



# AX

Self-loading and forager-filled forage wagons







## AX

Self-loading and  
forager-filled forage  
wagons

- Camless pick-up for very quiet running and hard wearing
- Tines in W-arrangement for optimum crop flow
- Wide and large-diameter rotor for high intake rates
- Central blade group control system for 0, 16, 16, 32 blades





- Sloping floor enhances crop feed efficiencies
- Articulated drawbar for high ground clearance
- Drawbar suspension for comfortable rides
- Sprung or unsprung tandem axles with hydraulic levelling system
- ISOBUS compatible



AX defines our range of forage wagons that offer capacities from 25 m<sup>3</sup> to 31 m<sup>3</sup> and which are available with different extensions that give users the flexibility to use them as self-loading forage wagons with and without discharge rollers but also as silage trailers in the maize harvest chain. AX suggests maximum reliability, efficiency and flexibility.

AX 250/280/310 dual-purpose wagons	4
The extensions	6
Hitch system, drawbar and running gear	8
The EasyFlow pick-up	10
The rotor cutter	12
The load area	14
The automatic loading system	16
The on-board electronic system & operator terminals	18
Technical Data	19



# AX 250 • 280 • 310 dual-purpose wagons

- AX 250 self-loading forage wagons with discharge rollers: 25 m<sup>3</sup> volume; collapsible or steel extensions
- AX 280 self-loading forage wagons with discharge rollers: 28 m<sup>3</sup> volume; steel extensions or silage extensions
- AX 310 self-loading forage wagons with discharge rollers: 31 m<sup>3</sup> volume; steel extensions or silage extensions

The new generation of AX self-loading forage wagon models score on their great diversity as they offer different extensions and capacities to adapt to many different conditions and applications. These extremely efficient machines serve as forager-filled but also as self-loading forage wagons with or without discharge rollers. For maximum flexibility and utilization that earns you excellent returns on your investment.

AX model		250 L	250 D	280 L	280 D	310 L	310 D
Capacity (acc. to DIN 11741)	m <sup>3</sup>	25	25	28	28	31	31
Available extensions		FL GL	FD GD	FL GL HL	GD HD	GL HL	GD HD
Discharge rollers		-	2/3	-	2/3	-	2/3
Work width (pick-up)	mm	1800	1800	1800	1800	1800	1800
Max. no. of blades		32	32	32	32	32	32
Minimum tractor input	kW/hp (approx.)	59/80	59/80	66/90	66/90	74/100	74/100

L = loading and forage transport wagon without discharge rollers, D = loading and forage transport wagon with discharge rollers, F = collapsible hay extension, G = steel extensions, H = silage extensions

## AX 250

Offering a volume of 25 m<sup>3</sup>, the AX 250 self-loading forage wagon with discharge rollers is the most compact model in the AX range and is available with collapsible or steel extensions. The AX 250 D is the model that also has discharge rollers at the rear. The camless and 1800 mm wide pick-up gathers the material effectively and feeds it to the rotor cutter which in turn lines up 32 blades that cut the material to 45 mm chops at a minimum tractor input.







#### AX 280

Offering a volume of 28 m<sup>3</sup>, the AX 280 self-loading forage wagon with discharge rollers is the most versatile machine in the AX range and can be specified with many different extensions – collapsible hay extensions, steel extensions or silage extensions. The AX 280 D model is specified with either two or three discharge rollers. The 1800 mm wide pick-up feeds the material to the rotor cutter with 32 blades that chop the material in scissor-like cuts to 45 mm lengths.



#### AX 310

The AX 310 GL is the flagship of the range and offers a capacity of 31 m<sup>3</sup>. It has a rugged steel extensions as standard specification or silage extensions as an option. The AX 310 D is the model that features either two or three discharge rollers at the rear. The 1800 mm wide pick-up feeds the material to the rotor cutter with 32 blades that chops the material in scissor-like cuts to 45 mm lengths.





## AX extensions

- Collapsible hay extensions are ideal in low buildings
- Rugged steel extensions with ropes secure the crop for loss-free transport
- Silage extensions with headboard hatch and no ropes for use as a silage trailer

The large choice of available extensions makes the KRONE AX a universal forage wagon. Collapsible hay extensions allow the AX to enter low buildings or pass under low gates whereas steel extensions give it a head start as a self-loading forage wagon. But it can also take silage extensions including the headboard hatch, which make it the perfect dual-use forage wagon / silage trailer.



