

**/// DARK**  
BY BERTHOUD



**MACHINE  
OF THE YEAR 2017**

**VANTAGE**

2800L 3500L 4300L 5500L 6700L

**BERTHOUD®**  
*Forward together*

# VANTAGE

## revolution in action

The VANTAGE is a high-end, trailed sprayer. It has an original design that stands out from the other trailed models by its DARK colour and style and is inspired by the BERTHOUD tradition. The VANTAGE has all the fundamentals of the brand: ACTIFLEX II axle suspension, DUALMATIC operation and its motorised version DUALELEC, as well as the BERTHOUD boom range. It provides an answer to customers looking for a "made-to-measure" spraying solution adapted to their farm and their crops. In addition, it provides access to ISOBUS technology either with the BERTHOUD VT TRONIC touchscreen or directly on the virtual screen of the tractor.

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# An innovative and ideally suspended chassis



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## ACTIFLEX 2 suspension: the top of the range!



**ACTIFLEX 2** axle suspension: the quality of your spraying depends among other factors on the stability of your machine.... BERTHOUD therefore proposes ACTIFLEX 2, a fully mechanical suspension with variable stiffness that is independent of the load. Based on a modification of the lever arm, it requires very little maintenance and provides you with true comfort and work quality!

**BERTHOUD INNOVATION**

On-road driving in total peace of mind and safety, you are safe

The VANTAGE range is entirely DREAL certified to drive on roads at 25 km/h. **Try the 40 kph version:** BERTHOUD offers the FRANCE 40 kph certification option on VANTAGE 43-46, 55-60 and 67-71 with all booms (except EKTAR B3 39 to 44m on VANTAGE 67-71).



## Optimal distribution of weight on the chassis, the tank design

- A high-density polyethylene diamond point tank that optimises the emptying of the tank.
- Limited height of the tank, wider at the bottom to keep the centre of gravity low.
- Sump with suction via a lateral pipe = no "syphoning" effect at the bottom of the tank = limits volumes at the bottom of the tank.
- Rinsing tank (380, 580 or 700 l depending on the models) positioned at the front and centre of the chassis for good load distribution and an evenly balanced machine.
- The tank has a wing shaped front that allows the shock waves of the spray mixture against the walls to be broken up.



*The tracking axle option allows the sprayer to stay in the track of the tractor. It may be used in automatic mode, but may also be controlled manually to avoid obstacles or when used on sloped ground.*

## Adopt trace monitoring, reduce the impact on your crops!

### Advantages

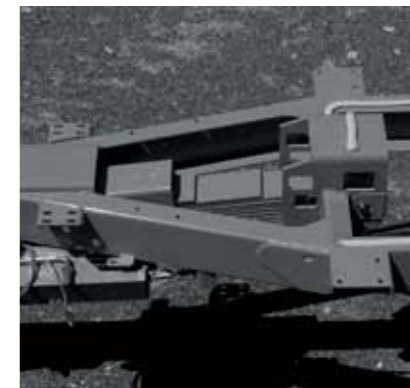
- Based on the distance travelled, it is efficient regardless of the travel speed
- Optimised stability regardless of the speed and turning radius
- Can be used in automatic or manual modes

# Berthoud at the heart of innovation



## Stay in control on slopes

The adjustable boom option allows you to manually correct the sprayer position on slopes, available with or without reset.



## FLEXIA drawbar suspension

This allows you to optimise your comfort whilst reducing the transfer of swinging from the sprayer to the tractor and limiting the strain on your machine components in the long term.

# Simplicity & good practices

**Pump sub-unit**  
The **DUALMATIC** selector unit and the **OMEGA** pump are a great tandem!

## DUALMATIC

Specially designed and developed by BERTHOUD, the staging of the valves allows the length of the pipes to be reduced and limit the residual volumes at the end of spraying. Furthermore, by limiting the number of valves, this makes the machine easier to use. It is associated with the **BERLOGIC** panel that can identify the **17 functions** of the machine using text = no risk of misinterpreting the functions.



## OMEGA pump

Bi-turbine centrifugal pump developed by BERTHOUD combining flow rate and pressure

- 550 l/min at 3 bar
- 2 low and high pressure compartments
- Self-priming pump
- A spraying pressure of up to 8 bar

## Mixing hopper: ergonomics combined with power

- Capacity: 35L
- Extended handle for opening and additional rinsing valve
- Rotary nozzle for rinsing containers
- Clear water supply via external suction or the rinsing tank to rinse the containers



## Your sprayer at your fingertips with **DUALELEC**, the only fully motorised sprayer on the market

Fully electric version available for application, **DUALELEC** allows you to control all of the VANTAGE functions without operating valves, both in the cab and at the spraying station. (optional)

- Control of tank rinsing, the boom and the circuits in the cab
- Mixing control in manual mode
- Control of filling volume with automatic cut-out and automatic control of mixing depending on the tank level with **DUALELEC 5**
- The system may still be used manually in the event of a fault



## NIVELEC gauge (as standard) optimise your precision

- Digital display of the spray mixture level in the tank, at the spraying station and in the cab
- Conservation of the tape gauge for direct reading



## NIVOMATIC gauge (optional) the solution to overflows!

- Programming a filling volume that is stopped with a buzzer sound or stopping the filling
- Conservation of the tape gauge for direct reading

## The gauges

Managing your residual volumes means measuring the volumes in your tank correctly

# Berthoud, good practices

# Technology for precision made in BERTHOUD

## DPAE BERTHOUD regulation

BERTHOUD flow regulation is based on a pressure sensor, which offers several advantages:

- Improved precision (pressure measurement close to the nozzle and more efficient on smaller volumes)
- Not affected by blocking
- No calibrated returns
- Low maintenance
- Closing of nozzle/nozzle requires no change in setting
- etc.

