



KELLANDS

AGRICULTURAL & INDUSTRIAL VEHICLE TECHNOLOGY



Market-leading, innovative, high-performance crop sprayers and spreaders.

PRODUCT RANGE

Kellands has led the way in quality, innovation and reliability – forging an enviable reputation as a blue-chip manufacturer of high-performance crop sprayers, spreaders and specialist industrial machines.

Positive drive technology

Innovation lies at the heart of the company's success, inspiring Kellands to create a new breed of weight-efficient, positive-drive sprayers and spreaders that deliver greater safety, productivity and fuel efficiency compared with traditional, hydrostatic machines.

Highly acclaimed product range

The highly acclaimed Kellands range includes the Agribuggy - a low-ground pressure self-propelled sprayer with a suite of high-tech features - and the highly adaptable Multidrive range – a unique series of multi-purpose load-carrying tractor units which can be customised with a selection of mounted sprayers and spreaders.

Variety of applications

Multidrive machines can be used in a wide variety of ways including roles as: slurry tankers, lime spreaders, trailer haulers & bespoke utility builds for industrial applications.

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Agribuggy A280



Multidrive M380 & M420

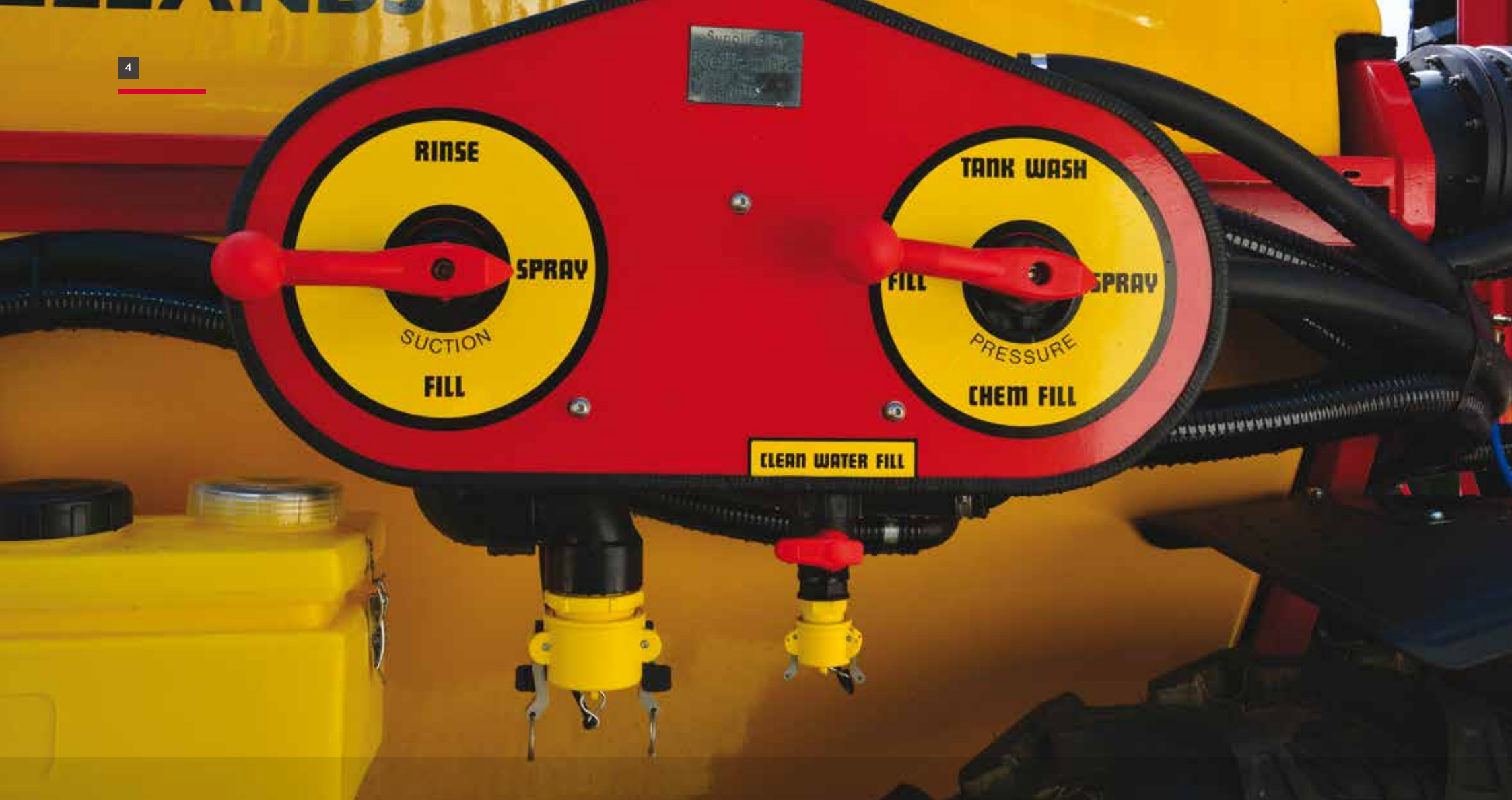


Multidrive M550



Multidrive F380





Market leaders in agricultural & industrial vehicle technology



THE KELLAND'S DIFFERENCE

Kellands prides itself on providing customers with everything they need for successful, cost-effective, and productive spraying and spreading.

Outstanding features pioneered by Kellands include:

- A high-performance positive mechanical drive system which delivers greater torque and grip, less wheel-spin, and power transfer up to 25 per cent more efficient than a hydrostatic machine
- A Low-centre of gravity weight-efficient design which delivers outstanding fuel economy and perfect 50/50 weight distribution for maximum stability and traction. Average consumption for an Agribuggy is around 70 litres-a-day compared with between 150 and 200 litres per day for rival hydrostatic sprayers
- Low-ground pressure enables Kellands sprayers to thrive in wet conditions where traditional sprayers and spreaders would struggle, giving longer access to crop fields and creating more opportunities for work
- A height clearance of 750mm, (when fitted with large-diameter row-crop wheels), ensures a large surface contact area for maximum flotation
- And a 360-degree high-visibility cab ensures enhanced safety, precision and comfort.