### **Collapsible hay extensions (FL / FD)**

The AX 250 L/D model has hay extensions that collapse hydraulically. With the extensions down, the machine easily passes under low gates. The top ropes, the slide cover in the front section and the rear cover ensure no material is lost in transport.





**Steel extensions (GL / GD)**

All AX forage wagons are available with the extra strong steel extensions. The crop is secured with top ropes that ensure nothing is lost during transport. The steel tailboard is operated automatically by two single-acting rams



**Silage extensions (HL / HD)**

The AX 280 and 310 can be specified with optional silage extensions. These include a silage hatch at the top of the head-board. Operated hydraulically, this flap moves forward for filling from the forager ahead. Without top ropes, the AX suits not only applications in which the material is collected by the pick-up but also when the wagon is filled by the forage harvester.





# Suspension system, drawbar and running gear

- Bottom- or top-mount drawbar
- Articulated drawbar for high ground clearance
- Drawbar suspension for comfortable rides
- Sprung or unsprung tandem axles with hydraulic levelling system

Varying harvest conditions, difficult situations on the clamp, high payloads, and long-distance travel at speed call for a running gear and a drawbar that offer maximum strength and stability as well as superior operator comfort and safety. Choose between the top-mounting hitch ring, the bottom-mount pivoting drawbar, the ball hitch or the articulated drawbar. This and the caster-steer tandem axles with either mechanical or hydraulic suspension allow you to specify your machine to your individual needs.



## Ball hitch

The bottom-mount ball hitch 80 brings great agility, minimizes wear and offers tongue loads of up to 3 tonnes.

## Hitch ring

The top-mount 40 mm hitch ring couples to the tractor clevis.



## Height control at your fingertips

The articulated drawbar offers hydraulic height control which can also be operated from an optional button on the headboard. The optional auto control feature allows operators to retrieve the stored field/road position of the drawbar easily and fast. The latter increases the ground clearance by up to 60 cm for easier manoeuvring on the headland or clamp.



## Suspended drawbar

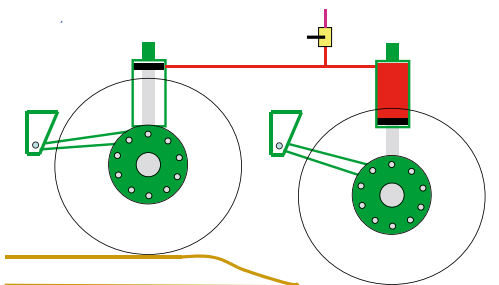
A suspended drawbar is available as an option on the AX and is a particular boon during long-distance travel on bumpy roads.





### Running on comfort

The AX 250 has standard tandem axles with mechanical suspension that offer a gross axle load of 10 t, 14 t or 16 t depending on tyre size. The axle load on the AX 280 and 310 is 16 t and maximum speed is 40 km/h. One of the two rigid axles can be caster-steered as an option, which helps avoiding turf damage when travelling through bends. The steering can be locked during shunting and clamping.



### Great stability

The caster-steer axle assembly with hydraulic auto-levelling has two separate hydraulic circuits. The system reduces the risk of machine roll when working in sloping fields or travelling through bends. The AX manages undulations with ease as the oil flows from the cylinder on the front axle to the cylinder on the rear axle and vice versa to compensate for roll. This way the machine weight is uniformly distributed to all wheels as the machine is entering the clamp.

### Choice of tyres

We offer the correct tyres for every harvest condition. Flotation tyres offer a larger contact area and are therefore preferable in boggy terrain as they reduce compaction and make for lighter pulling.



**Cross ply tyres**  
500/50 – 17 TL  
Width: 503 mm  
Ø: 945 mm



**Cross ply tyres**  
500/50 R 17 TL  
Width: 503 mm  
Ø: 945 mm



**Cross ply tyres**  
500/55 R 20 TL  
Width: 505 mm  
Ø: 1,060 mm



**Radial ply tyres**  
620/40 R 22.5 TL  
Width: 610 mm  
Ø: 1,080 mm



**Radial ply tyres**  
710/40 R 22.5 TL  
Width: 727 mm  
Ø: 1,140 mm





# The KRONE **EasyFlow pick-up**

- Wide pick-up for clean and comprehensive gathering
- Camless pick-up for very quiet running and hard wearing
- Tines in W-arrangement for optimum crop flow
- Optimum ground contouring by gauge wheels and side pivot

The camless EasyFlow pick-up has only few moving parts and runs extremely quietly, causing little wear. Boasting a wide work width, it gathers wide swaths tidily also in bends. Undulations are no problem at all, thanks to the pivoting suspension along with the gauge wheels.



