

# KNIGHT

MAXimizer PRO

GOLD MEDAL FOR INNOVATION



## MOUNTED & DEMOUNT

SPRAYERS



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# DESIGNED WITH **YOU** IN MIND

The Knight family started their sprayer business in 1984 driven by the need for a high quality, advanced sprayer. This passion continues within the business today delivering these values to today's agribusinesses

Our latest Mounted & Demount machines bring you the very latest in spray application technology, incorporated into industry leading boom and chassis suspension system, machine strength and durability.

## YOUR KEY TO SUCCESS!

Look out for these icons as a quick reference to how each Knight feature benefits YOU!



Accurate Application



Comfortable



Simple to Use



Saves you Money



Eco-friendly



High Output



# KNIGHT FRONT TANKS

## BOOSTING YOUR PRODUCTIVITY.



- Tank capacities available: 1300L - 1500L -1900L
- Heavy duty support frame with storage locker & fill point
- Integral clean water and hand wash tank
- Independent induction station - optional
- Simple 3 point linkage quick fit mounting
- Integrated parking stands
- Stand-alone tank or as an option can be integrated into the rear sprayer
- Full road lighting kit



# KNIGHT MOUNTED SPRAYER MODELS

DESIGNED TO HELP YOU GROW





➔ Boom design style & available widths:

- ⇒ Gull wing (side folding) = 12-24m
- ⇒ 3 series (side folding) = 14-28m
  - Lightweight
  - Hydraulic boom inclination – optional
  - One side folding - optional

- ⇒ V-Fold (rear vertical folding) = 21-24-28-30m
  - +/- boom inclination
  - Automatic boom levelling – optional

- ➔ Auto-fill - optional
- ➔ MAXImizer PRO plumbing
- ➔ ISOBUS integration
- ➔ Multi-section switching – manual or GPS option



Combining the unique Fastrac design with a Knight demount sprayer + front tank provides you with the tank capacity of a self-propelled sprayer, whilst retaining the versatility of a general tractor.

- ➔ Tank capacities available: 2500L and 3000L
- ➔ V-Fold (rear vertical folding) = 24-28-30m
  - ⇒ Heavy duty 4 series boom
  - ⇒ +/- boom inclination
  - ⇒ Automatic boom levelling – optional
  - ⇒ Auto-fill - optional
- ➔ MAXImizer PRO plumbing
- ➔ ISOBUS integration
- ➔ Multi-section switching – manual or GPS option





# SPRAYER FEATURES



## TANKS & STORAGE

We pride ourselves in being able to offer customers exactly what they require. Mounted sprayers can be ordered with rotational moulded or stainless-steel tanks with capacities from 1500 litres up to 3000 litres. Whilst our standard tank material is fibre-glass, for specialist customer requests, tanks can be fabricated from stainless-steel.

## CLEAN WATER TANK



All mounted sprayers are fitted with clean water tanks containing more than 10% of the spray tank. Clean water tanks are filled independently to avoid contamination from the chemical system. The optional clean water tank fill uses an independent pump which automatically tops up the wash tank whenever the operator is filling the main tank allowing them to focus on filling with product.

## STORAGE LOCKERS FOR PPE CLOTHING AND SPARE PARTS



All mounted sprayers have storage lockers strategically located around the machine for maximum operator convenience. The all-important PPE locker is located by the chemical filling station and includes separate compartments for clean and used items. Parts can be stored in a removable toolbox and spare nozzles can be stored in on-boom storage boxes to minimize down time.





## PUMPS & PRESSURE CONTROL

### MAIN PUMP - STANDARD



All Knight mounted sprayers use PTO driven multi cylinder diaphragm pumps to supply the main spray system. We use this type of pump for their simplicity, reliability, and ability to deliver consistent pressure and flow, on a linear basis, ensuring accurate product applications at all times.

### FAST FILL PUMP – OPTIONAL



For customers requiring a faster fill than the standard pump provides we recommend the addition of a front tank fitted with a hydraulically driven centrifugal pump. This can also be used to fill the rear tank if required.

### RAMSEY VALVE – SYSTEM PRESSURE CONTROL



Knight sprayers use a Ramsey diaphragm valve to regulate application pressure. We have used this valve for many years because it significantly reduces the workload of the sprayers electronic application control system and improves the accuracy of product application.

# SPRAYER FEATURES

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## CIRCULATION & FILLING

Knight were the first in the industry with full product circulation that produced an instant start in the field. They have continued to pioneer advanced sprayer control and circulation and today Knight sprayers use the patented MAXimizer PRO fluid control system that keeps the entire fluid system moving during filling and agitation which prevents dead spots. This system also flushes the entire system with clean water during filling for the ultimate in machine cleaning.



## TANK WASH SYSTEM



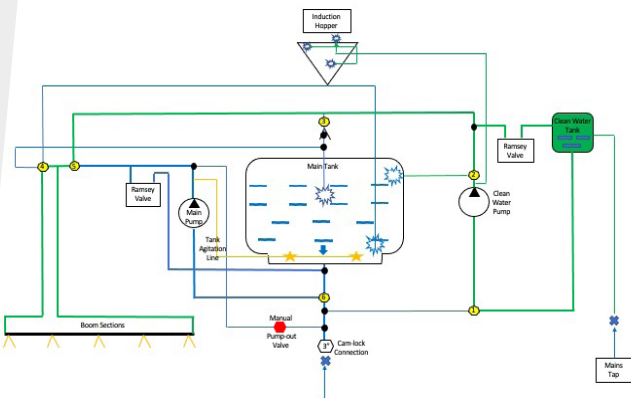
The spray tank has multiple wash heads for efficient cleaning at the end of the job. When incorporated with the Active Rinse system they can be operated independently of the chemical system for the ultimate in-field clean out including on-the-go rinsing to make sure the last drop of your chemical goes on the crop.



