KRONE
THE POWER OF GREEN

ZX 430, 470, 560

Self-loading and harvester-filled forage wagons

KRONE ZX

One wagon – two ways of filling

- **The world's most powerful self-loading and harvester-filled forage wagon**
  New and revolutionary 400 hp driveline
- Hydraulic and camless pick-up, W-arrangement of tines
- Steel floor with sloping front end
- **Pivoting headboard**
  Boosted capacity from a compact build
  Variable pressure control
  Pushing plate
- Swing-out blade bank with 48 selectable blades
- Optional SpeedSharp blade sharpener
- Massive cut-and-feed rotor with wide Hardox tine plates
- Three standard discharge rollers on ZX GD models. Overload protection comes from a clutch in the main driveline
- Hydraulic auto-level axles
- VariLoad auto filling system with automatic chain-and-slat floor control

ZX – the versatile and dual-purpose forage wagon

ZX

Harvesting all year round

- Versatile
- Efficient
- Economical
- Convenient

ZX – the high-capacity range				
Model	**No. of discharge rollers**	**Body**	**Capacity (DIN 11714)**	**No. of blades**
ZX 430 GL	–	solid steel	43 m^3	48
ZX 430 GD	3 (2)	solid steel	43 m^3	48
ZX 470 GL	–	solid steel	47 m^3	48
ZX 470 GD	3 (2)	solid steel	47 m^3	48
ZX 560 GL	–	solid steel	56 m^3	48
ZX 560 GD	3 (2)	solid steel	56 m^3	48

One machine – many applications

The key to viable farming is boosting efficiencies, cutting costs and utilizing equipment to full potential all year round. This is the scenario in which KRONE developed the ZX dual-purpose wagon. Dual-purpose means this machine serves as a self-loading/unloading maize and silage wagon on the one hand and as a forager-filled trailer on the other hand.

Nothing is lost
Filling the ZX models from the forager is straightforward and easy, especially as there are neither hoops nor ropes nor sliding covers where material could collect. The chute can direct the stream of material into every corner and hence achieve consistent and complete fills.

Models without discharge rollers
The dual-purpose forage wagons without discharge rollers are the super-efficient machines. The two powerful chain-and-slat floors move the material to the rear and out through the huge opening, backed up by a headboard that pivots to the rear in support of the unloading process, minimizing the amount of time spent on the clamp and maximizing your harvest chain efficiency.

Picking up fast and cleanly
The hydraulic EasyFlow pick-up features a massive cutting rotor which cuts the material to nominal chop lengths of 37 mm (1.5"), making ZX a full-fledged and high-capacity self-loading forage wagon with a cutting system – just the kind of high-output machine contractors ask for.

Models with discharge rollers
Solid steel bodies and up to three discharge rollers make the ZX 430 GD, ZX 470 GD and 560 GD models very versatile machines which unload the material in uniform mats to reduce the workload on the clamp and establish the best conditions for high-quality silage.

EasyFlow pick-up

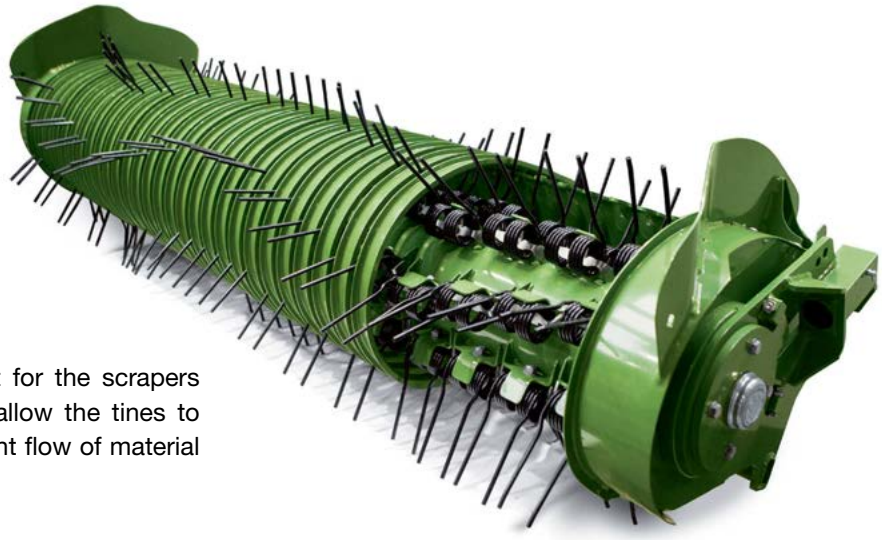
No cam, no chains

- Separate hydraulic drive
- Maintenance-free
- Automatic and manual speed control to adapt to the current ground speed
- Consistent collection of the material by tines in a staggered W arrangement
- Large pivoting range
- Impeccable work, hard-wearing, maintenance-free

EasyFlow – more efficient and more effective
Working at a width of 2,125 mm (7') (DIN 11220), the wide and camless pick-up with helical tines is powered by its own separate hydro motor. This pick-up is the first choice for those dealing with large and uneven swaths, heavy crops and high work rates.

The powerful pick-up

The camless and hydraulic EasyFlow pick-up with tines arranged in a helix meets the most exacting demands. Absolutely maintenance-free and a benchmarker in performance, this pick-up offers an even larger work width now that its hydraulic drive has been integrated in the rotor. As a result, an increased pick-up width helps collect even more material at an optimum ground speed, maximizing the overall intake capacity.



No cam but special scrapers
This camless pick-up stands out for the scrapers and their special design, which allow the tines to retract for a smooth and consistent flow of material into the machine.

Unique
Arranged in a W, the tines warrant a consistent crop flow and an equally consistent and full-width supply to the cutting rotor, boosting throughputs and machine fills.