## EC TRONIC monitor



- Permanently display the main spray parameters (volume/ha, speed, pressure measured)
- Integrates certain options: DUALELEC, etc.
- Traceability (by plot, with multi-users, etc.)
- Individually control 15 sections sequentially with the multi-function joystick
- Compatibility for GPS support: ISOBUS (TC-SC, TC-GEO, etc.), Trimble TUVR, etc.

## BERTHOUD advantages

Whatever the solution adopted, VANTAGE is supplied with the E-PILOT wireless joystick, which enables to control the hydraulic functions of the sprayer, opening the spraying within a radius of 20m around the machine.



## VT TRONIC monitor

The new VT TRONIC display is a top-of-the-line ISOBUS terminal offering standard features such as guidance, section shut-off, intra-plot dosage adjustment and documentation. The display has a touch-screen and displays information in windows that can be moved with the "fingertip" for comfort and visibility.

It runs on Android on which it is possible to install additional software to multiply its features. You can download farming applications or view information such as weather, rain alerts, cereal prices etc.

## THE VT TRONIC DISPLAY OFFERS:

- A 30 cm high-resolution touch screen
- An LCD screen displaying maps per plot (in aerial view) where you can see passages, field boundaries
- Runs on Android, with the latest graphic cards and a very user-friendly navigation menu
- Compatibility with integrated and assisted guidance systems with different levels of accuracy
- Can be used with other ISOBUS tools



## The full ISOBUS solution ISOTRONIC

The VANTAGE in the ISOTRONIC version is delivered without a cab unit. Connected to an Isobus tractor, VANTAGE will be recognised by the tractor Universal Terminal (UT), which will display the spraying parameters and will control the sprayer functions. The same is true for advanced applications of Precision farming grouped under the concept of TASK CONTROLLER: Section shut-off (TC-SC), Dosage adjustment (TC-GEO), Task documentation (TC-BAS), which will also be managed from the Tractor Terminal if this is permitted.

Berthoud is a member of the Agricultural Industry Electronics Foundation (AEF) whose goal is to promote ISOBUS for all machines, terminals and tractors through the ISO 11783 communication protocol. The objective is a perfect compatibility between suppliers and total freedom in choosing the unit for the users.

# High technology

# GPS assistance: Make the job easier

**BERTHOUD offers you a number of features to practise precision agriculture**

## E TECH unit: a turnkey solution!

The BERTHOUD regulation units may be fitted with E TECH unit for guidance, section shut-off and dosage adjustment. The console with a 20.3 cm touchscreen allows:

- Guidance.
- Section cut-off using GPS with display of section status.
- Intra-plot dosage adjustment

Upgradeable, you can easily unlock advanced features.



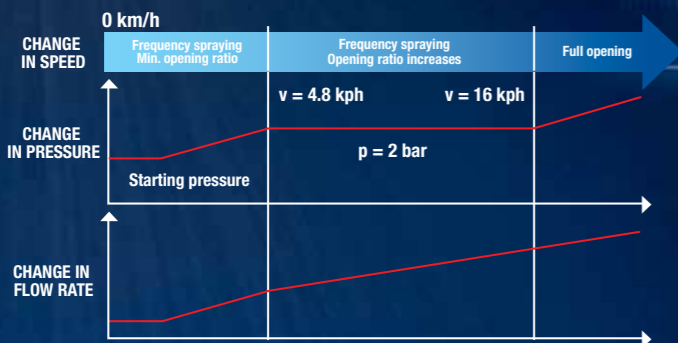
# SPRAYTRONIC

Frequency spraying for **optimum quality of application**

## Increase your working ranges with Spraytronic: The concept

Depending on your forward speed, a solenoid valve on each nozzle will disperse the spray. The ratio between the opening and closing time varies depending on the speed variation at a fixed frequency. SPRAYTRONIC therefore makes it possible to vary the flow of a nozzle by 70% and in the same way the working speed, without changing the operating pressure!

With spraying, the main problem of current systems is the limited working speed range to ensure a good spray quality. And the drops are either too fine (dispersion) or too large (flow). In addition to the limited working speed range when used with intra-plot dosage adjustment, it also limits the possible dosage range for the plot



## ADVANTAGES

- Only one nozzle needed to meet most needs: To reduce costs of use
- No pressure rises after changing nozzles: Optimum quality
- Use of a standard nozzle holder: Increase your scope of activity without changing nozzle
- Can be operated by entering a desired working pressure: Optimum quality for the working conditions
- Option to select nozzle/nozzle shut-off