## TANK AGITATION



All Mounted sprayers feature two stage spray tank agitation that automatically selects high flow during product mixing and reduced flow when finishing the job. This gives the best possible use of expensive chemicals.



## ACTIVE-RINSE

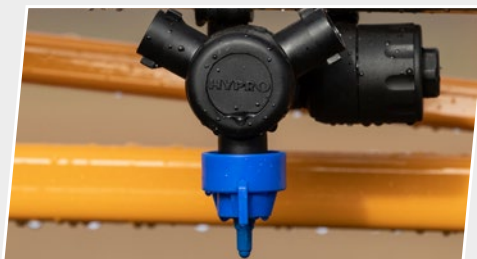


Active-Rinse is another plumbing and circulation innovation from Knight Sprayers. It features the addition of a high flow pump in the clean water system. During the fill cycle the system automatically fills the clean water tank and provides pressurised clean water at the induction hopper for rinsing containers. It can also be used for high-speed main tank filling. During spraying, as the tanks empties to its last few litres Active Rinse can be set to wash the tank walls, ensure residual chemical is kept to an absolute minimum. The system will also rinse the spray lines with clean water before folding and transport and returns the clean water to the spray tank ready for the next load.

## BLOW-OUT – OPTIONAL EXTRA



Using the sprayers compressor system, we have the ability to clean out the product suction pipe from the cam-lock connection to the supply source tap. The compressed air pushes the product back up the supply line so the operator can have a much cleaner and safer disconnecting operation. The system also allows blow out of the sprayer pipe work when required.



## MAXIMIZER PRO PLUMBING



The MAXImizer PRO pressurised circulation system ensures a continuous pressurised flow throughout the entire plumbing system to keep product in dilution. It ensures that the spray lines are always charged with dilute chemical at the target application pressure, ready for action.

# SPRAYER FEATURES



## INDUCTION HOPPERS

The Knight chemical induction system forms an integral part of MAXImizer PRO fluid control which automatically rinses and cleans the induction hopper pipes and valves after use. The latest Whirlpool hopper provides continuous rinsing and agitation during chemical filling which always keeps the bowl as clean as possible. The press-on container rinsing nozzle will easily clean larger 20 litre containers even with stubborn chemicals.



### STANDARD



- 25 litre capacity
- Stainless steel construction
- Hinged lid with can drain facility
- Hopper rinse ring
- Twin can wash heads
- Can wash hand lance

### WHIRLPOOL - OPTIONAL



- 30 litre capacity
- Circular design for improved cleaning
- Hinged lid with can drain facility
- Continuous hopper rinsing
- Can wash head
- Can wash hand lance



## BOOMS & BOOM HEIGHT CONTROL



At Knight Sprayers we cater for all customer requirements and pride ourselves on the quality and durability of our sprayer booms.