Hydro power
The integral hydro motor offers a number of advantages:

- It frees space on the pick-up ends for a wider work width
- Maintenance-free
- The absence of sprockets on the sides translates into a larger pivoting range
- Manual or automatic ISOBUS speed adjustment to the current ground speed and prevailing conditions

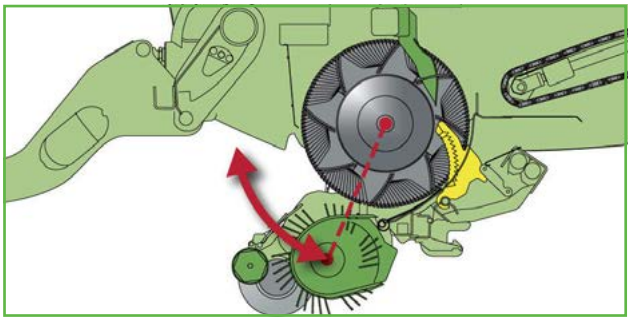
Extra strong
The 6.5 mm (0.3") tines with large-diameter coils withstand the most arduous conditions.

Crop press roller
This standard-fit roller ensures a continuous flow of crop over the full pick-up width. The roller can be adjusted to various heights to match the swath size and ground speed perfectly.

Excellent tracking
The pneumatic guide wheels on either side of the pick-up offer excellent height control and hence full adaptation to ground contours. Giving excellent tracking behind the tractor without scuffing, they offer best sward protection on the headland.

Pivoting through a wide angle
Pivoting laterally, the pick-up follows ground contours in any direction. The pivoting range, too, is larger now, courtesy of eliminated sprockets and an integral hydro motor. Every single stem is picked up. Nothing is left behind.

Lifting out higher
In undulating terrain, the pick-up oscillates through a constant range around the core of the cut-and-feed rotor, maintaining an optimum flow of material into the machine no matter how difficult the conditions. Aligned with the core of the rotor, the pick-up can be lifted out high on the headland.



Auto articulated drawbar
The articulated drawbar with double-acting ram is standard specification and provides a generous ground clearance of up to 75 cm – enough to roll on clamps no problem. The automatic artic drawbar offers a better ground clearance for headland turns. One headland and one road position can be programmed to the control unit.

Guide wheels at the rear
The pick-up is followed by optional and height-adjustable guide wheels which do not run in the tractor wheelings. This set-up ensures clean work on soft and wet ground.

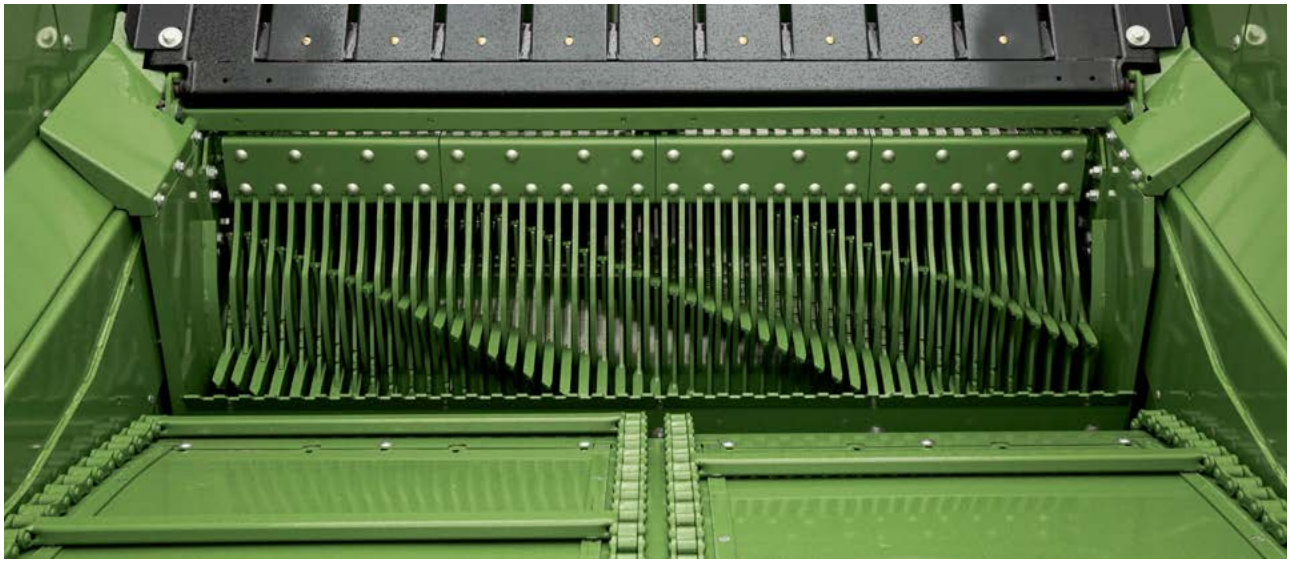
Cut-and-feed rotor

The world‘s most powerful rotor

- Unique KRONE Powerbelt transfers up to 400 hp
- Large feeding width (1,910 mm (6'3")) for maximum machine fills
- Large 880 mm (2'11") diameter rotor translates into a huge appetite
- Frugal on input power – thanks to Hardox plated tines

Higher outputs, better cuts

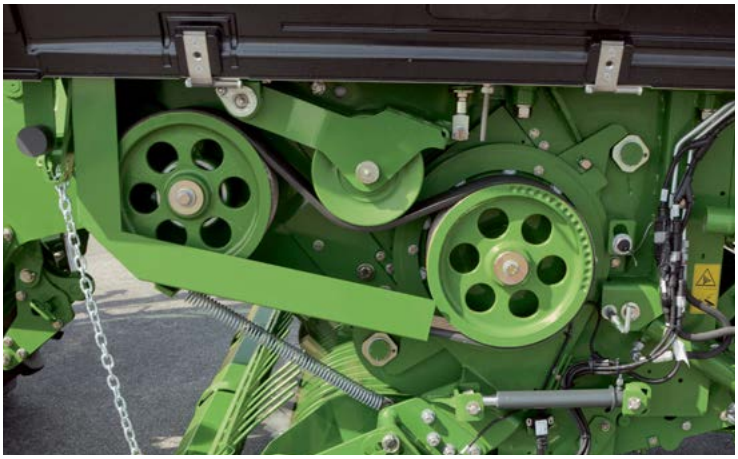
Powered by a poly V-belt, the 880 mm (2'11") diameter and 1,910 mm (6'3") wide feed rotor is extremely powerful. It features eight rows of tines in a helical arrangement. The tines have extra wide Hardox steel plates that provide gentle crop treatment, enhanced quality of cuts and lower power inputs.