AGRIBUGGY A280

Kelland's world-famous Agribuggy is a high-performance self-propelled crop sprayer that delivers a greater power to weight ratio and fuel economy than any of its rivals.

Featuring proven engine technology, four-wheel steering and a next-generation curved-cab with 360-degree visibility, the machine sets new standards for performance, reliability, comfort and efficiency.



Tough and durable hose attachment

Unique low centre of gravity design

Operator environment

Stylish and functional, the new Generation 3 cab features curved glass cutting down on reflections, improving visibility, and making the Agribuggy more pleasing on the eye.

Cab size has been increased and a roof-mounted heat and air-conditioning system ensure a pleasant working environment whatever the weather outside.

Power and performance

Agribuggy features a new Cummins 148hp power pack, a 4-speed heavy-duty automatic transmission with 2-speed transfer box, a lockable centre differential, and an independent parking brake.

The lean-burn engine boosts efficiency by delivering the lowest running and maintenance costs in class.

In the field and on the road

Agribuggy features four-wheel steering and a unique low centre of gravity design for a winning combination of power, visibility, and finger-tip control.

Operators can switch between two and four wheel drive, adjusting performance to suit the conditions and ensuring speeds of up to 50 km/h on the road. The machines' low-ground pressure capabilities reduce both compaction and damage when working in the field.

Productivity

Agribuggy comes equipped with a generous 2,700 litre spray tank which has been internally baffled and gel-coated. It features 12/24m fully hydraulic aluminium booms, and boom suspension with tilt and yaw control.

OVERVIEW

Performance

- Unrivalled power to weight ratio
 - 148hp, 2.8 litre, turbo-charged & intercooled engine
 - 4 speed, heavy-duty, automatic transmission with 2 speed transfer
 - Box with lockable centre differential and independent park brake
 - Melo, heavy-duty, reduction hub axles with up-rated brakes and allround suspension
 - Four-wheel steering system
 - Enclosed engine bay with easy access side panels
 - Remote PTO/engine RPM control for external filling operations
 - 95 litre inboard fuel tank
 - Height adjustable plastic mudguards
 - Electro-hydraulic PTO system with automatic speed control
 - Quick attach sprayer/spreader demount system
 - Powder coated finish to metal surfaces
 - Trelleborg 560/60 R22.5 Twin Radial LGP tyres
 - 11.2 or 12.4 row crop tyres on adjustable rims
 - Under belly sheet & front crop deflector shield
- Roof mounted, climate control air-conditioning system with carbon filtration
 - CD player/radio, auxiliary power socket
 - Fully adjustable steering column
 - KAB air suspension seat with head and armrests & lap belt
 - Buddy seat & storage with document compartment
 - 6 LED adjustable worklamps
 - Flashing amber LED beacon
 - "Command Arm" Seat mounted operators control console housing:
 - Digital/colour TFT machine management display including reversing screen
 - Aeros colour 8.4" touch-screen display with combined auto rate control & GPS guidance system c/w "Boompilot" auto section control, & RXA-30 (EGNOS) antenna
 - Multifunction Joystick control
 - 4WS controls with mode select
 - 4-Way electric joystick for lift/lower and tilt control
 - Switch controls for inner and outer boom folding
 - Master on/off plus 7-Section control switches
 - Electronic cruise control/hand throttle

Sprayer Demount Unit

- 2700 litre GRP spray tank, internally baffled & gel-coated
- 12/24 metre, fully hydraulic aluminum booms
- Multi-stage boom suspension with tilt control
- Compressed air system with storage and dryer tanks
- 7 section, air shut-off nozzles

- Unique, full-flow spray line recirculation / priming & purging system with sprayline rinsing
- 30 litre chemical inductor with mixer nozzle and can wash
- Self-fill facility with 6 metre detachable hose
- Tank washing system with 230 litre clean water tank
- 20 litre hand wash tank
- Protective clothing locker
- 4 cylinder, 274lpm pump with direct mount hydraulic drive motor
- Suction filter and self-clean pressure filter
- Side mounted, easy access/operation, pressure and suction control valves
- Dry sight gauge
- Triplet nozzle bodies with 3 sets nozzles
- External wash down hose/lance with self-recoil hose reel
- Rear road lights & reflective warning triangles.

Optional Equipment

- Various boom widths and combinations
- Foam bout markers
- Bluetooth compatible/alternative entertainment systems
- Single or 5 way nozzle bodies
- Demount legs/jacks
- Fertiliser spreader demount frame - universal
- Alternative wheels & tyres



Video camera rear mount



Pressure gauges



Seat mounted 'Command Arm'