### → GULL-WING – 12 TO 24M

Optional on all mounted up to 28m and standard up to 40m

### → 3-SERIES – UP TO 28M

Standard on the mounted sprayers up to 28m

### → V-FOLD – UP TO 30M

Available as an option on the mounted range

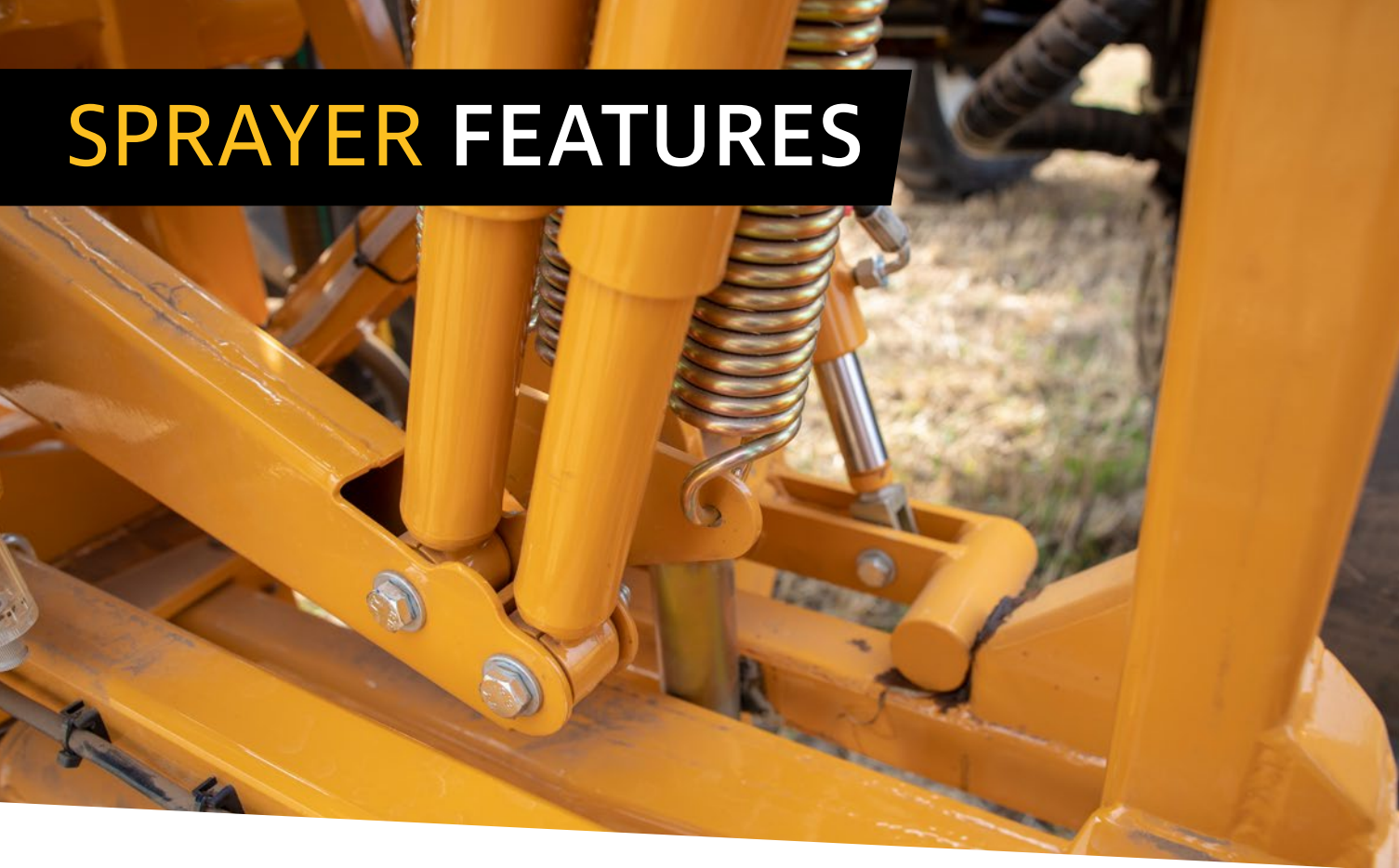
### → AUTO BOOM LEVELLING

We offer two versions of automated boom levelling, both integrated into the spray controller. DC1 provides mainframe raise/lower & synchronised wing control...DC2 provides mainframe raise/lower & independent +/- wing control

### → AIR-SLEEVE BOOMS ARE AVAILABLE UP TO 24M

### → OPTIONAL NOZZLE LIGHTING MAKES LONGER WORKING DAYS POSSIBLE

# SPRAYER FEATURES

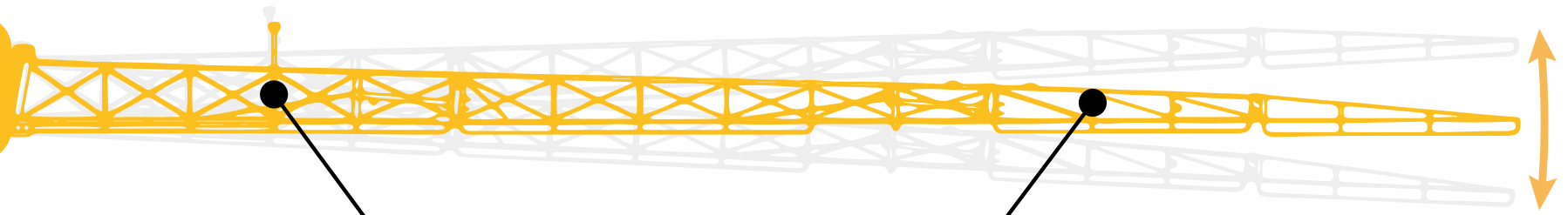


Position adjustable boom mounted sensors are used for boom height & inclination control