High class for large masses

The cut-and-feed rotor is powered by a 6-groove poly V-belt and planetary gears – a driveline concept that caters for the enormous horsepower of today's high-end tractors.

The belt speed is then reduced by planetary gears inside the rotor. This unique concept results in great elasticity and frees space to fit a wider rotor and increase throughputs even further.



A KRONE exclusive
This cut-and-feed rotor features a unique driveline which comprises the main gearbox which is protected from overload by a 2,800 Nm clutch inside the main drive shaft, the KRONE Powerbelt assembly and the planetary speed reducing gears. This driveline is able to transmit up to 400 hp from the pto.

The Powerbelt
The use of the Powerbelt offers a number of benefits: it increases the rotor width, it absorbs any torsion that may develop during loading and also absorbs peak loads. Last but not least, it leads to easy access to all service points. A tensioner ensures smooth operation.

Clever stuff
The integral planetary gears reduce the rotor‘s circumference speed and make for a wider feed width.

Hardox for longevity
The cut-and-feed unit is exposed to the highest strains; so we made the wide feeder plates from extra hardened Hardox steel to reduce wearing costs and increase the overall service life.

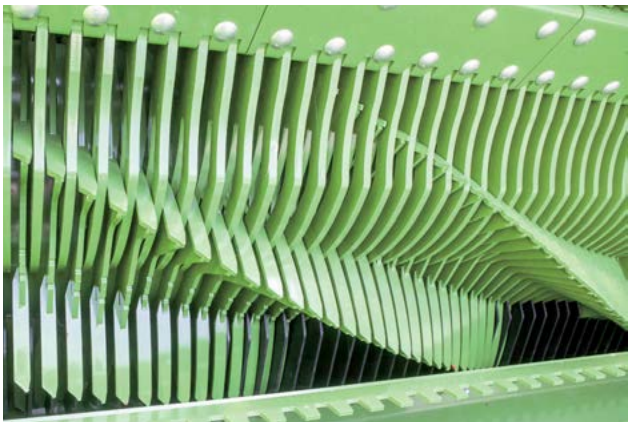
The cutting system

Cutting edge

- Top-quality and scissor-like cuts
- Up to 48 blades give down to 37 mm (1.5") LOCs
- Automatic activation of 0, 24, 24, 48 blades
- Blades are changed without tools and lock automatically

The crop is pulled over the blades
Cutting with their full edges, these blades lead to smoother and quieter running. The wavy blades maintain their sharpness over extended periods of time.

Cutting like scissors
This technique prevents the haulms from slipping through the narrow clearance between the wide tine plates and the blades, which in turn eliminates the risk of squeezing and guarantees perfect cuts.



Finest quality of cut

Cutting like a scissor – the secret of this system lies in the extremely narrow gap between the wide tine plates and the blades. As many as 48 blades are available to give perfect cuts. The central blade selection system quickly selects the desired number of blades and hence the length of cut.

Controlled from the cab
The blade bank lowers hydraulically to remove a blockage. Once the blockage is removed, the bank swings back into position and work is resumed.

