

GOLDACRES

Australia's World Class Sprayers

40 YEARS 78-18



G4V Series Crop Cruiser

G4V horticulture self propelled sprayer

The population is growing and the need for cheap, clean, green food is rising quickly.

Over the last 10 years the number of vegetable growers in Australia fell by 37%, yet the area planted still increased substantially.* The result is farms are getting a lot bigger, and so is the requirement for machinery.

Introducing the all new G4V

Goldacres has observed this trend and designed a purpose built sophisticated sprayer that is suited to the horticultural industry. Whilst from a distance the sprayer may look similar to its dry land broadacre and cotton sprayer cousins, a closer look will show it's much different. Horticultural operators require slower speeds, higher water rates, narrow wheel tracks and a tight turning radius.

The all new G4V sprayer from Goldacres offers a new level of performance and

efficiency not seen before. The design is centered around a 4000L main product tank complimented by booms with widths up to 36m. Riding on large diameter 46" wheels and tyres combined with four wheel steering to provide outstanding ride and sprayer manoeuvrability. Cummins power coupled to a four wheel drive hydro mechanical driveline all adds up to give the G4V outstanding tractive performance and efficiency results in almost any situation.

The G4V has been packaged with an uncompromising level of quality components, integrated systems, operator ergonomics and high end specifications.

If you are serious about farming, then look no further than the G4V for your spraying solution.



*Australian Government - Department of Agriculture and Water Resources ABARES 2017

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Australia's own

Since 1978 Goldacres has been regarded as Australia's most innovative sprayer manufacturer

From its inception four decades ago, Goldacres has prospered by constantly reinventing its products and business practices in this fast changing landscape that's modern farming. Our philosophy is simple;

"To put farmers in the driver's seat of best fit technology to make them outstanding in their field"

We are driven by four core values, innovation, uncompromising quality, adaptability and lastly, being courageous. These four values have led Goldacres on a journey to where we are today offering customer based spraying solutions that advance them forward with complete confidence.

Our sprayers are proudly built right here in Australia by a team of dedicated staff, turning ideas into reality and delivering sprayers which are truly;

"Australia's world class sprayers"





Cabin

Long days and nights operating the sprayer can be demanding on the driver

That's why the G4V Series Crop Cruiser features a premium cabin with essential features and comforts to help you get through. Goldacres designers have delivered a cabin that has everything you need, and nothing you don't.

- 1 Easy to use fully moulded operator side console featuring all sprayer function control switches, drink holder and storage area.
- 2 Acceleration and braking controlled by a propulsion lever. Cruise speed adjusted by a rotary knob.

- 3 Grammer air ride seat with adjustable arm rest and seat belt.
- 4 Fold away passenger seat.
- 5 Climate controlled air conditioner and heater with active carbon filtration. Ducted overhead storage box for drinks
- 6 Curved front and rear glass, full length side glass and large front windscreen wiper.
- 7 Engine monitor.

- 8 Two way tilt adjustable and telescopic steering column.
- 9 Twin USB charge points plus 12v power take off point for electronic accessories.
- 10 Pull down front blind.
- 11 Accessory mounting rail.
- 12 Bluetooth AM/FM radio.

Stylish roof design with forward and rear facing lights (Not shown)





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Hydro-mechanical drive system & susp

The G4V Crop Cruiser utilizes a combination of hydrostatic and mechanical drive systems to transfer maximum power to all four wheels with minimum fuel usage.

At the heart of the system is a single high capacity variable displacement hydraulic pump and motor. These two components form the hydrostatic part of the drive system and allow the operator to adjust the sprayer speed in smooth infinite amounts. In addition, the onboard computer adjusts the engine rpm to precisely match the required speed setting. The result is fuel usage averages as low as 14 l/hr and reduced cabin noise.