## BOOM CONTROL

INDEPENDENT LEFT & RIGHT, VARIABLE GEOMETRY, BOOM LEVELLING

4-DIMENSIONAL DAMPENED BACK FRAME



TWO DC2 BOOM LEVELLING SENSORS ON LEFT AND RIGHT BOOM

**MAXimizer** PRO



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# SPRAYER FEATURES



## AUTO BOOM LEVELLING

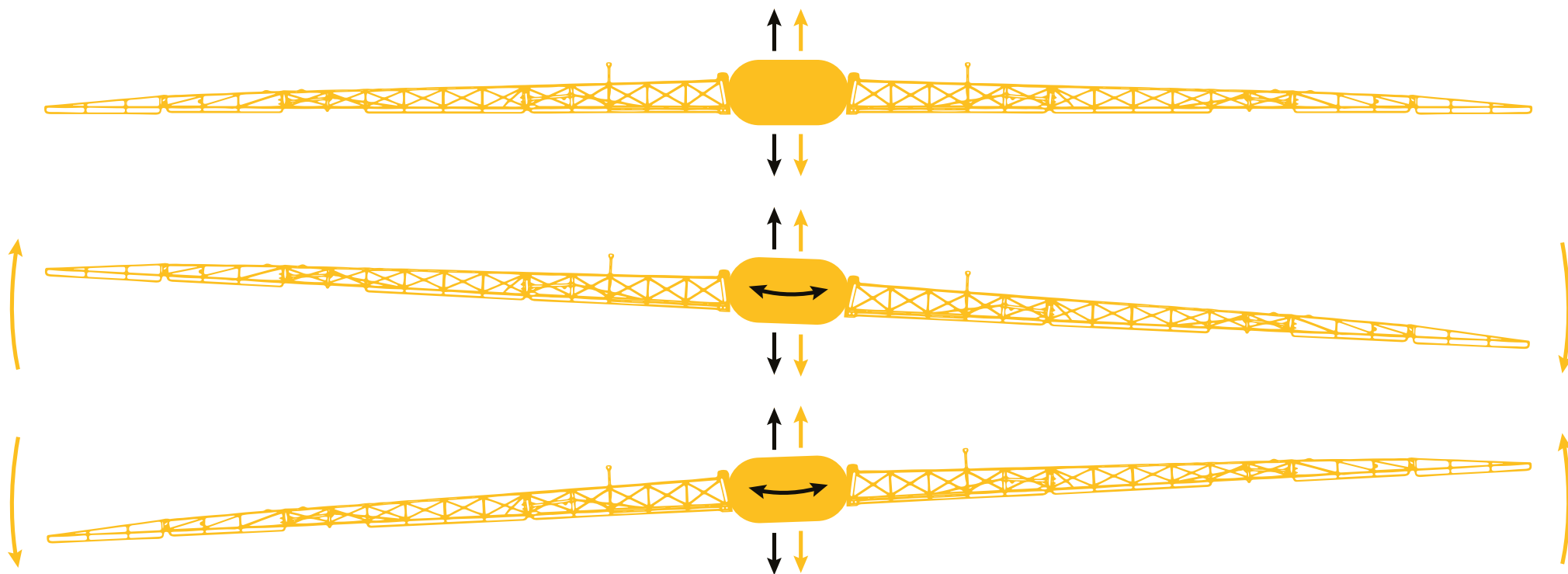
DC1



Mode 1:  Raise/Lower  Back Frame Levelling



Mode 2:  Raise/Lower  Synchronised Wing Control

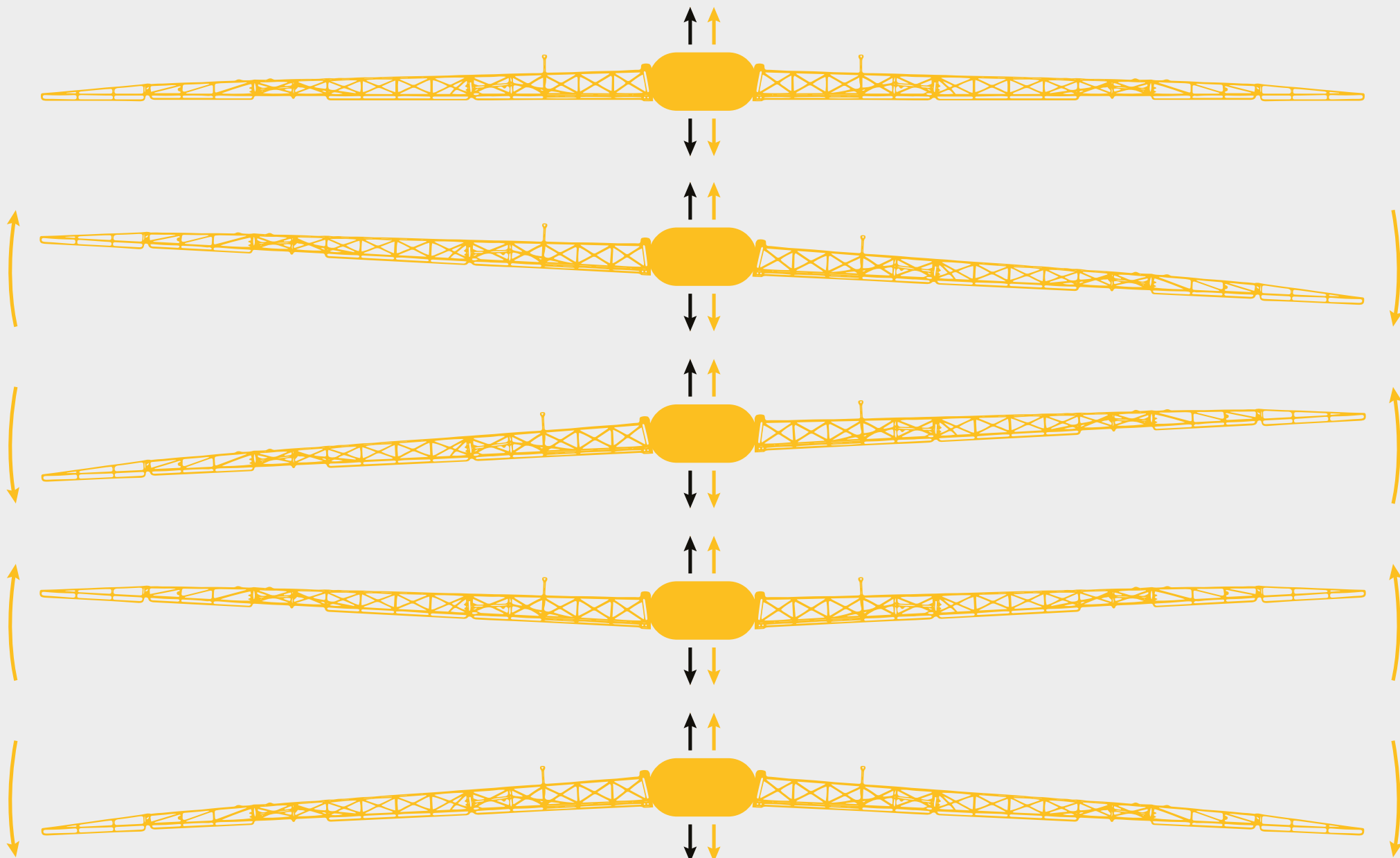




# DC2

↑ **Mode 1:**  Raise/Lower  Back Frame Levelling

↑ **Mode 2:**  Raise/Lower  Independent Wing Control



# SPRAYER ISO-BUS CONNECTIVITY

ALL KNIGHT SPRAYERS ARE FULLY ISO-BUS COMPATIBLE