# Flow of spray mixture Make a difference!

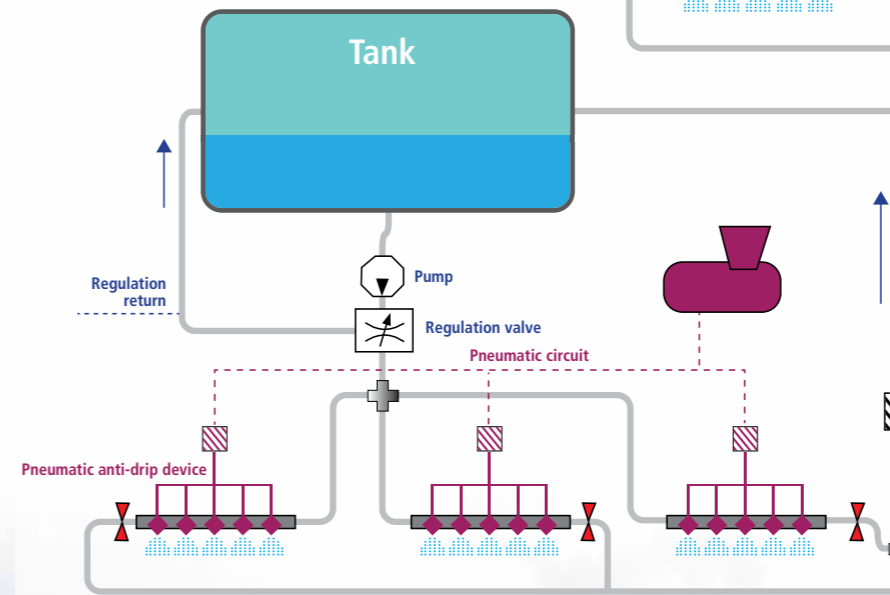
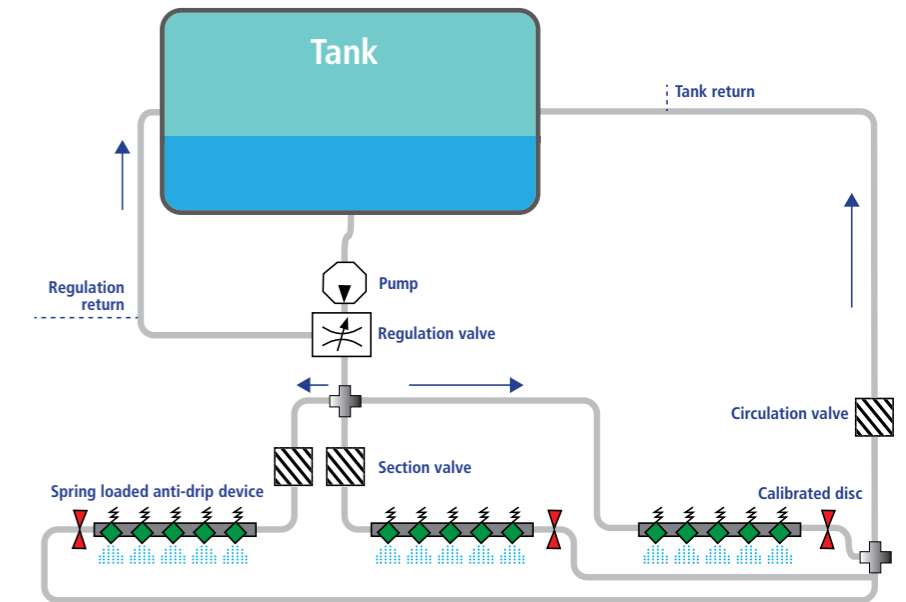
## Discontinuous flow: The basis

The spray mixture flows in the sections only when spraying, no return to the tank at the end of the section. Other types of flows can be fitted on VANTAGE.

## Semi-continuous flow (optional)

VANTAGE can also be fitted with semi-continuous flow. In this system, the liquid circulates continuously during spraying in order to prevent clogging at the end of a section.

This type of circulation is extremely useful when working with powder-based chemicals and in low-volume applications.



## Continuous flow (optional)

This ensures that the spray mixture flows during and after spraying. Based on an AGP (Pneumatic Anti-Drip) system, it provides various advantages:

- Minimises dirt and deposits
- Permanent agitation
- The rinsing water may be used several times by "recirculating" it = less contaminated water to be evacuated
- Rapid start-up
- Instantaneous pneumatic cut-out
- Returns channelled to a single pipe
- Motorised valves to open the flow from the cab

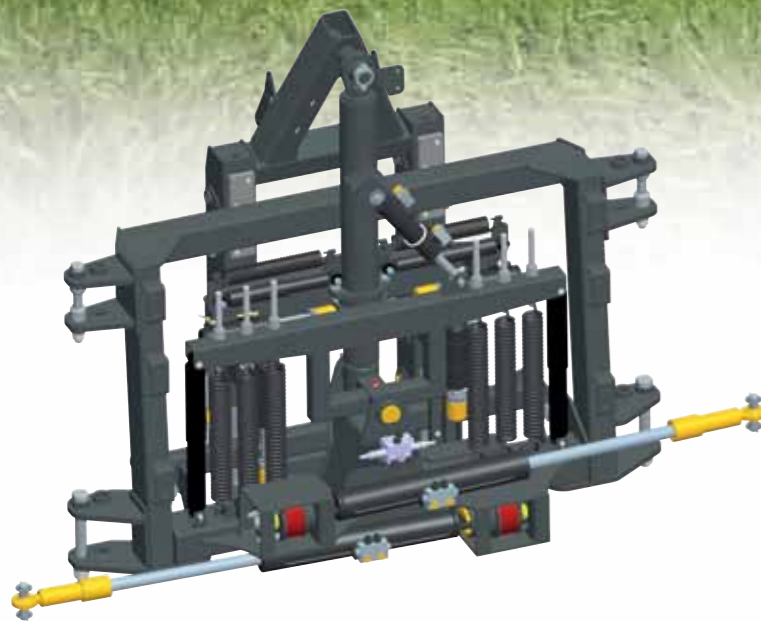


# AXIALE boom

## Legendary stability

Exceptional vertical stability especially when turning and very good stability on sloped ground thanks to its central pivot suspension. It follows variations in slopes without any action required from the user. Available from 24 to 33 m.

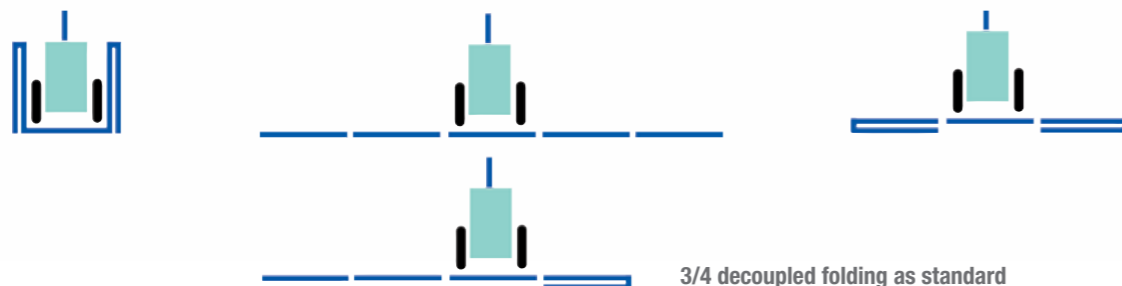
The boom is equipped with an anti-whipping device independent for each arm. This system reduces horizontal whiplash when accelerating and braking to protect the boom structure.