- 1 123kw (165hp) Cummins QSB 4.5L Tier 3 engine.
- 2 Forward mounted vertically stacked cooling system for fuel, charge air, hydrostatic transmission, water jacket and air conditioning allows operation in the hottest of days.
- 3 Single variable displacement hydraulic transmission and high capacity load sensing pumps.
- 4 Single variable displacement hydraulic transmission motor. Motor features three step displacement limiting to provide the right speed and torque for every situation.
- 5 Two speed transfer case with centre differential lock for full time 4WD operation. Oil cooled gear set keeps operating temperatures under control for the most demanding work conditions.
- 6 Both front and rear axles feature limited slip differentials to ensure all wheels receive the same torque in slippery conditions. Inboard wet multi disc brakes on the front axle provide long life, service free operation, even in muddy conditions. Final drive legs feature gear reductions to enable large diameter wheels to be fitted.
- 7 Using both the propulsion lever and the speed limiter control knob the operator can set the desired maximum ground speed. A simple push of the lever to full speed and adjust the knob will set the ground speed. When required to slow the sprayer pull back the lever. When ready to resume the set speed simply push the lever to the fully forward position and the central computer will take care of the rest. It's simple and precise.
- 8 The speed mode switch enables three different driving modes depending on the ground conditions. Essentially the mode switch adjusts the displacement of the hydraulic motor which in turn increases or decreases the amount of torque available. Combine this feature with the two speed transfer box and you have a sprayer capable of operating in just about any condition. The sprayer can be operated at speeds up to 40 km/hr.
- 9 As a standard feature the G4V is equipped with air bag suspension on all four corners. The axles are held in position using five high strength torque rods, these are strategically mounted to allow a very tight turning radius, even with large diameter wheels.

ension system



Tight headlands, no worries

G4V four wheel steering equals more hectares for cropping.

The fully welded semi truss rigid chassis features narrow frame rails, unique chassis and boom suspension system to allow very sharp steering angles even with large diameter wheels.

The switchable four wheel steering (4WS) gives a turning radius of just 2.9m* (inside of tyre) when fitted with large diameter 380/90R46 tyres and a 1.81m wheel track.

The system is controlled using angle sensors fitted to both front and rear axles in conjunction with the central sprayer controller. When switching back to two wheel steering (2WS) the rear wheels will automatically self centre.

At speeds above 15km/h the 4WS will automatically disengage and revert back to 2WS. This greatly improves stability and safety at these higher speeds.

*Will vary depending on wheel track



Wheel track options

Designed to suit many Rowcrop applications the G4V sprayers feature track width adjustment by changing the dish and rim configuration.

Wheel tracks from 1.81m - 2.36m can be achieved by reversing the bolted rim and disk to allow up to 16 track width variations. Tyre size 380/90R46. Special wheel tracks are available upon request.

Wheel track	Offset
1810mm	130
1860mm	105
1926mm	72
1976mm	47

Wheel track	Offset
1990mm	40
2020mm	25
2040mm	15
2070mm	0

Wheel track	Offset
2106mm	-18
2136mm	-33
2156mm	-43
2186mm	-58

Wheel track	Offset
2200mm	-65
2250mm	-90
2316mm	-123
2366mm	-148



Control Freaks!

In today's fast changing precision farming landscape it is easy to be left behind in the technology stakes

That's why Goldacres make it easy, with multiple solutions from the basic requirements to the top end needs.

For more than 2 decades Goldacres have relied on Raven to provide complete flow control systems with matched components to give, quite simply, unmatched flow control accuracy and stability.

At the heart of the control system is a high flow multistage centrifugal pump operated at consistent rpm. This multistage centrifugal pump provides high flow rates across a wide working pressure range compared to a single stage unit. This is essential for stable and accurate flow control. In addition, two system critical components, a flow meter and three way regulator valve, combine to help achieve fast "on target rate" and greater flow stability.

ISO BUS systems

Sprayer cabins can get pretty busy with the vast range of systems requiring individual control consoles. The ISO BUS standard brings all the systems together into the one display, called a virtual terminal (VT). Essentially each system contains the brains, while the VT is simply the interface between the two. This means only one operator console is required. Goldacres offer the

option for ISO BUS compatibility, allowing numerous leading VT displays to take over the sprayer control duties. Features like 3TS, pump speed readout, ultrasonic boom levelling plus sprayer steering and task control applications can all be all monitored by the one display.