LH boom arm



Work area



Top nozzle - air stop





TECHNICAL SPECIFICATION

AGRIBUGGY A280

Chassis	2.8 metre wheel base	Fully sealed box sectional steel chassis including underbell sheet and front deflector shield	Quick attach cone system/sprayer demont
Engine	Cummins 2.8L - 148HP Turbo charged & intercooled		
Transmission	ZF 4 Speed heavy-duty Automatic	Hi/Low range selection	
Axles	Lockable centre diff and parking brake	Axles Melo heavy-duty reduction hub axles	Power operated external disc brakes
Steering	Four wheel-steering (4WS) system	2WS, 4WS, Crab + road-safe mode	
Suspension	Up-rated brakes and suspension with heavy duty leaf and coil assister springs	Shock absorbers to front	
Hydraulic system	Hydraulic PTO system with speed adjustment control	4-Service electro-hydraulic spool valves	
Cab	Generation III front-mounted cab with all-round tinted glass for panoramic vision Climate controlled air conditioning with carbon filters Stereo/CD player Adjustable steering column Buddy seat and storage locker	Air seat mounted with "Command Arm" control console housing: - Digital/colour TFT machine management display including reversing screen. - Aeros colour 8.4" touch-screen display - Multifunction Joystick control. - Electronic cruise control/hand throttle	6 LED work lights Aerolite twin LED flashing beacon Large electrically adjustable side mirrors on adjustable arms Wide/deep anti-slip access steps
Additional	Enclosed engine bay with easy access, gullwing side panels External PTO control/hand-throttle for filling operation	95 Litre inboard fuel tank Front head lights with built in side lights and indicators	Height adjustable plastic mudguards Rear road lights and reflective warning triangles
Tyre & fixed center wheels	Trelleborg 560/60 R22.5 Twin Radial LGP tyres - Standard	12.4 x 36 row crop tyres and adjustable rims - Standard	Alternative wheels & tyres available
Optional equipment	Additional boom section controls Variable geometry/Independent boom lift High-output spray pumps	Foam bout markers Bluetooth phone connectivity Single or 5-way nozzle bodies	Demount jack-legs - set of four Fertilizer demount frame - universal
Road speed	50 k.p.h maximum		
Console controls	Digital TFT colour machine management display Multi-function electric joystick	Switch controls for inner and outer boom folding Master on/off plus 7-section (option for 9) control switches	Electric cruise control/hand throttle Gear selection controls
Sprayer demount unit	2700 Litre GRP spray tank, internally baffled and gel-coated 12/24 metre fully hydraulic aluminium booms Boom suspension, tilt and yaw control Compressed air system with dryer and storage tanks 7-Section air shut off valves and regulator Full-flow spray-line recirculation/purge system	30 Litre chemical induction hopper with mixer nozzle & can wash Self-fill facility with detachable hose Tank wash system with 230 litre clean water tank 20 Litre hand wash water tank Proective clothes locker 4-Cylinder, 274 ltr/min pump with direct mount PTO motor	Suction and self-cleaning pressure filters Side mounted suction and pressure manual control valves Dry sight gauge Triple nozzle bodies c/w 3 sets of standard flat fan nozzles External wash lance and self-recoil hose reel



MULTIDRIVE M380 & M420

The Multidrive M380 and M420 are rugged, high capacity load carriers. Available in 3.8 and 4.2m wheelbase options, the Multidrive is proven, multi-purpose vehicle both in the field and on the road.

Operator environment

The Multidrive World Series cab provides the operator with a large, comfortable working environment. The unit is controlled and analysed through the AMC panel on the right hand side of the operator, with precise fingertip controls for the mounted implement within easy reach.



User-friendly multi-function control station

Ergonomic cab control layout

On the road

Using a John Deere 6 cylinder 195hp engine means the Multidrive is both powerful and economical.

The engine is linked to a ZF automatic gearbox, with power transferred to the mechanical drive axles, which are equipped with independent hydraulic brakes. Add this to load sensitive, air suspension and the results are a safe and comfortable 50kph on the road, with the ability to carry up to 10 tonnes.

In the field

In the field, the operator can use this power and sure footing to great effect. With 4 mode pentatonic steering and large diameter wheel gear, the Multidrive offers excellent traction, stability and low ground pressure.

This results in crop and soil structure damage being kept to a minimum. With it's excellent field of vision and easy to use controls, the Multidrive makes easy work of even the most difficult conditions.

Versatility

As well as being able to carry large capacity spray packs, the Multidrive also has the ability to carry a wide range of implements. This results in a machine that can not only spray chemicals, but also apply both liquid and solid fertilisers.

Mounting and demounting of the implement is a quick and simple job, demount legs are available as an option and all connections are fitted with quick releases.

OVERVIEW

Steering Modes

2 Wheel steering – For use on the road and in the field, offers precise front wheel steering only.

4 Wheel steering – Selecting 4 wheel steer allows full power front and rear steering, ensuring precise tracking in confined spaces and tight headland turns.

Delay mode steering – Especially useful for travelling in tramlines, this option allows only the front wheels to steer until a preset angle is reached, only then the rear wheels follow. Allows minor corrections to be made on straights, while maintaining the capability of the machine to perform tight turns.

Crab steering – This mode is predominantly used for preventing side slip on steep inclines. A secondary use is to provide individual wheel markings to reduce soil compaction on soft ground.

Power

Both Multidrive models feature a John Deere PowerTech engine which delivers an excellent combination of power, strength and high torque reserves whilst maintaining excellent fuel efficiency.

- High torque, John Deere 6 cylinder 195hp engine
- ZF Automatic gearbox with power transferred to mechanical drive axles
- 50kph road speed
- Full trailing arm suspension to front and rear axles with air suspensions

Performance

Multidrive is a dedicated specialist load carrier and hauler. Each model has high payload to unladen weight, high capacity and a mechanical drive-line for efficiency and simplicity.

- 10 tonne payload on a true flat-bed
- Large volume capable of carrying up to:- 5,000 litre sprayer, 8 tonne spreader hopper
- 18 tonnes, legal trailer hauling at 50kph
- Capability to carry and haul simultaneously

Safety

Inboard oil immersed multi-plate disc brakes ensure safe, reliable and powerful braking whilst carrying or hauling the largest of loads.

- Full roll-over protective cage with side escape door
- Automatic, adaptive transmission with independent hydraulic power braking to both axles
- Disc park brake with fully laden holding capability on 50% incline
- Unique easy-access engine compartment

Versatility

A wide range of optional equipment is available from Multidrive such as demountable sprayers and spreaders or from a growing list of approved suppliers of crop protection and ancillary equipment.

- Wide choice of wheel/tyre combinations from 300 to 750mm wide row crop or flotation
- 4 or 6 pin, detachable frame system integrates with a wide variety of spraying and spreading packs

- Towbar and optional outboard hydraulic linkage
- Automatic pick-up hitch
- Choice of PTO systems

Mobility

Heavy duty front and rear steering axles are specified to provide safe and reliable carrying of heavy loads. Strong differentials and four planet hub reduction gears are used to enable full engine power to be transmitted reliably to the wheels.

- Simple to operate
- Pentronic 4-wheel, 5 mode steering system
- Low ground pressure
- High traction 4 wheel drive
- High manoeuvrability
- Ground hugging suspension system

Comfort

The World Series safety cab with tinted glazing provides excellent protection with panoramic vision. An efficient climate control air conditioning system enhances the operator environment for higher comfort and productivity.