The AXIALE 36-38m boom (2 steel arms) is fitted with a Pendulo-Axiale suspension

- Allows you to work in axial mode or in pendulum mode, you can switch from one mode to the other from the cab
- Double anti-whiplash effect: on unfolding cylinders of the main arms and on the mobile frame
- Slope control, variable geometries and reset as standard

### Folding and layout

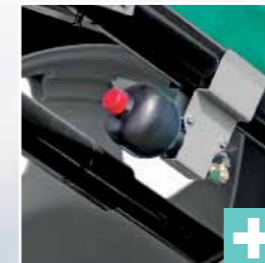


### built for large-scale farming

- Robust hinges, high-performance hydraulic cylinders which operate with the rod retracted when the boom is unfolded.



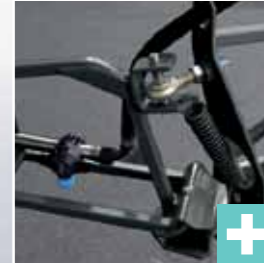
- Vertical damping using nitrogen cylinders on the raising cylinders



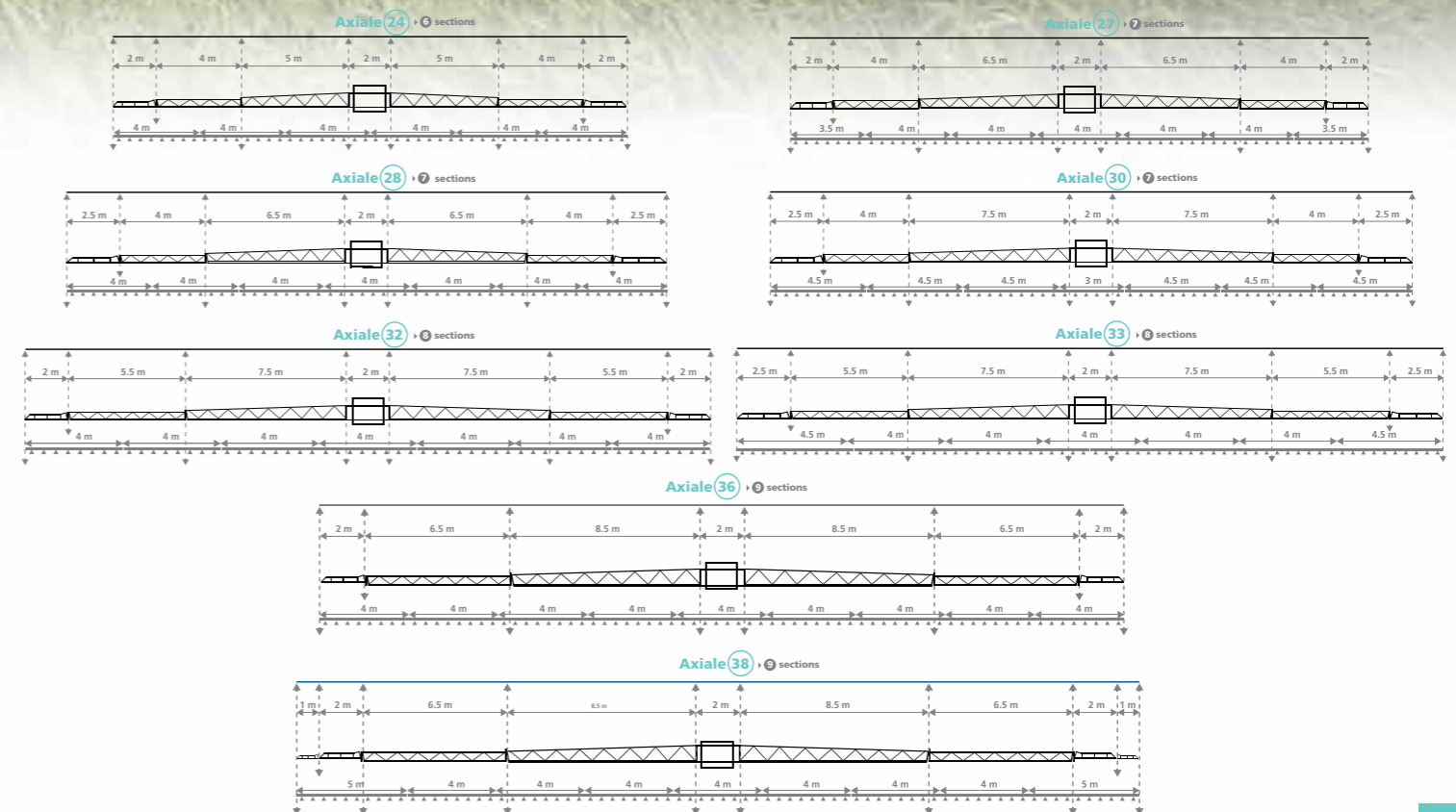
- Quadrix nozzle holders with front and rear protection.