### **The pick-up**

Working at a width of 1.8 m (to DIN 11220), the pick-up gathers wide swaths no problem and feeds the material to the rotor cutter in a very consistent flow. Excellent ground contour following comes from the pivoting suspension and the leading gauge wheels that pivot sideways and also offer height control without tools.



### **Perfect control**

You can order two optional gauge wheels to run at the rear and outside the tractor wheelings to optimize contouring and minimize contamination in very difficult conditions.





### Consistent crop flow at all times

The crop press roller has a chain that allows operators to easily adjust the work height to ensure a uniform and consistent crop flow in varying crops, swath volumes and at varying ground speeds.



### Strong tines

The 6.5 mm diameter double tines with large coils are particularly hard-wearing. Arranged in a wavy pattern, six rows of tines feed the material from the ends to the middle of the rotor, thereby preventing crop from building up as the machine travels through bends, for example, and spreading it evenly across the full width of the rotor cutter.







# The KRONE rotor cutter

- Wide and large-diameter rotor for high intake rates
- Helical tine arrangement for quiet running
- Easy pulling blades for exact and scissor-like cuts

Powerful and low-maintenance, the AX rotor cutter operates very smoothly and gently. The blades give exact cuts, stay sharp for a long time and are very easy to replace.



## The rotor

Measuring 760 mm in diameter and offering a working width of 1.47 m, the rotor cutter was developed for filling a high-capacity wagon. Its tines are arranged in six helical rows and have 25 mm Hardox plates for long service life. The scraper elements, too, are made from hard-wearing Hardox steel. The design ensures the tines feed the crop dependably through the blades for precise and scissor-like cuts and fast and uniform fills.



## The blades

The blades have long cutting edges which give particularly light-pulling cuts. The wavy edges cut very precisely and maintain their sharpness for many operating hours.



## The blade cassette

When all 32 blades are set to cutting action, the system achieves a nominal chop length of 45 mm. The blade group control system allows operators to select the blades in sets of 32, 16, 16, 0.





#### **Operated from one lever**

After the blade cassette lowers and the blades are withdrawn to '0' position, operate a lever on the left side of the machine to remove the blade cassette.



#### **Pulling out to the side**

After the cassette is released, it easily pulls out and swings alongside the machine for easy blade removal and replacement.



#### **Locked in place automatically**

After the blade cassette moves back into its working position, it locks home automatically on the right machine side.







# The load area

- Wide and sturdy channel-steel frame
- Sloping floor enhances crop feed efficiencies
- Strong chains and infinitely variable advance speed
- Discharge rollers with V-shaped tines distribute the material uniformly
- The optional cross conveyor belt unloads fresh forage directly on to the feed passage

The sloping floor on AX increases its throughput rates and minimizes tractor input. The extremely robust chain-and-slat floor offers stepless adjustment of its advancing speed, a feature that has been asked for by many farmers.



### Convenient steps

The AX forage wagons that are fitted with discharge rollers have a large nearside door that gives convenient access to the load area after you climb the fold-down ladder for a safe ascent.



### Robust design

The forage wagon is a heavy-duty machine thanks to its channel-steel frame. The hot-galvanized and powder and plastic coated sides are high-quality and extremely durable. The sloping mudguards avoid crop collecting here.



### The feeding belt

The optional cross conveyor belt is an ideal feature for farmers who feed the fresh forage directly to their cows. The 70 cm wide belt feeds the material to the right and left side. But you can also empty the machine as usual via the discharge rollers without any previous modification. The belt is integrated in the “rucksack” tailgate and moves out of the way when this is opened.





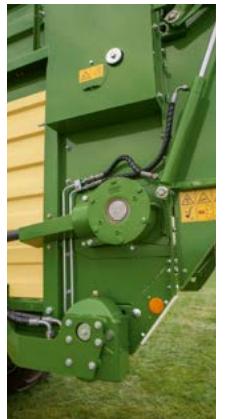
### Perfect pick-up loading

The chain-and-slat floor slopes 100 mm at the front, which reduces the length of the feed channel and thus the amount of power required to feed the material into the load area, enabling a faster and gentler crop feed.