- Ergonomically designed cab layout
- Outstanding visibility
- Climate control air conditioning
- Trailing arm and coil spring suspension



Market-leading performance



Power and reliability



Extreme versatility



Outstanding manoeuvrability



Created for safety



Enhanced comfort





WIDE AXLE VERSION ALSO AVAILABLE M380-XT & M420-XT

Designed to meet the needs of Control Traffic Farming (CTF) requirements, the new Multidrive XT series features wider width axles for 2.2m to 3.0m track widths.

The Multidrive XT series also sees an increase in horsepower to 225hp to ensure the 10,000kg load carrying and 18,000kg hauling capacities are retained.

Kelland's design engineers have also developed a new Articul-air suspension system to ensure the XT series retains the excellent traction, smooth ride and contour-following abilities which are synonymous with Multidrive.

The Articul-air system allows the wider front axle to articulate freely whilst still maintaining the self-levelling characteristics and considerably reducing stresses on the chassis and suspension system.

For more information about the wide axle Multidrive models please visit www.kellands.co.uk



TECHNICAL SPECIFICATION

MULTIDRIVE M380 & M420

Chassis	Choice of 3.8 and 4.2m wheel base models	Purpose built ladder type with DOMEX high tensile steel C-Sections & bolted cross members	4 or 6 point quick-attach implement mounting system
Engine	John Deere 6-cylinder 6.8 litre PowerTech	195 hp/144 kw @ 2000 r.p.m	785Nm/579 lb/ft @ 1500 r.p.m
Transmission	ZF 6WG160 fully automatic with torque converter lock-up & manual over-ride	Six forward & three reverse gears operated with single lever control Electrically operated 2/4WD select	Lockable centre diff and parking brake
Axles	Heavy duty front and rear steering with switch operated differential locks	Planetary reduction hubs and dual circuit power operated multi-plate oil immersed brakes	72" - 80" track
Steering	Pentronic 5-function Four-Wheel-Steering system	2WS, 4WS,	Crab, Delay-1 & Delay-2
Suspension	A-frame trailing arm front and H-frame trailing arm rear	Front & Rear load-sensitive air suspension	Heavy duty shock absorbers
Hydraulic system	Load sensing 45cc + 33cc gear pump. PTO output with in-cab controls	1 x D/A spool valve, diverter valve & kit to suit implement electro-hydraulic system	Side mounted oil tank with filter & gauge
Cab	World series mid-mounted cab with all-round tinted glass for panoramic vision Climate controlled air conditioning Stereo/CD player KAB suspension seat with lap belt & arm rests	Adjustable steering column AMC digital dash instrument display Control console for implement control gear Buddy seat	Work lights Aerolite twin LED flashing beacon Large side mirrors on adjustable arms Wide/deep anti-slip access steps
Additional	2-stage easy access/hinged bonnet assembly Stainless steel exhaust pipe	300 litre side mounted fuel tank Front & rear road lights	Front mudguards 7-pin trailer lighting socket at rear
Tyre & fixed center wheels	Michelin Multibib 540/65 R30 Michelin Axiobib 620/75 R30 Michelin Axiobib 650/75 R30	Michelin MachXbib 710/55 R30 Alliance 385 18.4 R34 Michelin Multibib 600/65 R34 Kleber Super-3 300/95 R46	Michelin Agribib 340/85 R46 Michelin Agribib 380/90 R46 Michelin SprayBib 380/90 R46
Optional equipment	Uprated hydraulic systems and oil coolers. Additional hydraulic spool valves. 7.5 cfm Air compressor kit - side mounted air tank & dryer system. Range of drawbars or hydraulic pick-up hitches.	Hydraulic and/or air trailer brake systems. Alternative mudguards to suit particular wheels & tyres. Instrument mounting bracket - in cab. KAB Air suspension seat. Carbon cab filters (in-lieu of standard card filters).	Bolt on step extension. Rear screen wipe/wash. Galvanized chassis finish. Stainless steel fuel & hydraulic tanks.
Load capacity	10,000kg including implement & product	18,000kg Hauling Capacity	
Road speed	50 k.p.h maximum		



MULTIDRIVE M550

5.5m wheelbase and tri-axle configuration results in an unrivalled ability to carry large loads safely and securely with minimal ground pressure.

Operator environment

The Multidrive World Series cab provides the operator with a large, comfortable working environment. The unit is controlled and analysed through the AMC panel on the right hand side of the operator, with precise fingertip controls for the mounted implement within easy reach.



Easy-access engine bay

High-clearance, low ground-pressure design

On the road

Using a John Deere 6 cylinder 266hp engine means the M550 is both powerful and economical. The engine is linked to an 11 speed power shift gearbox, with power transferred to the mechanical drive axles, which are equipped with independent hydraulic brakes. Add this to load sensitive air suspension and the results are a safe and comfortable 50kph on the road, with the ability to carry up to 14 tonnes.

In the field

The benefits of a six wheel vehicle over a four wheel vehicle include the ability to carry the additional weight on a relatively narrow tyre. The large diameter tyre and the additional axle of the M550 means the weight can be carried comfortably even at high working and road speeds. For low ground pressure applications wider tyres can be also used.

Versatility

The driven third axle of the M550 results in unrivalled traction and low ground pressure making it ideal for applications such as slurry or litter disposal in winter conditions.

The M550 offers an unequalled pay load area with 4.8 metres of usable space with up to a 14 tonne load capability making it an ideal high capacity material hauler. The M550 can be specified with a demount load bed which can either be tipped or dropped off - empty or fully loaded.

OVERVIEW

Performance

Created as a purpose-built specialist load carrier and hauler, the Multidrive M550 boast a high payload to unladen weight ratio; high-volume carrying capacity, and a smooth and efficient mechanical power transfer system.

- Up to 14 tonnes payload on a true flat-bed
- 18 tonnes, legal trailer hauling at 50 km/h
- Can carry and haul simultaneously

Power

Featuring the proven John Deere PowerTech engine, Multidrive vehicles offer an exceptional combination of power, strength and high torque reserves while still delivering impressive fuel efficiency.