SCS4400 systems

The SCS4400 sprayer console provides simple, fuss free control of the liquid flow duties. The SCS4400 features up to 7 boom section control switches (expandable to 10), manual pump speed readout, ground speed, three tier system (3TS) as well as several counters such as area and volume. If you are looking to further expand the capabilities, then the SCS4400 is compatible with most leading automatic section controllers on the market.

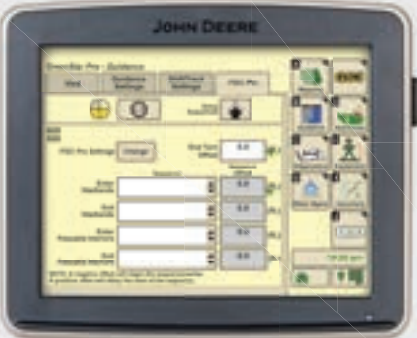
Any of these controllers can be fitted to the Goldacres G4V Crop Cruiser plus many more



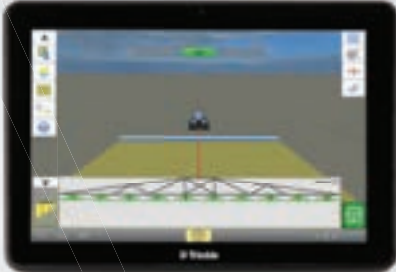
Raven SCS4400™



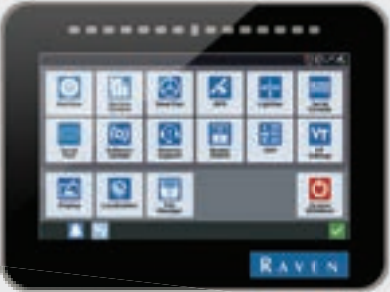
TopCon X30 - ISO Bus



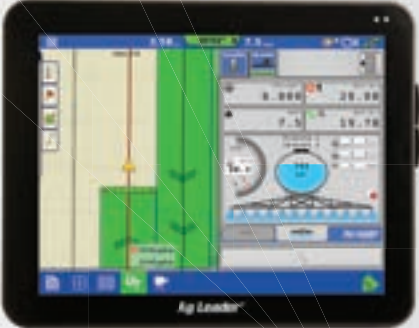
John Deere GreenStar™ 3 - ISO Bus



Trimble® TMX® 2050 - ISO Bus



Raven CR7™ - ISO Bus



Ag Leader® In Command - ISO Bus



A sprayer is only as good as its boom

Today's sprayers are full of bells and whistles which makes spraying a whole lot easier, comfortable and efficient

It's easy to forget what the end goal is. Precise chemical application.

Boom control can be the difference between a good spray result, and no result at all. Goldacres understand this and it is why all our sprayer designs are centred around the boom first and foremost.

Why do Goldacres booms ride so well?

Goldacres pioneered the use of lightweight aluminium in the outer boom wings over two decades ago. The philosophy was, and still is today that mass on a boom is fine so long as it is

as close to the centre as possible. Reduced mass on the boom extremities reduces boom forces in both yaw and roll. This combined with the unique boom suspension results in a very stable boom ride, regardless of the terrain.

TriTech booms are contour following, meaning that the boom level will be referenced to the sprayer chassis and not purely on gravity such as a pendulum boom. This allows the sprayer to transverse the sides of hills and contours whilst keeping the boom level to the ground at all times. This results in placing the nozzle at the optimum height above the target.







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OVERSIZE

TriTech booms

Strength, Stability, Reliability & Control

The TriTech boom range is designed for operators who demand the utmost performance, reliability and control. Time and time again the TriTech boom has been named “No.1 for boom stability”*, which at the end of the day, gives a superior spray result.

Features such as hydraulic yaw which precisely controls the forwards and backwards movement of the boom wings to minimise the under and over applying of chemical is now standard on all widths.

The strategically placed centre section suspension links help isolate the sprayer chassis movement over rough terrain. Combined with the tuned damping characteristics allows precise roll control

enabling an optimal and consistent nozzle height to be maintained, even without the use of electronic height control systems**.

All TriTech booms are constructed using lightweight trussing techniques, which allows for a stronger design without weight, the enemy of boom agility.