- End arms retractable in all 3 dimensions



### Structure and sections layouts



# KONDOR boom

## A compact boom

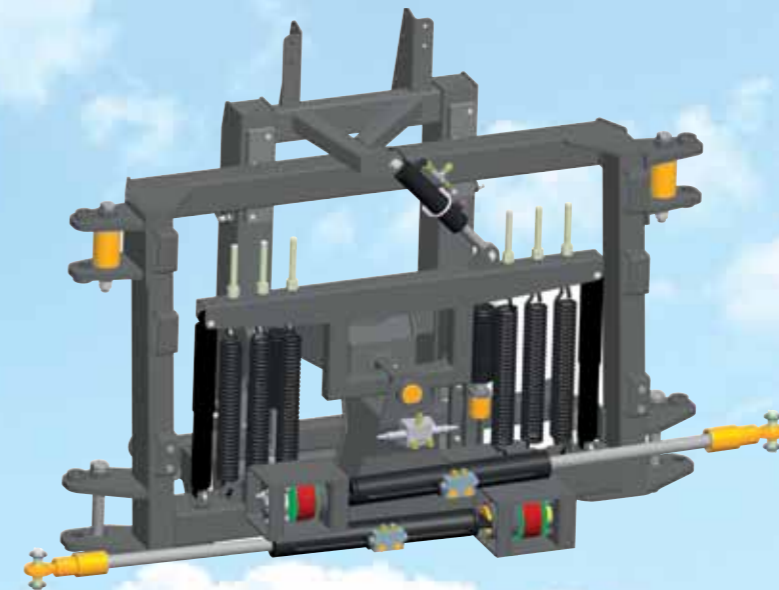
3-arm folding boom available in 32, 33, 36 and 38 m. Equipped as standard with an axial suspension, it has several advantages.

### A specific frame: Axiale suspension

Remarkable vertical stability, especially on turns, and a very good performance on sloping terrain thanks to its central pivot suspension system, which maintains the boom parallel to the chassis. It is fitted with double anti-whiplash: on the mobile frame and independently for each arm.

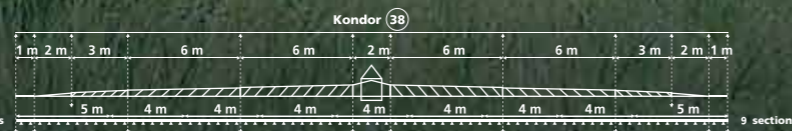
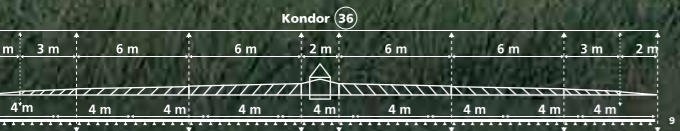
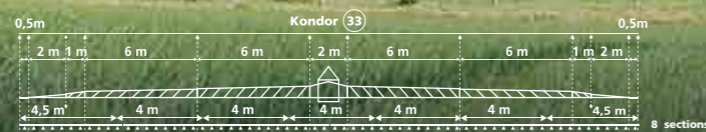
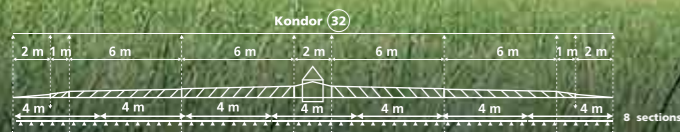
### A sturdy boom structure

- L-shaped structure to strike the best balance between weight and stiffness
- Quadrix nozzle holders with front and rear protection
- End arms retractable in all 3 dimensions with automatic return
- Safety bolt with shear part on the last joint to protect the boom's structure in case of impact
- Hydraulic lock between the main arm and the intermediate arm.
- Slope control and variable geometry as standard with control using solenoid valves.



Double anti-whiplash suspension

## Structure and sections layouts





# EKTAR B3

ready to devour hectares

## EKTAR B3 boom

Your performance advantage for dealing with large surface areas

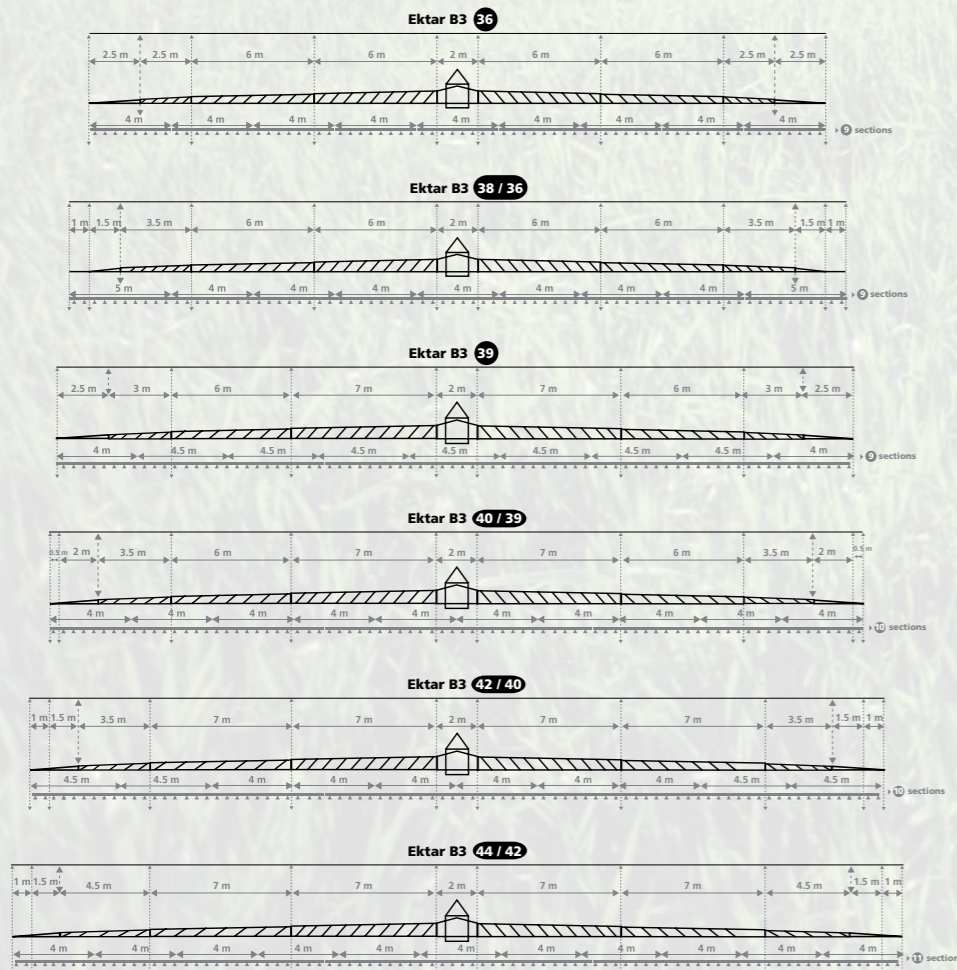
Available from 36 to 44 m, the EKTAR B3 boom has a POMMIER design arm and is associated with a BERTHOUD Pendulo-Axiale suspension.