- High torque, John Deere 6 cylinder 266hp engine
- Funk DF250 Automatic gearbox with power transferred to mechanical drive axles
- 50 km/h road speed
- Full trailing arm suspension to front and rear axles with load sensitive air suspension

Versatility

Multidrive machines can be equipped with a comprehensive range of optional equipment, transforming them into truly multi-purpose power plants. Options include: Multidrive demounted sprayers and spreaders and a growing range of crop protection and ancillary equipment created by approved suppliers.

- Wide choice of wheel/tyre combinations from 380mm to 750mm wide flotation, row crop or radials
- 6-pin, detachable frame system integrates with a wide variety of spraying and spreading packs
- Towbar and optional outboard hydraulic linkage
- Automatic pick-up hitch
- Choice of PTO systems

Mobility

Heavy duty front, center and rear steering axles are specified to provide safe and reliable carriage of heavy loads. Strong differentials and four planet hub reduction gears are used to enable full engine power to be transmitted reliably and consistently to the wheels.

- Easy to operate
- Pentronic 6-wheel, 4 mode steering system
- Low ground pressure
- High traction 6 wheel drive
- High manoeuvrability
- Ground-hugging suspension system

Safety

Inboard oil immersed multi-plate disc brakes ensure safe, reliable and powerful braking whilst carrying or hauling the largest of loads.

- Automatic, adaptive transmission
- Independent hydraulic power braking to all axles
- Disc parking brake with fully laden holding capability on a 50 per cent incline
- Unique easy-access engine compartment

Comfort

The World Series safety cab with tinted glazing provides excellent protection with panoramic vision. An efficient climate control air conditioning system enhances comfort and productivity.

- Ergonomically designed cab layout
- Outstanding visibility
- Climate control air conditioning
- Load sensitive air suspension



Market-leading performance



Power and reliability



Extreme versatility



Outstanding manoeuvrability



Created for safety



Enhanced comfort





TECHNICAL SPECIFICATION

MULTIDRIVE M550

Chassis	5.5 metre wheel base	Purpose built ladder type with DOMEX high tensile steel C-Sections & bolted cross members	6-point quick-attach implement mounting system
Engine	John Deere 6-cylinder 6.8 litre PowerTech	266 hp/196 kw @ 2000 r.p.m	1025 Nm/756 lb/ft @ 1500 r.p.m.
Transmission	Funk DF250 11 speed with fully automatic or manual power shift modes.	Single lever control with shuttle shift capability. Inching pedal for precise manoeuvrability.	Electrically operated 2/4/6WD select Lockable centre diff and parking brake
Axles	Heavy duty front, middle and rear steering with switch operated differential locks	Planetary reduction hubs and dual circuit power operated multi-plate oil immersed brakes	72" - 80" track.
Steering	Pentronic 4-function Six-Wheel-Steering system	2WS, 6WS	Delay-1 & Delay-2.
Suspension	A-frame trailing arm front and leading arm middle with H-frame trailing arm rear	Load sensitive air suspension	Heavy duty shock absorbers
Hydraulic system	Load sensing 45cc + 33cc gear pump. PTO output with in-cab controls	1 x D/A spool valve, diverter valve & kit to suit implement electro-hydraulic system	Side mounted oil tank with filter & gauge.
Cab	World series mid-mounted cab with all-round tinted glass for panoramic vision Climate controlled air conditioning Stereo/CD player KAB suspension seat with lap belt & arm rests	Adjustable steering column AMC digital dash instrument display Control console for implement control gear Buddy seat	Work lights Aerolite twin LED flashing beacon Large side mirrors on adjustable arms Wide/deep anti-slip access steps
Additional	2-stage easy access/hinged bonnet assembly Stainless steel exhaust pipe	300 litre side mounted fuel tank Front & rear road lights	Front mudguards 7-pin trailer lighting socket at rear
Tyre & fixed center wheels	Michelin Axiobib 620/75 R30 Michelin Axiobib 650/75 R30	Michelin Multibib 600/65 R34 Michelin Agribib 380/90 R46	Michelin SprayBib 380/90 R46
Optional equipment	Up-rated hydraulic systems and oil coolers. Additional hydraulic spool valves. 7.5 cfm air compressor kit – side mounted air tank & dryer system. Range of drawbars or hydraulic pick-up hitches.	Hydraulic and/or air trailer brake systems. Alternative mudguards to suit particular wheels & tyres. Instrument mounting bracket – in cab. KAB Air suspension seat. Carbon cab filters (in-lieu of standard card filters).	Bolt on step extension. Rear screen wipe/wash. Galvanized chassis finish. Stainless steel fuel & hydraulic tanks.
Load capacity	14,000kg including implement & product	12,000kg Hauling Capacity	
Road speed	50 k.p.h maximum		



MULTIDRIVE F380

Created from the proven Multidrive platform, the F380 offers outstanding performance and enhanced visibility with a 360-degree tinted glass cab offering the best in comfort, precision and safety.

Engine

The new Multidrive FC is fitted with a John Deere 195hp 6 cylinder 6.8L PowerTech engine. Rigorously tested by John Deere's installation engineers, a new cooling pack reduces power requirements to give improved fuel economy and reduced noise levels. A reversible cooling fan can be used to blow out any build up of dust in the radiator.

Transmission

A ZF fully automatic transmission provides 6 forward and 3 reverse speeds, with single lever control, shuttle shift capability and manual override. The torque converter is equipped with lockup in all forward gears.

Axles and suspension

Rugged mechanical axles (equipped with electronic diff locks) provide safe 50kph road speed and come with none of the reliability concerns associated with hydraulic wheel motors. Front and rear load compensating air suspension comes as standard providing an excellent ride in the field and on the road, both when fully laden or empty.

Braking

Dual circuit inboard wet brakes provide more than enough braking capacity to stop the fully laden Multidrive FC quickly and safely. Braking is further improved by the machine's excellent weight distribution and tank baffles prevent liquid surge under braking. Steering – Pentatonic all wheel steering with "on the move" engage/disengage ensures there is control for any situation. Modes include 2 wheel, 4 wheel, delay and crab steer.