No.1[^]

“Its stability performance is almost unmatched on all areas of our test track”

Kondinin Group Report 2017



*Kondinin group's Farming Ahead magazine 2012, 2014 & 2017. **Height control systems may be required in some extreme situations
^42m TriTech boom tested

Boom suspension explained

Why is boom ride and stability so important?

A boom which bounces, sways or yaws deposits chemical unevenly on the target. This can result in weed escapes and may even result in resistant weeds.

The Goldacres TriTech suspension system has been developed to provide you with the best boom ride possible and assist in an accurate application. Working in conjunction with the chassis airbags the boom features three way suspension that works to reduce boom pitch, roll and yaw - the three enemies of accurate application. A combination of shock absorbers, hydraulic cylinders and accumulators all work together to provide the best boom ride possible.

The TriTech suspension system has contributed to Goldacres consistently having the best boom ride when measured against competitor machines.

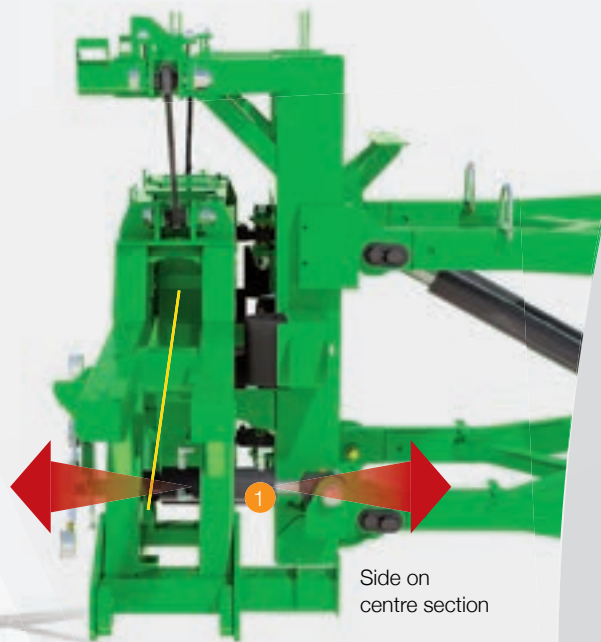


3D breakaway

Yaw

1 Hydraulic yaw

Two opposing hydraulic cylinders are mechanically connected together either side of the pivoting boom centre section. As the centre yaws one cylinder is retracted, the other is extended. This results in oil movement which compresses in a nitrogen charged accumulator. The result is precise boom yaw control.



Roll

2 Delta links

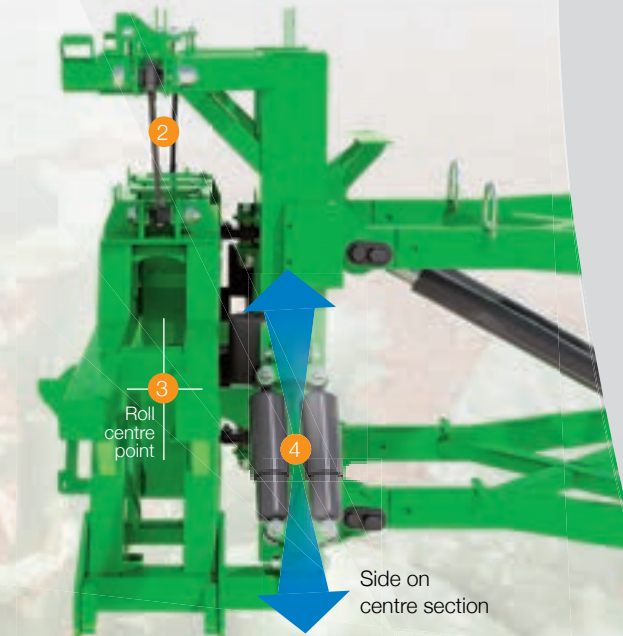
The key to the superior boom ride is the strategically placed links, in all there are four. Each link features spherical ball ends which allow the centre to move in all directions.

3 Roll centre point

The roll centre point is the location at which the boom pivots around, both in roll & yaw.

4 Roll dampeners

Reduces high frequency oscillation of the boom roll.