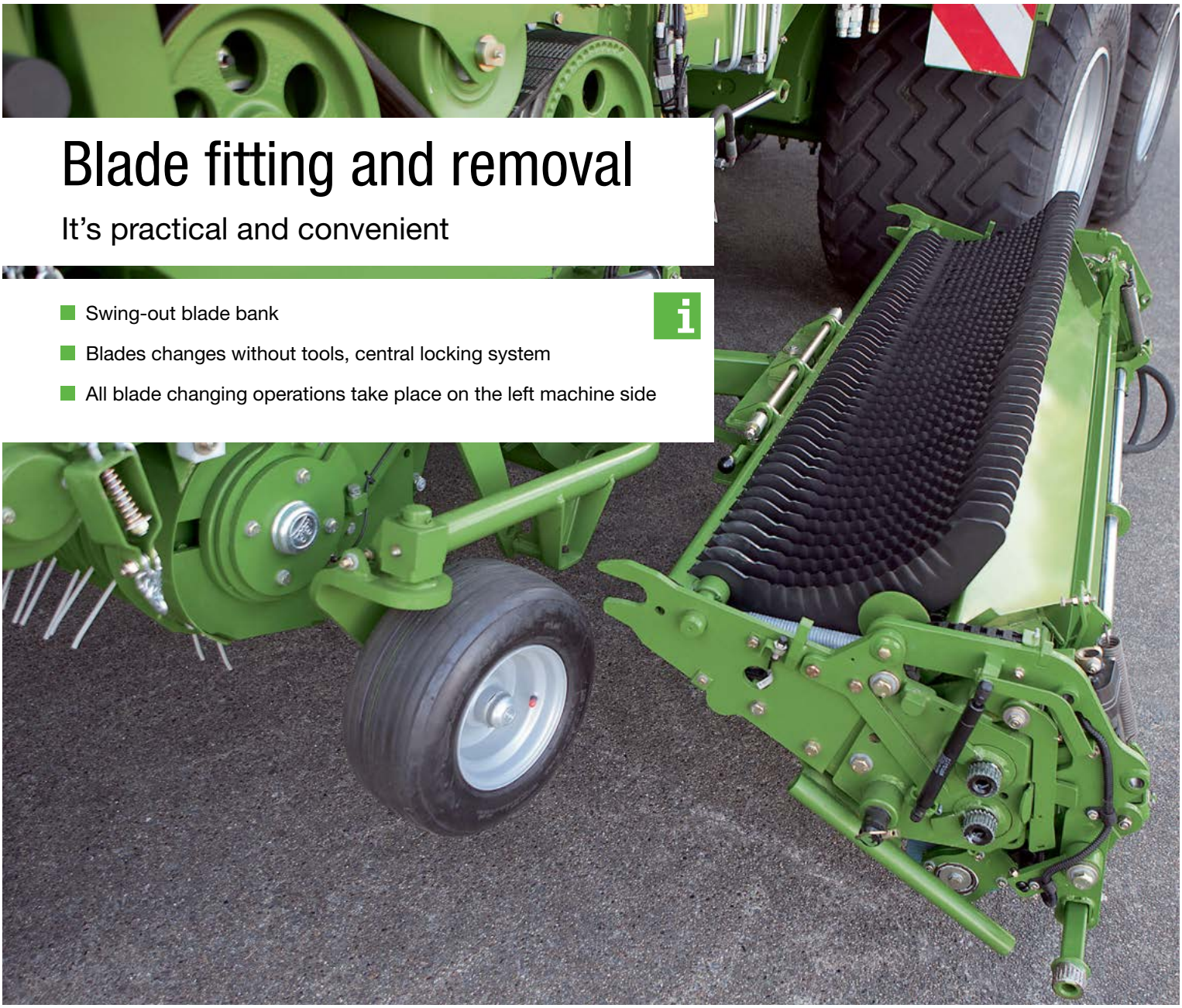
Individual blade protection
Equipped with individual protection, each blade retracts and swings back automatically once the object has passed. The tripping force is set variably from the cab and can be adjusted to special conditions.

Automatic activation
The central blade selection system makes it easy for the operator to set the desired chop length. ZX operators select the blades in sets of 24 or 48 which provide nominal chop lengths of 74 mm (2.9") or 37 mm (1.5"). 0 blades means the material is not cut.

Blade fitting and removal

It’s practical and convenient

- Swing-out blade bank
- Blades changes without tools, central locking system
- All blade changing operations take place on the left machine side

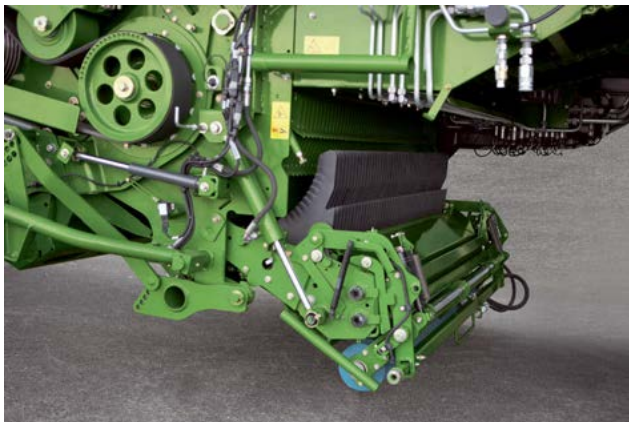


From the cab

The hydraulic blade bank lowers substantially for effective removal of blockages and swings out and in for easy blade changes.

No need to leave the cab

These extra controls raise and lower the blade bank conveniently from the ground – for easy maintenance and blade changes. The controls are available on machines that feature the on-board Comfort control system.



Straightforward and convenient

All blade changes are carried out without tools and from one side of the machine after the blade bank swings out. All blade-changing operations are carried out from the left side of the machine, from lowering the blade bank and swinging it out to removing the blades – a time and cost saving system.

How you do it
Lower the entire blade bank hydraulically, retract all blades to position 0 and unlock them. Then operate a lever on the left machine side to release the bank and swing it out.

Remove the blades by pulling them up and out of the bank. It's that easy.

As the blade bank swings back in place, its right end locks home automatically.

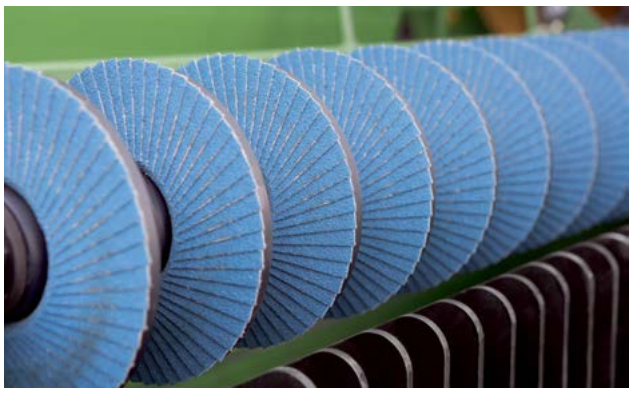
SpeedSharp

Automatic blade sharpener

- Sharpens the blades conveniently and within minutes
- Sharpens 24 blades in one operation
- Sharpens all blades consistently – all 24 grinding discs adjust automatically
- No annealing
- Simple design, absolutely reliable
- No sparks flying under the wagon

A KRONE exclusive
This optional and fully automatic sharpener consists of a hydraulic shaft with grinding discs that slide to the side. All discs are controlled automatically.