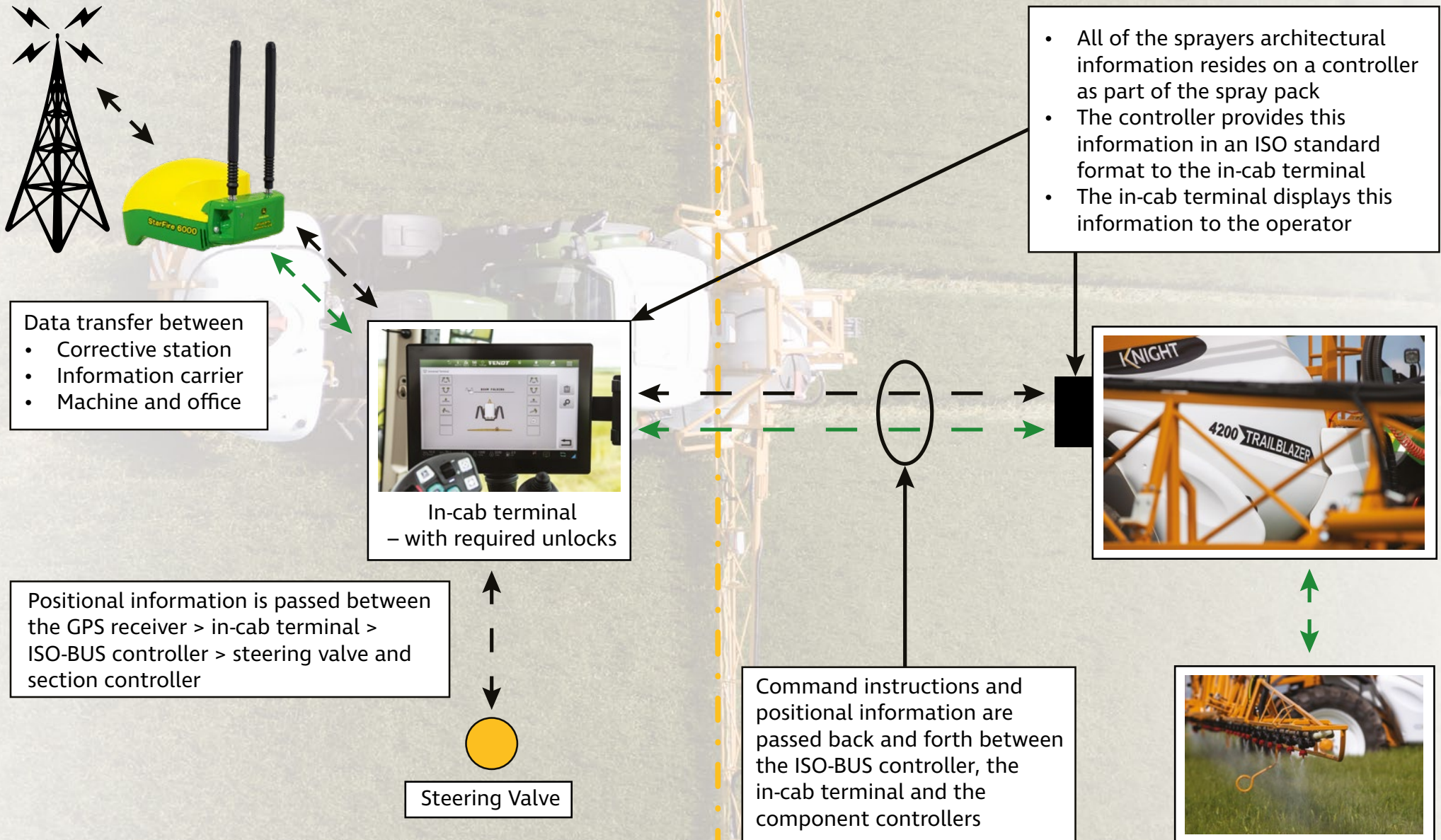
Information can be displayed across multiple screens if the base machine is equipped with this facility.



ISO-BUS means that any ISO-BUS component this side of the line will plug and play with the sprayer, giving full fleet integration

# ISO-BUS

Having an ISO-BUS sprayer means that any ISO-BUS component on this side of the line will plug and play



# SPRAYER TECHNOLOGY



The latest technology is always at the fore front of our thinking at Knight Sprayers. Whether it's chemical application related or machine and field management related, we have a precision farming system to deliver your particular requirements.