The end breakaway section protects the boom from stress damage if a ground, fence or tree strike occurs. The end section can break forwards, backwards and upwards. The spring mechanism uses an eccentric mounted sprocket and chain to provide maximum breakout force in the neutral position, then reduces the force the further the breakout.

Boom configurations

Many farms and crop varieties have different requirements when it comes to chemical application systems.

The new V Series TriTech boom utilizes a five chord layout on the inner wing with the main boom folding pivot points above the nozzles. This layout allows virtually any

nozzle configuration and spacing width to be achieved.

Goldacres are able to configure the boom to include single, double, clock face 3-5

nozzles bodies, droppers and high volume air sleeve systems just to name a few.

Wide choice of nozzles available from leading brands such as TeeJet and Lechler.

RapidFire and RapidFlow nozzle switching technology

Goldacres pioneered the use of pneumatic nozzle switching technology and boom recirculation in Australia more than a decade ago. In that time this technology has become the standard method for reducing chemical waste.

The pneumatic nozzle switching replaces traditional boom section valves to control water flow to the nozzles, with the trend

moving to wider booms in conjunction with greater number of spray sections meant that the traditional system simply became “to busy” with the amount of hoses on the boom required. The Goldacres RapdiFire and RapidFlow system uses a single common feed spray line with the nozzles switching on and off using a number of small pneumatic hoses.

The result is significantly reduced amount of spray hoses, reduced volume of chemical in the boom lines, quick on / off times for the nozzle, easy to reconfigure section spray widths and number of sections and of course the ability to flush the spray line back to tank without the need to physically spray on the ground.







CrossFire 250 shown

Application technology - 3TS

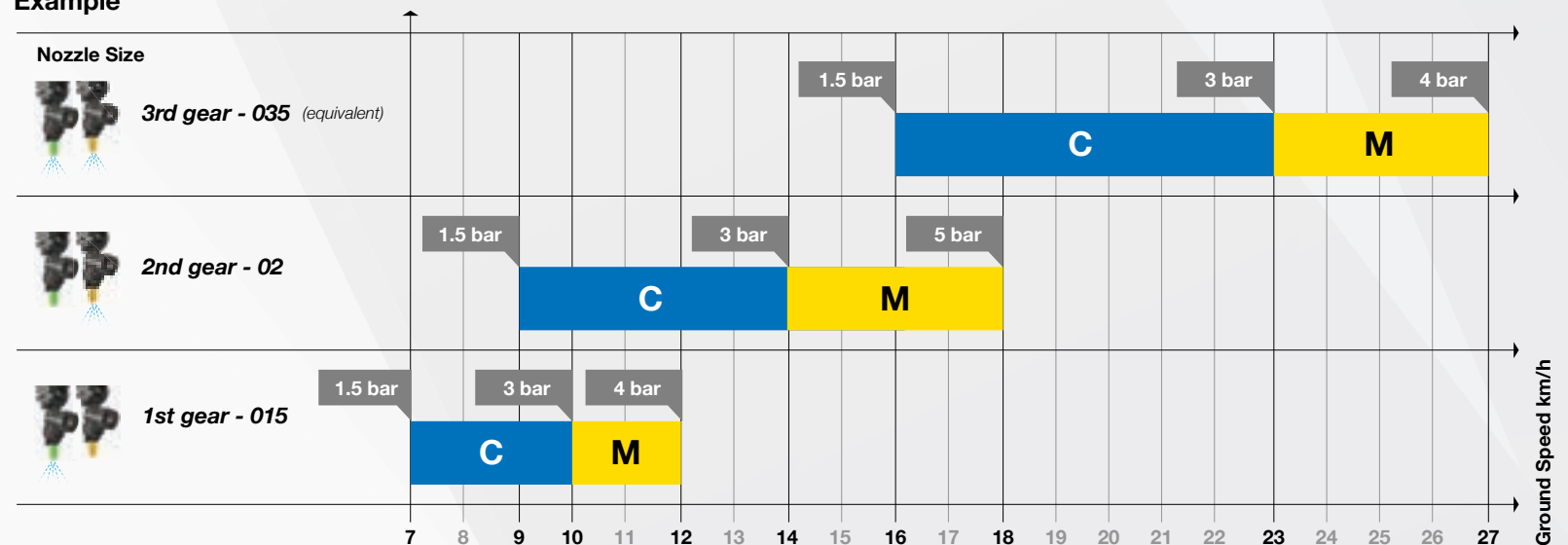
Nozzle technology has advanced in leaps and bounds over the years and a strong emphasis on drift control has influenced many nozzle designs, including air induction (AI) technology