### Heavy-duty chains

The AX forage wagons discharge their load fast and dependably. The AX 250 has two chains and the AX 280 and 310 have four chains, which are made up of short 10 mm round-steel and high-tensile links. The chains' advance is controlled steplessly by a hydromotor. The models with discharge rollers have a reversing mechanism that moves the material away from the discharge rollers to remove a malfunction, for example.



### Two or three discharge rollers

The AX models can be fitted with two or three discharge rollers. These have tines that are arranged in a V-line to distribute the material uniformly either on the clamp or in the feed passage. The bottom rotor revolves at a higher speed to boost unloading efficiency and crop flow consistency.





# The KRONE automatic loading system

- Entry-level floor advance control
- Shuts off the floor chains automatically on machines with discharge rollers
- PowerLoad auto loading system for forage wagons with steel extensions

No matter whether your AX self-loading wagon has the entry-level auto loading or the optional PowerLoad system, each system ensures the machine is filled to capacity whilst maintaining compression at optimum levels. With the wagon filled to capacity in each haul, you are cutting down on your transport costs.



## Tailgate protection

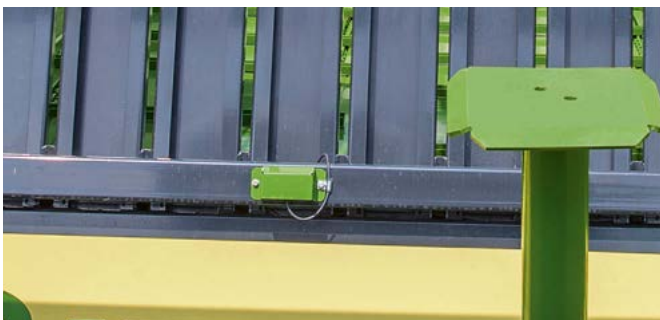
The tailgate on the wagons without discharge rollers has a sensor which stops the chains the moment it senses the machine is filled to capacity, thereby avoiding damage to the tailgate.



## Clear the rollers

When the machine is filled to capacity and material is pushing the bottom rotor to the rear, a motion detector stops the chains so the rollers can start off smoothly.



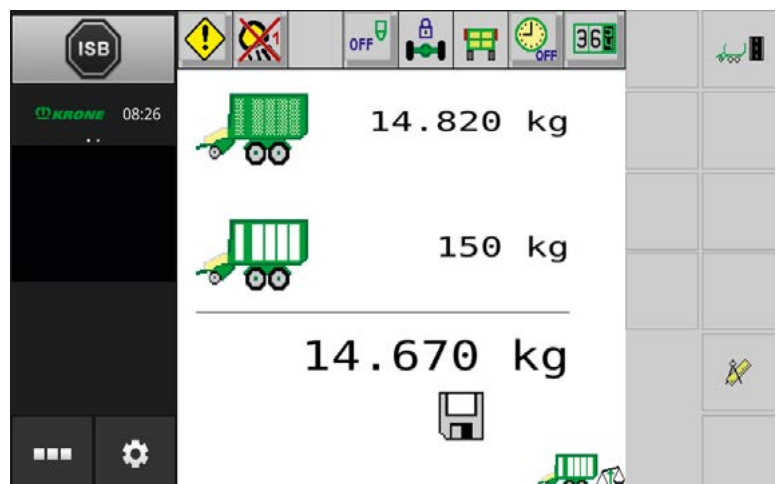


### The automatic loading system

This optional system activates and controls the chain-and-slat floor with the help of sensors. One sensor measures the pressure that the material exerts on the headboard (left photo). Another sensor at the top of the headboard scans the current angle of the silage hatch (right photo). The chain-and-slat floor is started automatically as soon as the pressure scanned equals the set pressure. Depending on the crop, it is also possible to use the two sensors independently of each other.

### Using both sensors

The PowerLoad floor chain varies its speed relative to the pressure that is detected by the sensor on the headboard. The system helps distribute the material evenly and preserve an optimum feed quality. Operators can enter the target pressure on the cab-based terminal.







## The KRONE on-board electronic system & operator terminals

- Clear and convenient
- Easy and user friendly
- ISOBUS compatible

The KRONE on-board electronic system clearly enhances the operation of the AX forage wagon. Available in Medium and Comfort specification, the system is operated from various terminals, each catering for different applications and needs.