## GPS STEERING & CONTROLLER OPTIONS:

Our fully integrated ISOBUS operating system will connect directly to your ISOBUS compatible tractor to form a fully integrated unit.



Trimble



Topcon



Ag Leader

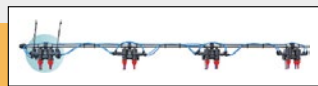


John Deere



## NOZZLE BODY & SPRAY LINE OPTIONS:

- Single line – 25mm polished stainless-steel pipework
- Single nozzle
- Triple nozzle
- Quin nozzle
- Quad nozzles plus Vario-select switching
- PWM control
- Individual nozzle on/off



Application rate 150 l/ha

Application rate 180 l/ha

Application rate 200 l/ha

Application rate 250 l/ha

## NOZZLE SWITCHING OPTIONS:

### → STANDARD

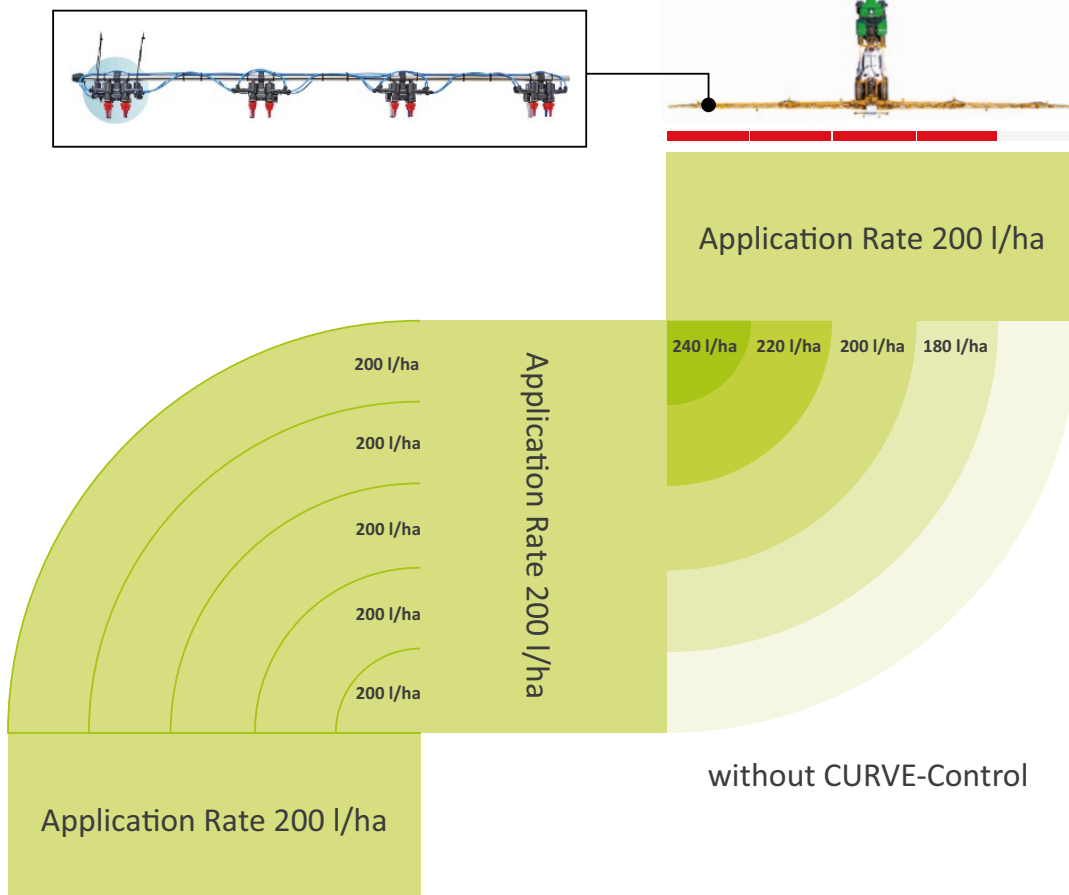
Uses the sprayer controller to switch section on/off – can be GPS controlled

### → VARIO-SELECT – GPS CONTROLLED

Uses the sprayers controller for: -

- ⇒ Section on/off
- ⇒ Nozzle/cluster on/off
- ⇒ Variable rate of individual nozzle/cluster (+/-)
- ⇒ Execution of variable rate application maps from your Farm software package

# SPRAYER TECHNOLOGY



with CURVE-CONTROL

## CURVE CONTROL – GPS CONTROLLED:

- ➔ Automatically adjusts the cluster output (+/-) to account for the speed of the boom through a turn



Touch 800



Touch 1200

## TASK BASED APPLICATIONS:

- ➔ The most accurate and efficient way to run your application programme – two-way data transfer with traceability record storage
- ➔ Create a work file in your farm management package
- ➔ Accept job information into the sprayer from your farm management package
- ➔ Return completed records from the sprayer back to your farm management package

# NOZZLE TECHNOLOGY

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SINGLE, TRIPLE, QUIN



VARIO-SELECT



PULSE WIDTH MODULATION (PWM)





# SPRAYER SALES, SERVICE & SUPPORT

From choosing your new machine, to aftersales service and support you can always rely on the customer focused team at Knight Farm Machinery.