Cab

The Multidrive Generation III cab provides a 340 degree field of view. Climate controlled air conditioning and carbon filters, ensures the operator is comfortable in all conditions.



High ground clearance

Compact transport position

OVERVIEW

Robust stainless steel tank

3000-5000 litre stainless steel spray tank with 500 litres of clean water capacity. Located between the axles for perfect weight distribution, all Chafer tanks are extremely durable and stable thanks to their stainless steel construction and internal baffles. Stainless steel provides a perfectly smooth nonporous surface which reduces the build up of chemical residue. This minimises the time taken and the amount of liquid required when rinsing.

Plumbing

Utilising a high capacity centrifugal pump, 3" suction and 2" pressure plumbing, the Multidrive has the ability to achieve both high rate liquid fertiliser applications and low rate precision chemical applications.

Boom

The Multidrive F380 is available with boom widths ranging from 24-40 metres. Both the bi-fold and triple fold booms are well proven and have helped hundreds of growers maximise their crop potential through fewer crop wheelings, minimised compaction and more timely spray applications. Chafer Contour Automatic boom levelling is available as an option.

Boom suspension

In addition to the Multidrive's air suspension, the booms are equipped with suspension and damping for bounce, yaw and tilt, protecting the boom and providing a stable ride in all field conditions.

Versatility

The Multidrive F380 unit can be fitted with either a Chafer Spray pack or a granular fertiliser spreader equipped with its own bag lift. These units can be swapped quickly using a set of demount legs (optional).

Automatic spray controller

Automatic spray rate control and electro-hydraulic function control come as standard on the Multidrive via an RDS Delta 34i. A choice of automatic spray rate controls and GPS guidance systems are available on the Multidrive offering auto section control, guidance, variable rate application and auto steer are specifiable options, allowing ever increasing accuracy and automation.



Robust stainless steel tank



Boom suspension



High-performance spraying



Fast and effective hydraulic folding



Working width of up to 40m



Automatic spray controller





Chafer

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CONTRACTING
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OMEX

Chafer

multi-drive

*Multi
drive*

TECHNICAL SPECIFICATION

MULTIDRIVE F380

Chassis	3.8 metre wheel base	Purpose built ladder type with DOMEX high tensile steel C-Sections & bolted cross members	6-point quick-attach implement mounting system
Engine	John Deere 6-cylinder 6.8 litre PowerTech with reversible hydraulic fan with reverse for cleaning	195 hp/144 kw @ 2000 r.p.m	785Nm/579 lb/ft @ 1500 r.p.m
Transmission	ZF 6WG160 fully automatic with torque converter lock-up & manual over-ride	Six forward & three reverse gears operated with single lever control	Electrically operated 2/4WD select Lockable centre diff and parking brake
Axles	Heavy duty front and rear steering with switch operated differential locks	Planetary reduction hubs and dual circuit power operated multi-plate oil immersed brakes	72" - 80" track
Steering	Pentronic 5-function Four-Wheel-Steering system	2WS, 4WS	Crab, Delay-1 & Delay-2
Suspension	A-frame trailing arm front and H-frame trailing arm rear	Load sensitive air suspension front & rear	Heavy duty shock absorbers
Hydraulic system	Load sensing 45cc + 33cc gear pump. PTO output with in-cab controls	1 x D/A spool valve, diverter valve & kit to suit implement electro-hydraulic system	Side mounted oil tank with filter & gauge
Cab	Generation III front-mounted cab with all-round tinted glass for panoramic vision Climate controlled air conditioning with carbon filters Stereo/CD player KAB air suspension seat with lap belt & arm rests	Adjustable steering column AMC digital dash instrument display Control console with 12v power socket for implement control gear Buddy seat and storage locker	6 LED work lights Aerolite twin LED flashing beacon Large electrically adjustable side mirrors on adjustable arms Wide/deep anti-slip access steps
Additional	Engine cover with gullwing side access panels 7.5 cfm Air compressor kit - side mounted air tank & dryer system	300 litre side mounted fuel tank Front & rear road lights	Front mudguards 7-pin trailer lighting socket at rear
Tyre & fixed center wheels	Michelin Multibib 540/65 R30 Michelin Axiobib 620/75 R30 Michelin Axiobib 650/75 R30	Michelin MachXbib 710/55 R30 Alliance 385 18.4 R34 Michelin Multibib 600/65 R34	Michelin Agribib 380/90 R46 Michelin SprayBib 380/90 R46
Optional equipment	Uprated hydraulic systems and oil coolers. Additional hydraulic spool valves. Range of drawbars or hydraulic pick-up hitches.	Hydraulic and/or air trailer brake systems. Alternative mudguards to suit particular wheels & tyres.	Galvanized chassis finish. Stainless steel fuel & hydraulic tanks.
Load capacity	10,000kg including implement & product	18,000kg Hauling Capacity	
Road speed	50 k.p.h maximum		

SPRAYERS DURABLE BOOMS FOR ACCURATE SPRAYING

Twin fold booms

Kellands 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 to drive spraying productivity, Kellands 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.

Boom suspension

Triple stage boom suspension for bounce, tilt and yaw is fitted as standard on all Kellands 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

Kellands 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.

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 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 the maximum benefit from GPS controlled automatic boom section shutoff.

TWIN FOLD BOOM

Boom width	18	20	21	24	28	30
Folding width (m)	12/18	12/20	12/21	12/24	14/28	15/30
Break back width (m)	2.0	2.0	2.0	2.0	2.0	3.0
Spray Sections (m) Standard Configuration	3-6-6-3	4-6-6-4	4.5-6-6-4.5	6-6-6-6	7-7-7-7	7.5-7.5-7.5-7.5

TRIPLE FOLD BOOM

Boom width	30	32	36	40
Folding width (m)	12/24/30	12/24/32	12/24/36	12/24/40
Break back width (m)	2.5	2.5	2.5	2.5
Spray Sections (m) Standard Configuration	3-6-6-6-6-3	4-6-6-6-6-4	6-6-6-6-6-6	8-6-6-6-6-8



Dual nozzle bodies fitted to twin fold boom



Triple nozzle with air shutoff



Pressure filters as standard



Spray line quick release drain point

Dual nozzle bodies

Dual nozzle bodies can be used to hold Kellands 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.