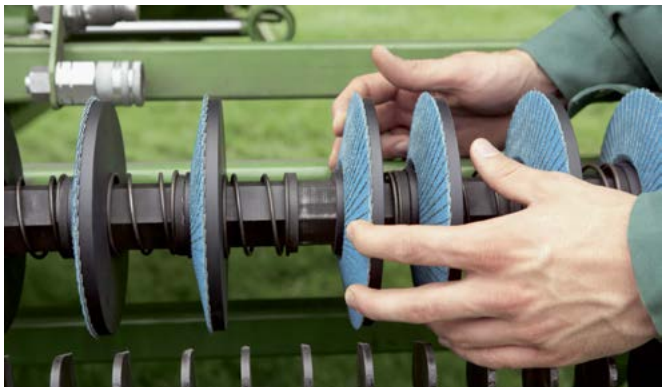
Flap discs
The 24 flap discs have generously overlapping flaps. Warranting superior performance and longevity, they give a 'cold' grind that prevents the blades from annealing.



The formula 1 sharpener

Sharp blades are fundamental for clean cuts and light action. Experience shows that blades will be sharpened sooner and more often, if grinding is a straightforward routine.
For this reason KRONE developed SpeedSharp, the unique blade sharpening system for fastest, safest and most convenient grinds. Simplicity is its trademark.

No need to leave the cab
The operator sets up to 10 grinding cycles on the cab-based control box.



Consistent sharpness
Each disc is pressed on to the blade by a bevel spring, a design that leads to a high-quality and consistent cut of all blades whilst minimising the material that is removed from the blade. The system warrants consistently sharp blades although these show different degrees of wear.

Sharp blades in about 4 minutes
A complete grinding cycle for all 48 blades including blade bank out/in takes only four minutes depending on the number of cycles entered to the terminal. The blade bank swings out to the side and offers an excellent view of the grinding process.

Automatic and safe
Swing out the blade bank, fold up the grinding shaft and couple two oil hoses. Then press an external control to start hydraulic grinding. An electronic sequence control moves the shaft up and down and to the sides. No sparks can fly off because all grinding takes place alongside the machine.

Pivoting headboard

The meaningful system

- Up to 4.5 m^3 extra capacity
- Compact build
- Fast and thorough unloading
- Less load on the chain-and-slat floor
- Variable degrees of compression in loading application
- Increased drawbar tongue load for increased traction

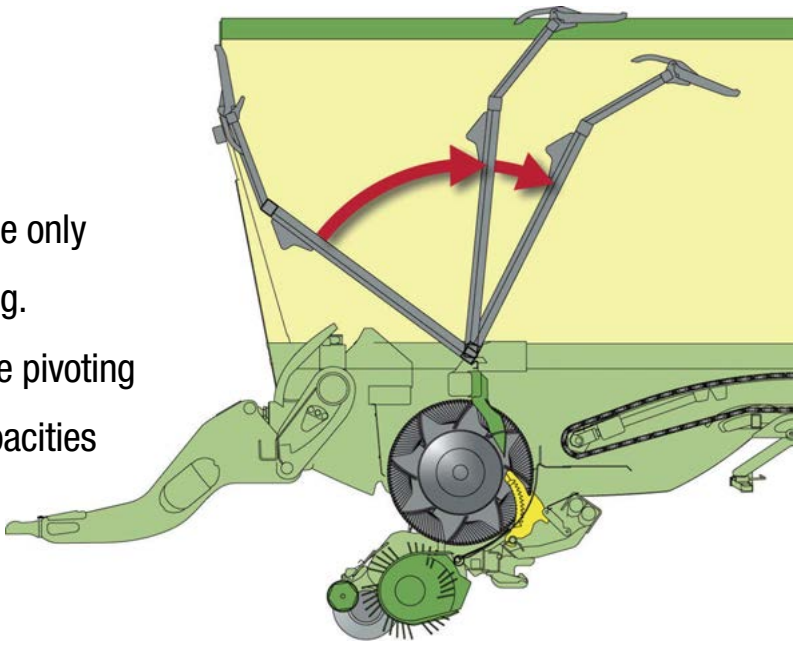
In loading position
The movable headboard is in mid position when the forage wagon is loading. This position is stored to the control system. It is easy to adapt the board to varying harvest conditions.

Added 4.5 m^3 capacity
When the sensor detects that the machine is filled to capacity, the headboard moves automatically towards the tractor which increases its capacity by another 4.5 m^3, making ZX an even more viable machine.

As forage transport wagon
When the machine is used to haul chopped forage, the headboard moves fore into its end position, increasing the machine's capacity, offering the chute a larger target range, and increasing the load on the drawbar, which in turn increases traction.

Pack in more

Road speeds and trailer capacities are not the only parameters for viable farming and contracting. Loading and unloading rates are vital too. The pivoting headboard boasts the machine‘s loading capacities by 4.5 m^3, increasing the tractor‘s rear wheels‘ traction, compressing the material to a suitable degree and supporting a fast and effective unloading.



Powerful
The robust headboard is operated by hydraulic rams on either side. Its movement is controlled either manually or automatically. The clear headboard provides an excellent view of the load area.

Pushing plate
As the headboard pivots aft, it acts as a plate that pushes the crop to the rear, thus emptying the machine thoroughly and completely. Its pivoting action is fully customizable, including start, frequency and intervals. All unloading sequences run fully automatically.

Perfect for first passes
The headboard tilts towards the tractor and the articulated drawbar lowers – the ideal scenario for the forager chute filling the wagon following behind and an effective way of eliminating crop loss and ensuring optimum fills.