## SALES

When purchasing your new Knight sprayer you can count on expert sales support and advice from our technical sales team and our specialist dealers. We can help you create a new machine specification to suit your exact needs.

From our purpose built headquarters in Rutland, UK we can custom build a machine to match your personal specification and with a visit to our factory, you can see your very own machine being built on our production line.

In conjunction with our preferred finance provider we can offer you a competitive way to purchase of your new sprayer including Higher Purchase and Contract Hire.\*

\*Finance provision is subject to status. Terms and conditions apply.

## SERVICE

Knight understand the importance of keeping your sprayer up and running. With the help of our nationwide dealer network, we provide a complete service and maintenance program including full seven day support and NSTS testing.

Our team of fully trained engineers are available for onsite visits to your farm or field with their fully equipped mobile workshop.

## PARTS

Our dedicated spare parts department can help you with parts identification and advice to ensure you get your parts quickly and efficiently. Guaranteed next day delivery is offered throughout mainland UK and an out of hours collection service from our factory is available.

**K**NIGHT  
P A R T S   S H O P

A variety of parts are available to purchase from our online store:

[shop.knight-ltd.co.uk](http://shop.knight-ltd.co.uk)

## Technical Information - X-Front Tanks

		X-FT 1300	X-FT 1500	X-FT 1900
TANK OPTIONS	1300 litre rotation moulded tank	■		
	1500 litre rotation moulded tank		■	
	1900 litre rotation moulded tank			■
BUILT IN FEATURES	Built in parking stand legs	■	■	■
	Built in hand wash station	■	■	■
	Built in clean water wash tank	■	■	■
	Multiple tank wash heads	■	■	■
	Formed tank shape to maximise drivers visibility	■	■	■
	Road and work lighting kit with marker boards	■	■	■
STORAGE	Built in storage lockers	●	●	●
MOUNTING	Tractor front linkage mounted	■	■	■
MULTIPLE USAGE	Use for other operations - fertiliser application & chemical during potato planting/maize drilling etc /ballast	■	■	■
CHEMICAL INDUCTION	Integrated induction hopper & station	●	●	●
FLUID TRANSFER	Manual fluid transfer from front tank to sprayer	●	●	●
	Automatic circulation and transfer between front and rear tank	●	●	●

## Technical Information - Xtra Mounted Sprayers

		X-FT 1300	X-FT 1500	X-FT 1900
TANK OPTIONS	1300 litre rotation moulded tank	■		
	1500 litre rotation moulded tank		■	
	1900 litre rotation moulded tank			■
BOOM OPTIONS	3-Series Gullwing horizontally folding boom (inclined transport position) up to 24m	■	■	■
	Heavy duty V-Fold vertical folding boom up to 24m. Compact folding to within tractor width	●	●	●
	Heavy duty V-Fold vertical folding boom - 28 to 30m. Compact folding to within tractor width	●	●	●
	DC1 automatic boom height & levelling	●	●	●
	DC2 automatic boom height & levelling with +/- boom inclination control	●	●	●
TRACTOR COUPLING SYSTEM	Category 2 three point linkage mounting	●		
	Category 3 quick release lower link ends	■	■	■
	Easy attach PTO shaft attachment to tractor	■	■	■
	Integrated parking stands	■	■	■
SPRAYLINES	<b>MAXImizer PRO</b> pressurised, high speed spray line circulation system with instant air shut off	■	■	■
	Single stainless steel line with large choice of single or multiple nozzle bodies - 500mm spacing	■	■	■
	Single line with twin outlets and large choice of single or multiple nozzle bodies - 500mm spacing	●	●	●
	Single line with twin outlets and large choice of single or multiple nozzle bodies - 250mm or 333mm spacing	●	●	●
	Twin line with large choice of single or multiple nozzle bodies	●	●	●