The spray nozzles operating pressure range and size determine the application rate and speed band at which the driver must adhere to. This band is usually quite narrow. To overcome this Goldacres offer a 3 tier system (3TS) which effectively gives

the driver a much wider operating band whilst still maintaining optimum droplet size. Think of 3TS as a three step gearbox. Each nozzle type has an operating pressure band for a given droplet size. As the first nozzle reaches the top of the

pressure band it switches off and the next larger size nozzle switches on. When that nozzle reaches the top of that pressure band the first nozzle will switch on again, effectively giving three operating bands.

Example



Application rate = 70 l / ha • Nozzle type - Lechler IDK 015 & 02 when tier 3 (1 & 2) = 035 equivalent flow rate ■ Course Droplet ■ Medium Droplet

Chemical handling & fluid systems

When your sprayer is sitting idle being reloaded with water and chemical it's not making you money. That's why Goldacres fit filling solutions that minimise the reload time to get you back in the paddock sooner.

The G4V Crop Cruiser has been designed and built with all the best fully integrated water and chemical transfer systems. This allows the sprayer to be reloaded quickly, safely and efficiently.

Fluid System

Central to the G4V's fluid system is the ARAG MP400 multistage centrifugal pump. The pump is constructed using five impellers mounted to a common shaft which provides a more linear flow over a wide pressure range. The pump is rated to 400 l/min at 8 bar pressure. RPM sensor and oversize suction filter means the operator can be confident that adequate pump performance is being achieved.



1 EZ Control Station

Today's tough OH&S requirements are there to ensure everyone finishes the day like they started, safe and well. At Goldacres we not only take care of our own employees, but we ensure operators of our products are also looked after. The G4V features an all new EZ control operator station with well laid out colour coded connection points and valves at correct working heights, 70L hand wash tank and a wash down gun for rinsing out empty containers and fill station areas. External switches with protective covers allow the operator to switch on functions like the fill, chemical transfer and spray pump, external lighting, wash down gun and switch the suction between the main or 300L rinse tank.

2 Water transfer

Transfer water into the sprayer quickly and conveniently using the integrated 3" self priming centrifugal fill pump. The pump is plumbed from the fill point to the tank using 3" hose with minimal restrictions, this allows fill rates of up to 700 l/min. Because the fill pump is fully

integrated through the EZ control station the water can be distributed to not only the main tank but also rinse water tank, main tank flush sprinklers, induction hopper flush and micromatic coupler.

3 SuperFlow Chemical Induction Hopper

The SuperFlow chemical induction hopper is an integrated chemical transfer system that allows liquids, granular and powdered products to be measured and transferred into the main tank. The hopper has 60L capacity with both drum and internal rinsing capabilities. The high flow 2" venturi is mounted at the base of the hopper which draws the chemical into the water stream at that point, minimising the chance of blockages.

Liquid chemical Transfer Systems

The G4V is equipped with two types of chemical transfer systems. Venturi and electric

4 Venturi

When large quantities of neat chemical need to be transferred into the sprayer from either a 1000L

intermediate bulk container (IBC), 110L enviro drum or just a standard 20L drum then the chemical enviro drum coupler or venturi probe can be used. This connection point uses a venturi mounted in the top of the tank to create a vacuum to draw the chemical straight in. At no stage does the neat chemical come into contact with any pumps.

5 Electric

If precise amounts of chemical need to be measured into the sprayer then this can be achieved using the on board electric 12 volt transfer pump. This pump is plumbed directly to the 60L super flow induction hopper where the chemical volume can be measured. Once the desired volume is met then the chemical can be transferred to the main tank using the venturi at the base of the hopper.