### Pendulo-axiale boom suspension



- Allows you to work in axial mode or in pendulum mode, you can switch from one mode to the other from the cab
- Double anti-whiplash effect = on unfolding cylinders of the main arms and on the mobile frame
- Slope control, variable geometries and reset as standard

### Structure and sections layouts



Berthoud,  
control on the ground

# Optional equipment that makes the difference

## BOOM CONTROL: the most efficient system on the market

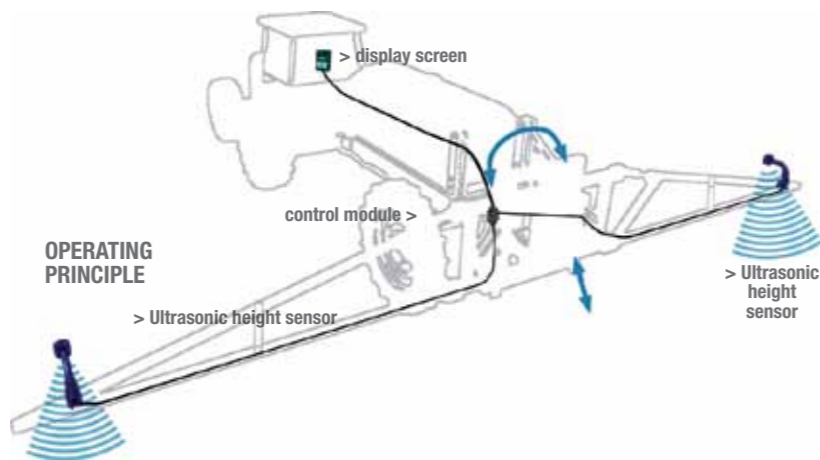
The BERTHOUD BOOM CONTROL automatic boom height regulation system is available as an option on all of our machines fitted with solenoid valves. The BOOM CONTROL system maintains the boom at a height preset by the user. Three versions are available:

### SLANT CONTROL version

The SLANT CONTROL version allows you to control the height of the boom and the slope automatically.

This version of BOOM CONTROL is designed for:

- sprayers with boom up to 28 m
- sprayers operating in relatively flat ground
- sprayers not fitted with variable geometry

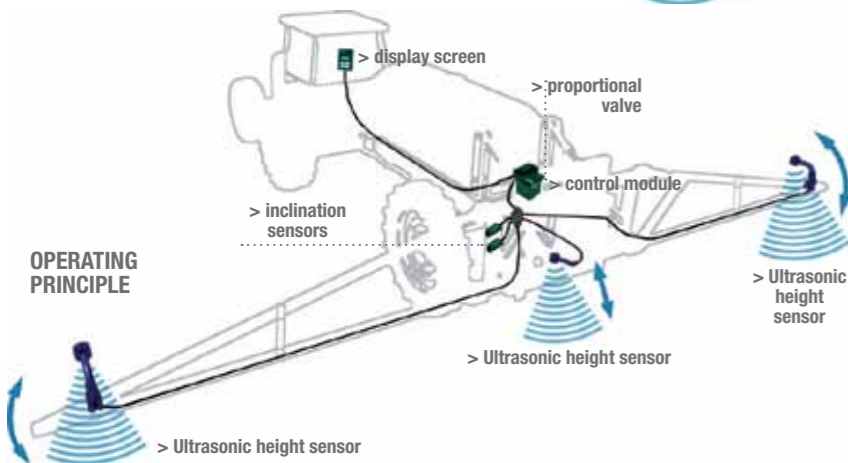


### TOTAL CONTROL version

The TOTAL CONTROL version controls the height, variable geometries, etc.

This version of BOOM CONTROL is designed for:

- boom greater than 28 m fitted with variable geometry
- hilly terrain

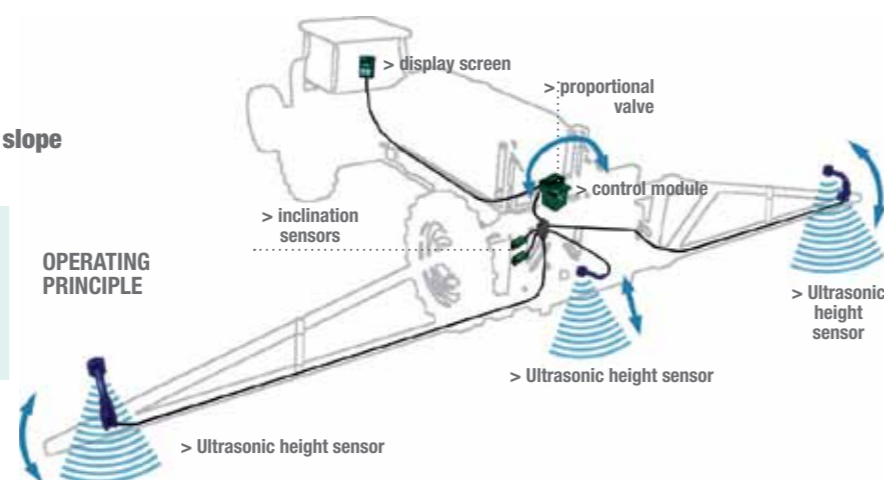


### ACTIVE ROLL version

The ACTIVE ROLL version controls the height, the slope corrector and variable geometries.