Take on more

and boost your work rates

- PowerLoad with pre-compression sensor and filling level detector exploits the machine's full capacity
- VariLoad controls the floor speed automatically and relative to the crop density
- The forward sloping chain-and-slat floor increases the capacity and reduces the pto input
- Robust steel floor – great longevity

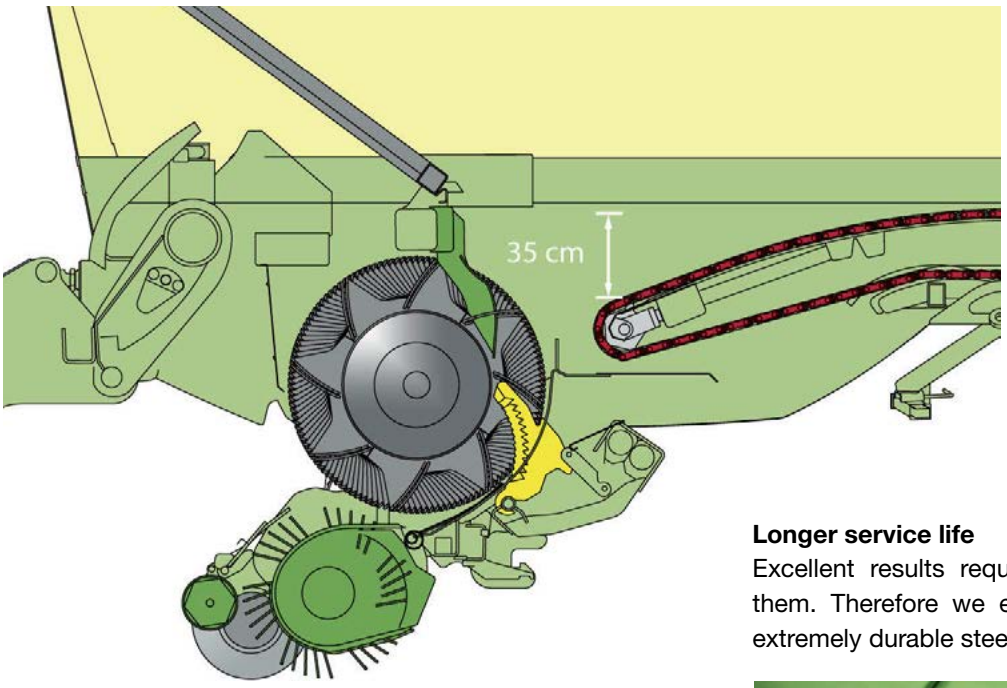
VariLoad – the powerful auto loading system
A strain gauge measures the load on the cross brace down on the headboard. When the gauge detects the load and the crop density inside the wagon has reached the default limit, the chain-and-slat floor starts moving automatically, adapting its advance speed to the strain measured by the sensor. A truly impressive system that results in uniform fills, machine use to capacity, and reduced fuel consumption.

Making the most of machine capacity
The volume sensor on the flap at the top of the headboard senses the degree of filling. As soon as the flap moves beyond a default angle, the system activates the chain-and-slat floor. Reducing operator fatigue and utilizing the machine to potential, the system either relies on the data provided by the load sensor or the volume sensor or both.

Advancing to success

The ZX range was designed with the contractor in mind.

The sloping chain-and-slat floor achieves immense efficiencies and easy-loading and boosts your capacities – all at the same time.



Longer service life
Excellent results require excellent tools to accomplish them. Therefore we equipped our ZX wagons with an extremely durable steel floor.

The powerful chain-and-slat floor
Sloping towards the front end, it reduces the length of the feed channel and thus the amount of power required to feed the material into the load area, making for a faster and gentler crop feed. Your benefit: maximum efficiency, minimum consumption.

The over-achiever

Powerful, fast and efficient

- Double chain-and-slat floor with two separate motors
- Ultra-durable flat link chains
- Standard auto fast mode engages fast advance relative to the current load
- Conical frame and tapering sides for smoother unloading

Robust
The 240 mm (9.4") high side beams are made from channel steel and combine with a large number of high-tensile stanchions and hot-galvanized, powder-coated and plastic-laminated sides that offer ultimate durability and strength. The sides are hot-galvanized, powder-coated and plastic-laminated. Quality through and through.

Double chain-and-slat floor
The use of two chain-and-slat floors doubles the machine's unloading efficiency. The box section chain slats offer good grip and a positive feed. The chains are pretensioned mechanically to prevent wear and tear.

Flat link chains
The four flat link chains feature massive joints and are extremely hard-wearing and high-tensile. The wide chain links and sprocket teeth translate into effective advancing.

It‘s a peach

In addition to quick loading, the KRONE ZX dual-purpose forage wagons also offer superior unloading – courtesy of high-end engineering that withstands the permanent exposure to huge masses of material. Two chain-and-slat floors, i.e. four flat link chains and two motors and a conical structure that widens to the rear will always deliver.

No losses
You can fit a plate that shrouds the cutting rotor and the feed channel in maize foraging applications when the machine is filled by the forage harvester. The plate keeps the rotor and passage clean and free of material.

Powered from either side
Each chain-and-slat benefits from its separate drive assembly. The gearboxes and hydromotors are journalled inside the frame without any strain. The operator can double the floor’s advance speed via a spool and relative to the current filling level.

Easier unloading
The conical design offers the advantage of providing a wider outlet area for a smoother material flow. Also, all obstacles in the material flow have been eliminated. Nothing is left behind.

ZX GL

Dual-purpose forage wagons

- One wagon – two purposes: hauling maize chops and harvesting silage grass
- Sturdy steel sides and hydraulic tailboard
- Massive, up to 56 m^3 capacities (DIN 11741)
- Hydraulic headboard

Dependable in the heat of harvest

The GL models are the heavy-duty models in the ZX range. Rated to a 31 t gross weight, these massive machines boast huge capacities, highest work rates, a superior quality of cut and absolutely dependable operation – qualities that are crucial at harvest time. Lacking top hoops and ropes, they make perfect trailers to run in the maize harvest chain.

Harvesting without losses

Offering capacities of 43 m^3 to 56 m^3 (DIN 11741) in versatile applications and featuring solid steel sides and no discharge rollers, the ZX dual-purpose 430 GL, 470 GL, and 560 GL models are our 'contractor' machines. These models are designed to deliver superior efficiency and profits.