One for the road



Ease of transport

Whether you are spraying in the field or driving down the road, uninterrupted vision around the sprayer is essential for the safety of you and others.

Features like the flat folding boom wings so the operator's line of sight is uninterrupted. Adjustable side mirrors provide a clear view of the road behind. Compact folded booms provides the operator with easy access to the cabin yet brings the overall transport width down to under 3.5m*, eliminating the need for an escort vehicle. Internal wet disc brakes fitted as standard if the unthinkable should happen. LED daytime running lamps, turn indicators, projector style halogen head lights and rotating warning beacons round out the package. The G4V Crop Cruiser really is one for the road.

**Dimensions are based on 380/90R46 tyres fitted at standard wheel track 2000mm*

	A (m)	B (m)	C (m)	D (m)
18m boom	3.98	3.1	8.10	3.55
24m boom	3.98	3.1	8.10	3.55
30m boom	3.98	3.1	9.05	3.55
33m boom	3.98	3.1	9.87	3.55
36m boom	3.98	3.1	9.87	3.55



G4V standard specifications

Engine	G4V
Cummins QSB 4.5L cylinder, Tier 3 emission. 119kw (160hp), 622N.m (459lb-ft)	Std
Charge air, water jacket, hydraulic oil and fuel combination cooling package by Innotherm	Std
Transmission	
Hydro-mechanical Transmission and Drive Line: Danfoss Hydraulic Transmission Pump 115cc Motor 160cc (Single) Full automotive control	Std
Drive system	
Constant 4 wheel drive 2 Speed hydraulic drive transfer case with centre diff lock, forced lubricated and 12v oil cooler.	Std
Fixed width mechanical drive axles with limited slip differentials front and rear.	Std
300mm gear drive Drop legs	Std
Steering	
2 wheel steer and 4 wheel steer modes switchable from cabin 4WS is speed limited to <15Km/h	Std
Turning Radius – 1.8m track – 380 wide tyres – 2.9m (inside of tyre)	Std
Hydraulics	
Danfoss 75cc load sense piston pump	Std
3.9cc gear pump for transfer case lubrication and cooling	Std
90L hydraulic reservoir with return oil filtration	Std
Electrical system	
12V – 160amp electrical capacity	Std
Dual batteries with master isolator	Std

	G4V
Fully sealed connectors with colour coded wires used throughout the wiring harness	Std
Light	
Front mounted egress roof work lights	Std
Night Pro (DFO)	Opt
LED light bar	Opt
LED service lights	Opt
Braking system	
4 wheel braking via hydraulic transmission system.	Std
Independent emergency braking system controlled via foot pedal. Internal hydraulic wet brakes. Front axle only.	Std
Chassis	
Fully welded semi truss rigid mild steel	Std
200 x 100 x 6mm main rails	Std
Suspension	
5 link torque rods with rear sway bar. 4 x rolling lobe air springs with ride height levelling. Shock absorbers on all corners.	Std
Paint system	
Grit blasted steel work followed by high build primer. All un welded sections seam sealed	Std
Wet top coat paint system with high temperature baked finish	Std
Wheel Equipment	
480/80R46 - ground clearance 1100mm	Opt

	G4V
380/90R46 - ground clearance 1000mm	Std
Axle tracks	
Wheel tracks, 1.81 – 2.36m using bolted adjustable rims	Std
Mudguards	
4 x full length axle mounted polyethylene mudguards	Std
Cabin	
Premium cabin with curved front and rear glass	Std
Dual tilt and telescopic steering column	Std
Air suspension seat with seat belt. Fully adjustable	Std
Training seat	Std
Accessory mounting rail on RHS	Std
Carbon filtration with positive cab pressurisation	Std
Bluetooth equipped radio	Std
Engine diagnostic display	Std
Main cabin access	
Full length LHS access platform with auto folding ladder.	Std
Boom	
Delta series flat folding boom. 18, 21, 24m	Opt
TriTech series flat folding boom. Mild steel inner wings with aluminium outer wings and breakaway. Available in the following widths. 24, 28, 30 & 36m.	Opt
7 boom sections	Std