This version of BOOM CONTROL is designed for:

- Booms greater than 33 m
- Hilly terrain
- High working speeds



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### Advantages of BOOM CONTROL:

- Working speed of up to 30 km/h
- Soil/Crop Mode
- In the TOTAL CONTROL and ACTIVE ROLL version, there is a proportional hydraulic valve for quick and smooth movements
- Automated headland mode
- Factory fitted or can be added later to the machine



Berthoud, technology

### External washing



Available as an option, it allows you wash the machine in the field using an automatic winder with 18 metres of hose and a gun and brush.

### Boom lighting



A lighting kit can be fitted to the boom. For booms of up to 33 m, it includes 1 light at the spraying station and 2 lights on the boom and 4 lights for booms of over 33 m

# Specifications & equipment and equipment

## VANTAGE equipment

	VANTAGE		
	28-30/35-37	43-46	55-60/67-71
Fixed drawbar	X	X	X
FLEXIA drawbar suspension	0	0	X
High drawbar	0	0	0
Adjustable boom	0	0	0
Ball hitch	0	0	0
Manual stand	X	X (AXIALE)	
Hydraulic stand		X (other booms)	X
ACTIFLEX 2 axle suspension	X	X	X
Parking brake	X	X	X
Hydraulic brake	X	X	X
Underframe lower cover protection	X	X	X
France braking 40 kph	0	0	0
380-litre rinsing tank	X		
580-litre rinsing tank		X	X (version 5500)
700-litre rinsing tank			X (version 6700)
20 l hand wash tank	X	X	X
Mixing hopper	X	X	X
Ribbon gauge	X	X	X
NIVELEC gauge	X	X	X
NIVOMATIC gauge	0	0	0
DUALELEC 5	0	0	0
DILUNET	0	0	0
Filling filter 8/10 <sup>th</sup>	X	X	X
Backflow filter 4/10 <sup>th</sup>	X	X	X
Modular agitation	X	X	X
Electrical shut-off for agitation	0	0	0
Boom rinse without return to tank	X	X	X
Lav'ton main tank	X	X	X
OMEGA pump	X	X	X
Hydraulic pump drive	0	0	0
Motorised valves	X	X	X
ECTRONIC	X	X	X
ISOTRONIC	0	0	0
VT TRONIC	0	0	0
AXIALE boom	X	X	X
KONDOR boom		X	X
EKTAR B3 booms		X	X
Stainless steel lines	X	X	X
Nozzles	4 nozzle sets supplied as standard		
BOOM CONTROL	0	0	0
Semi-continuous flow	0	0	0
Continuous flow (AGP)	0	0	0
Boom lighting	0	0	0
External washing	0	0	0

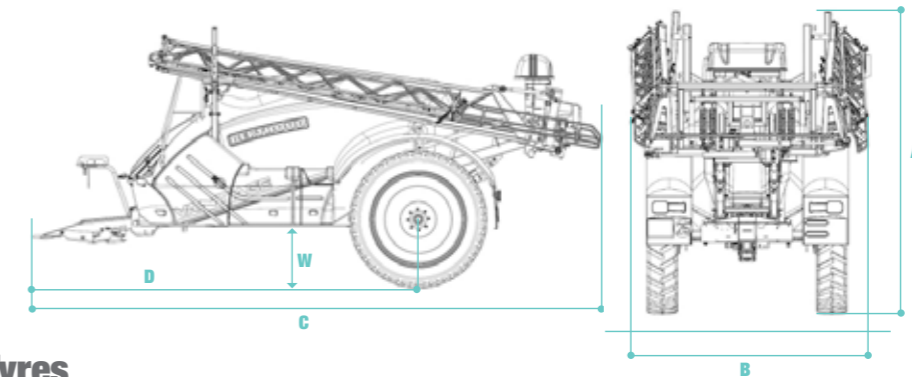
X	Standard
0	Optional
	Not available

Other mandatory options to be added for certification in Germany, Italy, Spain and Poland

## Dimensions and weights

Dimensions in metres		Axiale	Axiale	Axiale	Kondor	Ektar B3	Ektar B3
		24 - 28	30 - 33	36 - 38	36 - 38	36 - 38	39 - 44
VANTAGE 28-30 35-37	A	3.47-4.06	3.55-4.00				
	B	2.55	2.55				
	C	6.89-6.96	7.9-8.56				
	D	4.46	4.46				
	W	0.85	0.85				
VANTAGE 43-46	A	3.47-4.06	3.55-4.00	4.20	3.70	3.90	
	B	2.55	2.55	2.52	2.50	2.55	
	C	7.13-7.47	8.43-9.09	9.45		7.80	
	D	5.02	5.02	5.02	5.02	5.89	
	W	0.85	0.85	0.85	0.85	0.85	
VANTAGE 55-60	A	3.78	3.78	4.20	3.70	3.90	3.90
	B	2.55	2.55	2.52	2.50	2.55	2.95
	C	7.98	7.98	9.45		8.40	8.40
	D	5.89	5.89	5.89	5.89	5.89	5.89
	W	0.85	0.85	0.85	0.85	0.85	0.85
VANTAGE 67-71	A	3.78	3.78	4.20	3.70	3.90	4.25
	B	2.55	2.55	2.52	2.50	2.55	2.95
	C	7.98	7.98	9.45		8.29	8.29
	D	5.89	5.89	6.25	5.89	5.89	5.89
	W	0.85	0.85	0.85	0.85	0.85	0.85