It's safe, too
This sensor switch on the tailboard stops the chain-and-slat floor as soon as the pick-up has filled the body to capacity. The floor automatically stops advancing to protect the tailboard from damage.

Controlled from the cab
The steel tailboard is operated automatically by two single-acting rams. The board is locked and unlocked automatically – very convenient.

Pump it out
Courtesy of a wide open tailboard, two chain-and-slat floors and smooth, vertical sides, ZX GL disposes of gigantic masses of crop in no time and at no trouble.

ZX GD

Dual-purpose self-unloading forage wagons

- 3 large-diameter discharge rollers (470 mm (1'6.5")) are standard specification
- Discharge rollers protected through main drive shaft
- Stopping the bottom roller auto-stops the floor
- Both bottom rollers spin at higher speeds for consistent unloading

Convenient
The side door with foldable ladder offers convenient access to the load area for easy removal of any crops that may have been left in the machine.

Unloading faster
Powered directly by the main gearbox, the discharge rollers perform absolutely dependably. In addition, they are overload protected by a clutch inside the main drive shaft to eliminate any downtime.

Reaping success

The first step in producing quality silage is to spread the material in a perfect mat on the clamp. The ZX GD models with steel sides and up to three large-diameter rollers at the rear unload the material layer by layer and across the full length of the clamp for easier rolling.

The heavy-duty driveline
The drive power flows through extra robust gearbox and down the 1" roller chains, which feature spring-loaded chain tensioners. No power is lost. The chains are powered by a shaft that runs down the chassis, driving a right-angle gearbox inside one of the axial section beams.

The chain-and-slat floor stops automatically
When the machine is filled to capacity and material is pushing the bottom rotor to the rear, a motion detector stops the chains and the discharge rotors start off smoothly.

Three rotors for three-fold power
Specify your forage wagon with three enclosed rollers and an adjustable tailboard and you can produce even more uniform mats. Studded with V-tines, the rotors spread the crop across the full machine width, with the two bottom rotors spinning faster than the top rotor to cut down on unloading time.

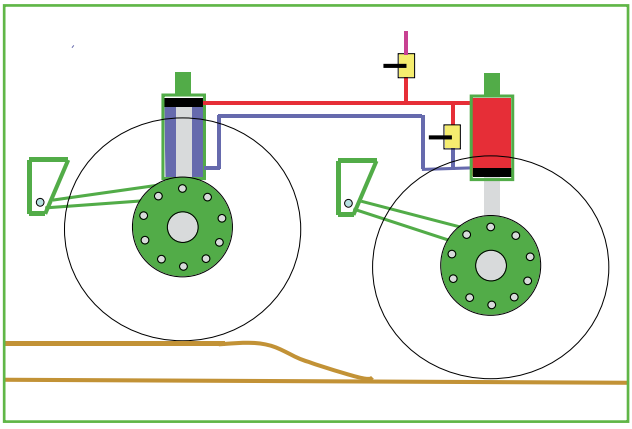
Tandem axle

Hydraulic auto-levelling

- Anti-roll design for best road stability
- Maximum stability on slopes
- Uniform wheel loading – reduced wear
- Steered axles protect the sward from damage and the tyres from excessive wear

Full adaptation
The axles provide for generous travel, distributing the load uniformly to the rear and front wheels at all times. They also offer excellent climbing and running on steep clamps.

Maximum stability
To compensate for undulating ground, the oil flows from the cylinder on the front wheel to the cylinder on the rear wheel on the same side of the machine and vice versa. Using two separate circuits inside one axle assembly eliminates the risk of rolling and maintains the body level at all times.



On the road to success

Large wheels and high sides pose high demands on the running gear of a dual-purpose forage wagon. The caster-steer and forced-steer tandem axles offer hydraulic levelling to cater for all requirements and situations. Each assembly offers maximum roll stability when travelling at speed and around bends. More than that, it provides great stability on the slope. These axles offer a maximum of safety and operator comfort.

Superior road stability
A separate oil circuit on either machine side and equal oil pressures on either side of a ZX tandem or tridem axle assembly translate into greater road stability and a reduced risk of roll when working on slopes or managing tight turns at speed.

Gentle on the sward
The axle steering system is standard specification. Treading softly on the grass and pulling light in turns, the steered rear wheels reduce tyre wear and the strain on the running gear.

Radial plye
800/45 R 26.5 TL 174 D

Radial plye
with Trac lugs
800/45 R 26.5 TL 174 D

Radial plye
710/50 R 26.5 TL 170 D

Large 26.5" wheels
A choice of different treads and carcasses is available for the tandem axle tyres to provide the perfect outfit for every situation.

Tridem axle assembly

Hydraulic auto-levelling

- Tridem axle is standard on ZX 560 GL and ZX 560 GD
- Up to 27,000 kg (59,524 lbs) axle load – 3 axles
  Up to 30,000 kg (66,138 lbs) technical load
- Superior operator comfort, great stationary and on-the-move stability
- Steered front and rear axle
- Lift-out front axle

Excellent ride

The six wheels on the tridem assembly ensure soft treading and full ground contour following. The hydraulic auto-levelling system between the hydraulic rams on the front and rear wheels and the separate circuits make it easy for the machine to run behind the tractor. There is no risk of rolling, instead you enjoy superior stability. The machine may be approved to 60 km/h (37 mph).

Heavy duty

The tridem axle and the ball hitch drawbar for bottom attachment allows the ZX 470 and ZX 560 to offer gross weights of up to 34,000 kg and travel at 40km/h or 60km/h. The heavy-duty chassis features hydro-pneumatic suspension and hydraulic levelling for superior stability.

Steered wheels
A steered front or rear axle ensures excellent tracking in every curve, protecting the sward and minimizing drawbar power.

Lifting axle
The front axle can be raised hydraulically from the terminal to save tyre tread on empty hauls.