	G4V
8 boom sections	Opt
9 boom sections	Opt
10 boom sections	Opt
Rapid fire single line in 500mm spacing	Opt
3 tier system (3TS)	Opt
Trijet nozzle bodies	Opt
Cross fire 3TS (3TS capability with nozzles staggered every 250mm)	Opt
Custom nozzle spacing and configurations on request	Opt
Hydraulic wing tilt	Std
Hydraulic bi-fold (TriTech booms only)	Std
Hydraulic yaw system (TriTech booms only)	Std
Automatic boom height control system (TriTech booms only)	Opt
Remote fence line jets	Std
Air sleeve system	Opt
Spray control system	
Raven SCS4400	Std
ISO BUS control system (no VT supplied)	Opt
Solution tanks	
UV stable Polyethylene heavy walled tank.	Std
Main tank - 4000L	Std
Rinse tank – 300L side mount	Std

	G4V
Wet sight tube mounted to tank	Std
Spray Pump	
400 l/min multi-stage centrifugal pump	Std
Suction filter plus twin pressure filters	Std
Chemical handling and transfer	
Chemical suction probe	Std
60L induction hopper	Std
Electric chemical transfer pump	Std
Micromatic rinse socket and coupler	Std
3" integrated water transfer pump	Std
Service / Maintenance	
Remote grease nipple bank	Opt
Auto grease system	Opt
Turning circle	
2.9m (min)	Std
Weight	
Tare weight (kg) - 30m TriTech boom	9450
Gross weight (kg)	14,000



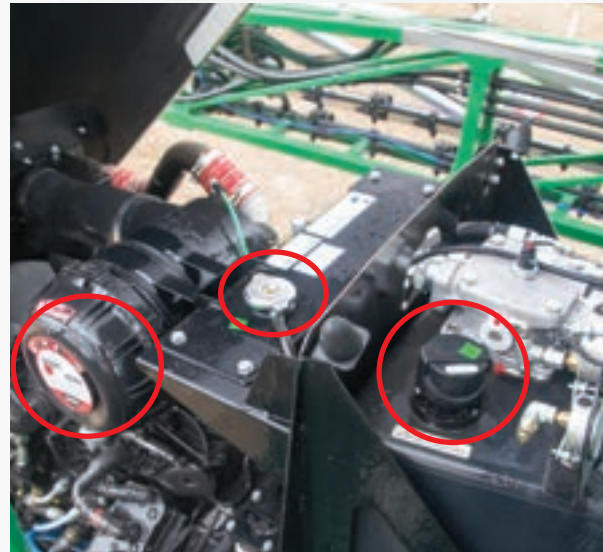
Maintenance - Easy does it

Today's machinery is more reliable than ever before, however regular inspections are still required to ensure maximum performance

Goldacres engineers have ensured all maintenance points are easy to access, with the majority of these located within easy reach from the cabin access platform.



Greasing of critical pivot points can be time consuming and difficult to do, generally resulting in extended periods between greasing. To minimise maintenance time the optional remote grease nipple bank can be fitted or an optional automatic greaser is available to ensure the right amount of grease is delivered to every pivot point at the right time.



Engine, hydraulic oil, engine coolant, fuel filters and air cleaner can all be accessed from the cabin access platform. Making routine checks quick and easy.



Slide out dual battery compartment for easy access.



Parts & service

When you're down – trust Goldacres to pick you up

Farming can be unpredictable, we understand that spray application is time critical, and that idle time costs more than just money.

Goldacres extensive Australia wide dealer network with trained sprayer technicians are there for when you need them the most.

Trust Goldacres support to get your machine back up and spraying quickly.

No one knows your sprayer like Goldacres

Goldacres dedicated team of product specialists stand beside the dealer, and right behind the product with the industry's best know how.

All of our sprayers are proudly built right here in Australia, we know exactly what parts go where and how to fit them. Our fully stocked warehouse carries over 20,000 line items ranging from the smallest o-ring to the largest boom wing. Rest assured we have the part you're looking for.









Springland Spray Contracting, Tasmania



Goldacres Trading Pty Ltd
1-3 Morang Crescent, Mitchell Park 3355
P: 03 5342 6399 - F: 03 5342 6308
goldacres.com.au

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