### Alpha control unit

This is the base specification level for the AX forage wagon – the Medium on-board electronic system complete with the Alpha control unit, which operates the pick-up, the articulated drawbar, the chain-and-slat floor and the tailgate.



### Delta terminal

The Delta terminal has a 5.5-inch touch screen, a touch pad with 12 function keys and one dial. From here, operators control all loading and unloading functions, collect and store machine data and carry out diagnostic routines. They can also connect an optional joystick (AUX) and a CCTV camera for added comfort.



### More operator comfort

The CCI 1200 operator terminal with 12-inch touchscreen offers the same features as the Delta terminal plus it allows operators to split the screen in two views. For example to see all machine control elements in one view and the camera footage in the other.





# Technical data

- 25, 28, or 31 m<sup>3</sup> capacities
- Complete with cutting system
- With or without discharge rollers
- 16 t gross weight

		AX 250 L	AX 250 D	AX 280 L	AX 280 D	AX 310 L	AX 310 D
Capacity (to DIN 11741)	approx. m <sup>3</sup>	25	25	28	28	31	31
Pick-up working width (to DIN 11220)	Approx. m	1.80	1.80	1.80	1.80	1.80	1.80
Cutting system Cutting length with 16/32 blades	Approx. m	90/45	90/45	90/45	90/45	90/45	90/45
Discharge rollers Standard/option	Number	-	2/3	-	2/3	-	2/3
Tractor power	Approx. kW/hp	59/80	59/80	66/90	66/90	74/100	74/100
Length	Approx. m	8.10	8.85	8.80	9.60	8.80	9.60
Width*	Approx. m	2.46- 2.58	2.46- 2.58	2.46- 2.79	2.46- 2.79	2.58- 2.79	2.58- 2.79
Height*	Approx. m	3.50- 3.64	3.50- 3.64	3.60- 3.65	3.60- 3.65	3.87- 3.88	3.87- 3.88
Platform height	Approx. m	1.30	1.30	1.30	1.30	1.30	1.30
Track width (with steering axle and Medium control)	Approx. m	1.95	1.95	1.95 (2.00)	1.95 (2.00)	1.95 (2.00)	1.95 (2.00)
Drawbar tongue load (top/bottom hitching)	t	2/3	2/3	2/3	2/3	2/3	2/3
Axle load	t	10/14/16	10/14/16	16	16	16	16
Tyres 500/50-17 14 PR 500/55-20 12 PR 620/40 R 22.5 710/40 R 22.5		Standard option option	Standard option option	Standard option	Standard option	Standard option	Standard option
Filling / unloading rate	approx. min	5-8/1.5	5-8/3	6-9/2	6-9/3	7-10/2.5	7-10/3.5
Ground clearance	Approx. m	0.62	0.62	0.62	0.62	0.62	0.62

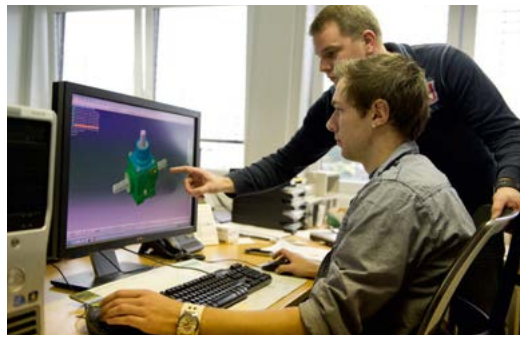
\*depending on axle and tyre height

All specifications, weights and dimensions do not necessarily comply with standard specifications and are therefore not binding. All product specifications are subject to change.



# Maschinenfabrik Bernard KRONE

Perfect in every detail



Innovative, proficient and close to our customers – these are the keywords that mark the philosophy of our family-owned company. As a forage specialist, KRONE manufactures disc mowers, tedders, rakes, forage wagons and silage trailers, round and square balers as well as the high-capacity and self-propelled BiG M mower conditioners and our BiG X forage harvesters. Quality made in Spelle – since 1906.

Your KRONE dealer



**Maschinenfabrik Bernard KRONE GmbH & Co. KG**

Heinrich-Krone-Straße 10  
D-48480 Spelle

Phone: +49 (0) 5977 935-0  
Fax: +49 (0) 5977 935-339

[info.ldm@krone.de](mailto:info.ldm@krone.de) | [www.krone.de](http://www.krone.de)