Kellands 'Contour' boom levelling

Kellands Contour enables sprayer booms to follow ground contours without the need for adjustment from the operator. Working automatically using ultrasonic sensors mounted on the boom, Kellands Contour can help to minimise operator fatigue and ensure 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 include:

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





PRECISION APPLICATION & SPRAYER CONTROL

All Kellands sprayers are fitted as standard with an automatic rate controller. The Kellands 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.

Sprayer rate controller

Regulation mode

- Pressure sensor
- Flow sensor (optional)

Display information during spraying

- Target application rate (l/ha)
- Actual application rate (l/ha)
- Actual real time flow 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 nozzles selection and target rate
- Programmable nozzles
- Boost mode of target rate
- Variable rate control (optional)
- Fertiliser specific gravity correction
- Working width correction

Memory counters

- 2 channel memory
- Individual field memories
- Sprayed volume (L)
- Sprayed area (ha)

Calibration/testing

- Simple calibration of wheel speed sensors
- Wheel memories (Flotation & row crop)
- Simple flow meter calibration (If flow meter is fitted)
- Nozzle flow rate adjustment
- Simulated ground speed for stationary sprayer testing
- Sensor functionality testing (diagnostics)

Alarms

- Over/Under application alarm
- Spray pressure alarm
- Tanks contents alarm

IN CABIN CONTROL PANEL

	Twin Fold Boom 18-30m	Triple Fold Boom 30-40m
Boom lift / tilt	•	•
Independent tilt left & right	Optional	•
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	Optional	Optional
Kellands spray line switching	Optional	Optional
Foam marker	Optional	Optional
Kellands contour	Optional	Optional
Steering mode	•	•
Work lights	•	•



The Multidrive cab is fitted with a switch panel to control all of the hydraulic and electronic systems on the Kellands spray pack. Located to the right of the operator, the switches are within easy reach and clearly laid out.

SOLUTIONS FOR INTELLIGENT SPRAYING

When you need to take your spraying accuracy to the next level, Kellands sprayers can be fitted with 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 110/150

Topcon System 110 is a rugged compact spray 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. System 150 does all of the above, but with the added advantage of being auto steer compatible.



Topcon System 350

For growers requiring absolute control of spray applications, System 350 meets and surpasses these requirements.

In addition to the functionality of the System 110, System 350 can be used for auto steering, variable rate control and can also compile detailed job summary reports for data tracking and multi-year analysis. All of this information can be accessed through the state of the art 12.9" touch screen display.

FUNCTIONALITY	TOPCON SYSTEM 110	TOPCON SYSTEM 350
Sprayer rate control	•	•
Guidance	•	•
Auto steer		Optional
Spray coverage mapping	•	•
Automatic section control	Up to 10 sections	Up to 10 sections
Variable Rate Control		Optional
Data keeping and recording	•	•
Multi Product Control		•
GPS Compatibility	Marine Beacon, EGNOS, Omnistar VBS or HP, Starfire or RTK	Marine Beacon, EGNOS, Omnistar VBS or HP, Starfire or RTK

TECHNICAL SPECIFICATION

MODEL	3.8M TWIN FOLD	3.8M TWIN FOLD	4.2M TWIN FOLD	4.2M TWIN FOLD	4.2M TRIPLE FOLD	4.2M TRIPLE FOLD
Tank size	3000	4000	4000	5000	4000	5000
Chassis						
Quick releases for easy demounting	•	•	•	•	•	•
Demount legs	•	•	•	•	•	•
Storage lockers	•	•	•	•	•	•
Road traffic lights	•	•	•	•	•	•
Stainless steel tank						
Nominal Tank Volume	3000L	4000L	4000L	5000L	4000L	5000L
Real Tank Volume	3150L	4200L	4200L	5250L	4200L	5250L
Clean water tank volume	400L	400L	500L	500L	500L	500L
Hand wash water tank	25L	25L	25L	25L	25L	25L
Dry sight gauge	•	•	•	•	•	•
Dual tank rinse nozzles	•	•	•	•	•	•
Adjustable tank agitation system	•	•	•	•	•	•
Boom						
18-30m Twin Fold	•	•	•	•	•	•
30-40m Triple Fold					•	•
Independent boom levelling	Optional	Optional	Optional	Optional	•	•
Electro hydraulic control of boom lift, tilt, independent tilt and fold						
Stainless steel sprayline line nominal bore	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Nozzle Spacing	50cm	50cm	50cm	50cm	50cm	50cm
Triple Nozzle Bodies	•	•	•	•	•	•
Spray line prime and purge	•	•	•	•	•	•
Electric ball valve shutoff	•	•	•	•	•	•
Number of manually controlled boom sections (Max)	4 (8)	4 (8)	4 (8)	4 (8)	6 (10)	6 (10)
Plumbing						
Hydraulically driven centrifugal pump	650L/min	650L/min	650L/min	650L/min	650L/min	650L/min
High capacity stainless steel venturi chemical hopper	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	•	•	•	•	•	•
In cab controls						
RDS Delta 34i rate controller	•	•	•	•	•	•
Hydraulic & electric control panel	•	•	•	•	•	•
Tyre options						
Michelin 340/85 R46 Agribib Rowcrop (Speed rating 150A8)	•	•	•			
Michelin 380/85 R46 Agribib Rowcrop (Speed rating 157A8)	•	•	•	•	•	•
Michelin 420/80 R46 Agribib (Speed rating 151A8)	•	•	•	•	•	•
Michelin 480/80 R46 Agribib (Speed rating 158A8)	•	•	•	•	•	•
Michelin 620/75 R30 Axiobib (Speed rating 164D)	•	•	•	•	•	•
Michelin 650/75 R30 Axiobib (Speed rating 166D)	•	•	•	•	•	•