# Technical Information - Xtra Mounted Sprayers

X-FT 1300

X-FT 1500

X-FT 1900

		X-FT 1300	X-FT 1500	X-FT 1900
FLUID SYSTEM	Simple, low volume - high output plumbing system with unique Knight <b>MAXimizer PRO</b> fluid control	■	■	■
	Large capacity suction filter with interchangeable elements	■	■	■
	Automatic pressure compensation via Ramsey regulator	■	■	■
	Automatic spray line clean water rinsing system	■	■	■
	<b>Active-Rinse</b> circulatory system with automatic clean water tank fill & fast fill assistance	●	●	●
	Liquid fertiliser ready	■	■	■
PUMP	PTO driven 300 litre/minute diaphragm pump. Suitable for chemical or liquid fertiliser application	■	■	■
	PTO driven 460 litre/minute diaphragm pump. Suitable for chemical or liquid fertiliser application	●	●	■
	High capacity centrifugal pump. Suitable for chemical or liquid fertiliser application	●	●	●
	Hydraulic drive from the tractor	●	●	●
ELECTRONIC CONTROLLER	Muller Smart-Terminal with joystick control for simple section switching and rate control	●	●	●
	Muller Track-Guide 3, GPS section control for operation of all spraying, filling and boom folding functions	●	●	●
	Muller Touch 1200, GPS section control for operation of all spraying, filling and boom control functions	●	●	●
	ISOBUS integration to suitably equipped tractor	●	●	●
	<b>Curve-Control</b> (for use with <b>Vario-Select</b> nozzle option) unlock for variable rate application	●	●	●
REGULATION SYSTEM	Flow based rate controller system for simple setting and accurate application	●	●	●
	Pressure based rate control system for large variations of flow	●	●	●
	Combined flow & pressure regulation for variable rate application, Vario-Select and individual nozzle control	●	●	●
FILLING STATION	Ergonomic control layout with single filling control valve	■	■	■
	Automatic chemical induction hopper with continuous circulation, can wash and contained draining	■	■	■
	Push button control incorporating in-cab filling, rinse and washing	●	●	●
	Electronic tank level control with automatic filling and overflow protection	●	●	●
NOZZLE BODY OPTIONS	Single nozzle, air actuated	■	■	■
	Triple nozzle, air actuated	●	●	●
	Quin nozzle, air actuated	●	●	●
	<b>Vario-select</b> , variable rate nozzle cluster, 4 nozzle positions air actuated	●	●	●
	Pulse Width Modulation (PWM) individual nozzle control - electrically actuated	●	●	●
NOZZLE & CAPS	Customer choice at extra cost	●	●	●
SECTION CONTROL	Up to 18 section shut-off available	●	●	●
	Individual nozzle control (EDS)	●	●	●

# Technical Information - Demount Sprayers for JCB Fastrac & Unimog

DM 2500

DM 3000

		DM 2500	DM 3000
TANK OPTIONS	2500 litre stainless steel tank	■	
	3000 litre stainless steel tank		■
	Clean water tank, with a capacity (>10%) of the main tank	■	■
BOOM OPTIONS	3-Series Horizontal folding Gullwing boom (inclined storage position) in 12/24m or 14/28m	■	■
	Heavy duty V-Fold boom with two stage folding in 24/28 or 30m with +/- boom inclination levelling	●	●
	DC1 automatic boom height & levelling	●	●
	DC2 automatic boom height & levelling with +/- boom inclination control	●	●
SPRAYLINES	<b>MAXimizer PRO</b> pressurised, high speed spray line circulation system with instant air shut off	■	■
	Single stainless steel line with large choice of single or multiple nozzle bodies - 500mm spacing	■	■
	Single line with twin outlets and large choice of single or multiple nozzle bodies - 500mm spacing	●	●
	Single line with twin outlets and large choice of single or multiple nozzle bodies - 250mm or 333mm spacing	●	●
	Twin line with large choice of single or multiple nozzle bodies	●	●
FLUID SYSTEM	Simple, low volume - high output plumbing system with unique Knight <b>MAXimizer PRO</b> fluid control	■	■
	Large capacity suction filter with interchangeable elements	■	■
	Automatic pressure compensation via Ramsey regulator	■	■
	Automatic spray line clean water rinsing system	■	■
	<b>Active-Rinse</b> circulatory system with automatic clean water tank fill & fast fill assistance	●	●
	Liquid fertiliser ready	■	■
PUMP	300 litre/minute diaphragm pump. Suitable for chemical or liquid fertiliser application	■	■
	460 litre/minute diaphragm pump. Suitable for chemical or liquid fertiliser application	●	●
	High capacity centrifugal pump. Suitable for chemical or liquid fertiliser application	●	●
	Hydraulic drive from the tractor	■	■
ELECTRONIC CONTROLLER	Muller Track-Guide 3, GPS section control for operation of all spraying, filling and boom folding functions	●	●
	Muller Touch 1200, GPS section control for operation of all spraying, filling and boom control functions	●	●
	ISOBUS integration to suitably equipped tractor	●	●
	<b>Curve-Control</b> unlock for variable rate application	●	●
REGULATION SYSTEM	Flow based rate controller system for simple setting and accurate application	●	●
	Pressure based rate control system for special applications	●	●
	Combined flow & pressure regulation for variable rate application, Vario-Select and individual nozzle control	●	●

# Technical Information - Demount Sprayers for JCB Fastrac & Unimog

DM 2500

DM 3000

		DM 2500	DM 3000
FILLING STATION	Ergonomic control layout with single filling control valve	■	■
	Chemical induction hopper with continuous circulation, can wash and container draining	■	■
	Push button control incorporating in-cab filling, rinse and washing	●	●
	Electronic tank level control with automatic filling and overflow protection	●	●
	Whirlpool induction hopper with individual function control	●	●
NOZZLE BODY OPTIONS	Single nozzle, air actuated	■	■
	Triple nozzle, air actuated	●	●
	Quin nozzle, air actuated	●	●
	<b>Vario-select</b> , variable rate nozzle cluster, 4 nozzle positions air actuated	●	●
	Pulse Width Modulation (PWM) individual nozzle control - electrically actuated	●	●
NOZZLE & CAPS	Customer choice at extra cost	●	●
SECTION CONTROL	Up to 18 section shut-off available	●	●
	Individual nozzle control (EDS)	●	●
DEMOUNT PACK	Demount leg kit to facilitate safe removal & storage of the sprayer pack	●	●



# KNIGHT

Company policy is one of continuous improvement and we reserve the right to change specification without notice.

Specifications shown include both standard and optional features.

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