Weight (kg)		Axiale	Axiale	Axiale	Kondor	Ektar B3	Ektar B3
		24 - 28	30 - 33	36 - 38	36 - 38	36 - 38	39 - 44
VANTAGE 28-30	Empty weight	3610	4000				
	Total GVWR	6880	7270				
	Axle GVWR	5250	5610				
	Drawbar GVWR	1630	1660				
VANTAGE 35-37	Empty weight	4100	4400				
	Total GVWR	7845	8215				
	Axle GVWR	6220	6580				
	Drawbar GVWR	1625	1635				
VANTAGE 43-46	Empty weight	4090	4480	5030	4960	5000	
	Total GVWR	8850	9240	9790	9830	9860	
	Axle GVWR	6670	7030	7270	7840	7660	
	Drawbar GVWR	2180	2210	2520	1990	2200	
VANTAGE 55-60	Empty weight	4310	4700	5250	5180	5600	5750
	Total GVWR	10630	11020	11570	11500	11920	12070
	Axle GVWR	8010	8370	8610	9050	9300	9260
	Drawbar GVWR	2620	2650	2960	2450	2620	2810
VANTAGE 67-71	Empty weight	4660	5250	5600	5290	5750	5900
	Total GVWR	11760	12150	12700	12730	13190	13340
	Axle GVWR	8870	9230	10000	10040	10400	10390
	Drawbar GVWR	2890	2920	2700	2690	2790	2950



## Tyres

Name	Vantage 28-30	Vantage 35-37	Vantage 43-46	Vantage 55-60	Vantage 67-71
<b>Axiale 24 to 28</b>					
Wheels 270 / 95 R 48	std	std	-	-	-
Wheels 300 / 95 R 46	Optional	Optional	std	-	-
Wheels 300 / 95 R 52	Optional	Optional	Optional	-	-
Wheels 340 / 85 R 48	Optional	Optional	Optional	-	-
Wheels 380 / 90 R 46	Optional	Optional	Optional	Optional	Optional
Wheels 420 / 85 R 38	Optional	Optional	-	-	-
Wheels 460 / 85 R 38	Optional	Optional	Optional	-	-
Wheels 520 / 85 R 38	Optional	Optional	Optional	std	-
Wheels 520 / 85 R 42	-	-	-	Optional	std
Wheels 520 / 85 R 46	-	-	-	Optional	Optional
<b>Axiale 30 to 33</b>					
Wheels 270 / 95 R 48	std	-	-	-	-
Wheels 300 / 95 R 46	Optional	std	std	-	-
Wheels 300 / 95 R 52	std	Optional	Optional	-	-
Wheels 340 / 85 R 48	Optional	Optional	Optional	-	-
Wheels 380 / 90 R 46	Optional	Optional	Optional	-	-
Wheels 420 / 85 R 38	Optional	-	-	Optional	Optional
Wheels 460 / 85 R 38	Optional	Optional	Optional	-	-
Wheels 520 / 85 R 38	Optional	Optional	Optional	std	-
Wheels 520 / 85 R 42	-	-	-	Optional	std
Wheels 520 / 85 R 46	-	-	-	Optional	Optional
<b>Axiale 36/38 Kondor - Ektar</b>					
Wheels 340 / 85 R 48	-	-	std	-	-
Wheels 380 / 90 R 46	-	-	Optional	Optional	Optional
Wheels 420 / 85 R 38	-	-	-	-	-
Wheels 460 / 85 R 38	-	-	Optional	-	-
Wheels 520 / 85 R 38	-	-	Optional	std	-
Wheels 520 / 85 R 42	-	-	-	Optional	std
Wheels 520 / 85 R 46	-	-	-	Optional	Optional

# /// DARK

BY BERTHOUD

DARK is a powerful expression of the legacy of BERTHOUD's know-how but also one of the most innovative and promising technologies for the future. It creates an elegant breakaway in terms of style from the past and is the vector of the Berthoud technology among the most demanding users.

Apart from its Style, DARK is characterised by 2 other elements:

## /// DARKCOMFORT

### DRIVING IS NOTHING WITHOUT PLEASURE

Available on the DARK range, this equipment maximises your comfort when working.

- Your sprayer at your fingertips thanks to the fully motorised DUALELEC
- Optimised spray quality thanks to continuous flow combined with the pneumatic anti-drip device
- etc.

## /// DARKPRIVILEGE

### STAY CALM, FOCUS ON THE DRIVING

On a farm, the sprayer is the most used machine during the year. It guarantees the quality of spreading plant protection products, which will determine a part of the crop yield. In addition, spraying must take place at a specific date. So a breakdown can have a huge impact on the crop management and the economic profitability of the farm.

**Dark privilege** has been designed to bring you greater peace of mind in the use of your machine. It has the following characteristics:

#### **DARK Privilege ★**

It consists of **Smart & Go Premium**: A BERTHOUD technician will assist you with the start-up and then visit you after a season of use to fine-tune the use of your machine and answer all your questions

For several years now, we have been working hard to stay close to you through visits, customer meetings, etc. because you are our main source of inspiration.

When you purchase a DARK model, you are entering a world where you are at the heart of our focus. We will call upon you take the time to listen to you so that our ranges of machines are constantly upgraded to meet your needs more precisely.



# VANTAGE 100% BERTHOUD

**BERTHOUD**, a success story that started in 1895 on the initiative of Paul **BERTHOUD**. In 1987, the brand joined the Exel Industries group, the world leader in spraying techniques present in the agricultural, industrial and general public fields. **BERTHOUD** generates its turnover through its equipment for Row crops, Vines and Trees.



## Brand advantage

**BERTHOUD** meets all your requirements: mixed-farming breeding, cereal crops, large farms, agricultural contractors (ETA), Cooperatives for the use of agricultural equipment (CUMA), etc. From the simplest machine (mechanical DPA), to **E BERTHOUD SOLUTIONS**, (precision agriculture), all of them enjoy the best resale value on the second-hand market.



## Innovation advantage

**BERTHOUD** designs 100% of its sprayers and over 10% of its employees work on Research and Development. **BERTHOUD** develops its own concepts and holds many patents: ACTIFLEX, etc.



## Network advantage

A special partnership of over 50 years with a network that provides a relay close to your location. 350 dealership technicians are trained every year in our Training Centre.



## Service advantage

Delivery of spare parts in less than 24 hours, service level of close to 99% strengthened by the high availability of our teams on the road and the performance of our After Sales hot line.



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We reserve the right to modify our models and their features.

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**BERTHOUD**<sup>®</sup>  
*Forward together*

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