MODEL	3.8M TWIN FOLD	3.8M TWIN FOLD	4.2M TWIN FOLD	4.2M TWIN FOLD	4.2M TRIPLE FOLD	4.2M TRIPLE FOLD
Tank size	3000	4000	4000	5000	4000	5000
Optional equipment						
Topcon System 110 Sprayer Controller	Optional	Optional	Optional	Optional	Optional	Optional
Topcon System 350 Sprayer Controller	Optional	Optional	Optional	Optional	Optional	Optional
Kellands Contour automatic boom levelling with headland management	Optional	Optional	Optional	Optional	Optional	Optional
Independent boom levelling	Optional	Optional	Optional	Optional	•	•
Boom tip fold back	Optional	Optional	Optional	Optional		
Air shutoff nozzles	Optional	Optional	Optional	Optional	Optional	Optional
Five outlet nozzle bodies	Optional	Optional	Optional	Optional	Optional	Optional
Additional electric valve boom sections (Max)	Optional (6)	Optional (6)	Optional (6)	Optional (6)	Optional (6)	Optional (6)
Additional air shutoff boom sections	Optional (20)	Optional (20)	Optional (20)	Optional (20)	Optional (20)	Optional (20)
Additional stainless steel spray line 1" bore	Optional	Optional	Optional	Optional		
Dual nozzle bodies for Streambar MR system	Optional	Optional	Optional	Optional		
Dual nozzle bodies for boom frame mounted Streambar MR system					Optional	Optional
Jet flush system	Optional	Optional	Optional	Optional	Optional	Optional
25l foam marker	Optional	Optional	Optional	Optional	Optional	Optional
75l foam marker (Tractor air supply required)	Optional	Optional	Optional	Optional	Optional	Optional
Suction filter	Optional	Optional	Optional	Optional	Optional	Optional
Fast filling port with isolation valve	Optional	Optional	Optional	Optional	Optional	Optional
Hydraulically driven fast fill pump	Optional	Optional	Optional	Optional	Optional	Optional
Rear flashing light	Optional	Optional	Optional	Optional	Optional	Optional
Boom lights	Optional	Optional	Optional	Optional	Optional	Optional
Automatic tank fill	Optional	Optional	Optional	Optional	Optional	Optional
Weights and Dimensions*						
Length (m)	7.5	7.5	7.9	7.9	7.9	7.9
Height (m)	4.2	4.2	4.2	4.2	4.4	4.4
Width (m)	2.8	2.8	2.8	2.8	2.8	2.8
Wheelbase (m)	3.8	3.8	4.2	4.2	4.2	4.2
Unladen Weight (t)	8.2	8.2	9.6	9.6	10.6	10.6



LIME AND FERTILIZER SPREADERS

Kellands offers a range of trailed spreaders with varying capacities.

The standard version of the spreader is fitted with a mechanical wheel drive that ensures efficient and precise control of the dosage. The wide-angle PTO drive shaft and LED lights are standard as well.

There is an extensive line of additional equipment for the spreader that makes for great versatility; included is equipment for spreading salt and sand, as well as a 4m conveyor belt for filling ditches with sand or similar material.

With its robust and reliable design the spreader will give you many years of hard work, and the strong belt transmission that operates the 2 spreading plates and the many standard stainless steel parts contribute to a long life at top performance.

All spreaders are fitted with a roller cover and hydraulic covers are also available.



MODEL	K65	K85	K135
Net weight approx	2000 kg	2800 kg	6500 kg
Capacity (level measure)	5 m ³	6.6 m ³	13.5 m ³
with extension (level measure)	6.5 m ³	8.5 m ³	17 m ³
Wheel size	23.1 x 26/10 PR* 28 x 26 650/65 x 30.5	650/65 x 30.5* 800/65 x 32	650/65 x 30.5* 750/60 x 30.5
Hydraulic brakes (1)	Standard	Standard	Standard
Hydraulic jack	Excl.	Standard	Standard
Hopper length	300 cm	395 cm	578 cm
Hopper width	215 cm	215 cm	245 cm
Loading height approx.	230 cm*	235 cm*	275 cm*
Total length	530 cm	660 cm	874 cm
Maximum width	252 cm*	265 cm*	290 cm*
Std. Spreader transmission	SPC4500-1	SPC4500-2	SPC4500-2

SALES, SERVICE & SUPPORT

Kellands customers can count on world-class sales support with specialist advice direct from the manufacturer; one-to-one consultations with experienced sales professionals; and expert guidance on creating new machines to precise personal specifications.

We pride ourselves on delivering exceptional after-care support - offering a comprehensive range of parts; a secure and easy-to-use 24/7 online store; and a highly experienced team of service professionals with nationwide coverage.



Sales

Kellands can also help you fund your purchase with low-rate finance available on selected models, and can even offer a trade-in service for suitable machinery.

If you are on a tight budget you might also consider one of Kellands quality pre-owned machines. All models are generally serviced and tested to our high exacting standards.

Service

Kellands commitment to customer service excellence means that wherever you are in mainland UK, and whatever your make and model of sprayer, Kellands can offer a full on-call maintenance service at your own premises.

Each member of the Kellands service team is an expert in sprayer and spreader technology. Backed by extensive training and a fully-equipped mobile workshop, they provide an unrivalled level of product knowledge and back-up, and deliver fast and effective cover across the country.

Parts

Kellands maintains a huge stock of items from spray nozzles to sophisticated GPS systems, with close to 40,000 different parts available. The company's spares department covers 2,500 square feet and is set up for speed and efficiency, with guaranteed next day delivery available throughout mainland UK. The service is also open to non-account customers, who can pay by credit card over the phone.

Workshop

Kellands Service team is a member of the NSTS sprayer testing scheme and offers full maintenance and calibration services for virtually any make of sprayer - whether tractor-mounted, trailed or self-propelled.

The company maintains an advanced, fully-equipped workshop at its Gloucestershire headquarters, as well as a fully-mobile service to almost every part of the UK.

For expert help and advice please contact our sales team:

Call **+44 (0)1452 863900**

Email **sales@kellands.co.uk**



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