oil flow over 60L/min at spraying engine RPM

|          |          |
|----------|----------|
| Standard | Optional |
| •        | ○        |

# Chafer Machinery

Chafer Machinery Ltd  
1 Cow Lane • Upton

Gainsborough • Lincolnshire • DN21 5PB

T: 01427 838341 • F: 01427 838507

sales@cropprayers.com • www.cropprayers.com

Every effort has been made to ensure that the information in this publication is as current and accurate as possible. However, inaccuracies, errors or omissions may occur and details of the specifications may be changed at any time without notice. Therefore, all specifications should be confirmed with your Chafer dealer or Chafer Machinery Ltd prior to any purchase. Photographs may contain machines fitted with optional equipment.

Designed and produced by [www.edgeinteractive.org.uk](http://www.edgeinteractive.org.uk)