Full flotation
Each axle benefits from individual suspension and hence offers huge travel. As a result, each wheel puts the same pressure to the ground no matter how undulating the terrain.

Radial plye
800/45 R 26.5 TL 174 D

Radial plye
with Trac lugs
800/45 R 26.5 TL 174 D

Radial plye
710/50 R 26.5 TL 170 D

Suitable boots for the tridem axle
Select the tyres that best suit your applications. Wide tyres give easier pulling on soft ground and reduce the risk of compaction.

Brakes and steering

The highest level of safety

- Electronic EBS brake features:
  - ALB load-sensitive brake power control
  - ABS anti-lock brake system
  - RSS roll stability support
- Castering, hydraulic or electronic forced steer axles, easy attachment

The brakes

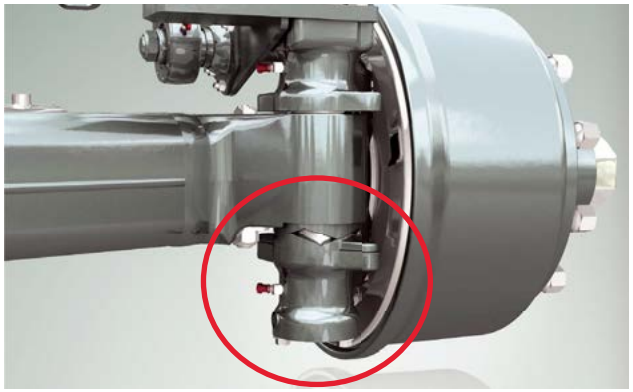
The ZX dual-purpose forage wagons have dual line air brakes as standard specification. The hydraulic load-sensitive proportional valve controls the brake pressure relative to the load. The hydraulic brake system is an option in certain markets.

Enhanced operational dependability

The optional electronic EBS brake system comprises ALB, ABS and RSS functions. The roll stability system intervenes by braking whenever there is a risk of rollover so that ZX will not roll over when managing narrow bends at speed. All functions interact to provide safe operation.

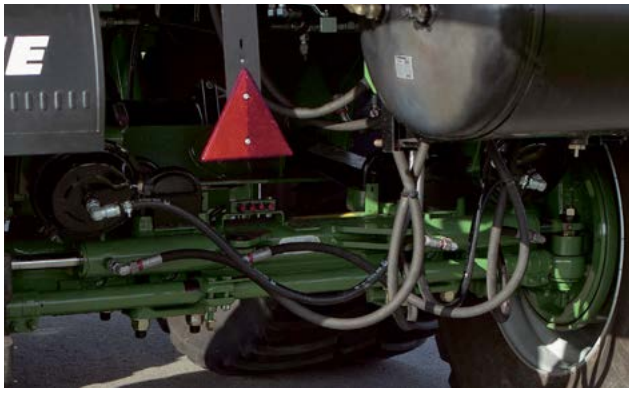
Better ride

As a leading manufacturer of commercial trailers, we do know the ropes of trailer manufacturing. Ever bigger and faster tractors, ever higher trailer capacities and payloads call for a fundamental rethink of road and field safety. Therefore, KRONE offers an electronic brake system that has already proven its worth on our commercial trailers. Steered axles help protect the swath and provide added safety.



Best straight travel
The cam discs on the stub axles are locked relative to the load that is currently placed on the axle, which results in maximum road stability and safe turning. The deflection forces are lowest when the machine is empty.

Caster-steer axles
The passive caster steer tandem axle is base specification for all ZX 430 and ZX 470 models. This axle assembly offers reduced tyre wear, reduced scuffing and light pulling in curves.



Locking cylinder
The caster steer system can be locked for shunting and clamping by operating a locking cylinder from the terminal. If the tractor is specified with ISOBUS, this auto lock system ensures quiet castering at speeds of more than 30 km/h (19 mph).

Managing tightest turns
Doing without a control linkage, the passive caster steer system provides for plenty of clearance around the drawbar, which results in tightest turns.

Forced steering

Active steering from the cab

- Option on tandem axles, standard feature on tridem axles
- Hydraulic or electro-hydraulic (option) steering on tandem axles
- Electro-hydraulic steering on tridem axles
- Light and smooth ride, low tyre wear, perfect manoeuvring
- Electronic steering allows operators to interfere by countersteering

Hydraulic attachment for tandem axle models
The steering system on tandem axle models is attached to the tractor via a standardized ball hitch, a steering rod and a hydraulic master cylinder which controls the oil flow to and from the power steering ram.

Hydraulic or electronic control

Forced-steer wheels protect the sward and the tyres as the machine is making the turn, reducing the load on the tandem or tridem axle and resulting in easier pulling. The electronic system allows the operator to interfere with the shunting or countersteer manually on the slope or in critical situations on the clamp.

Electronic forced steering
An electronically controlled forced-steer system controls the axle via the tractor's standard ball hitch, a steering rod and a sensor that senses the wagon's current angle relative to the tractor and sends the information to the axle steering system via the system's computer. This steering version uses a very compact linkage system which provides better agility than the hydraulic system.

Safe travel on the road
The electronic forced steering system offers superior ride stability, quiet running and safety at speed, starting to decrease the intensity of steering when the machine's forward speed reaches 30 km/h (19 mph) and reducing it to zero when the combination reaches 50 km/h (31 mph).

Beware of the edge
The situation is familiar to every farmer – the machine is at risk of slipping off the clamp whilst rolling too closely along the edge. In this situation, the electro-hydraulic forced steering system allows the rear wheels on a tandem assembly (or the front and rear wheels on the tridem axle) to steer away from the edge.

Steering uphill
The electro-hydraulic forced steering system allows operators to countersteer in situations where the wagon is at risk of drifting downhill when travelling at right angles to the slope. The system steers the leading and rear axles on a tridem assembly.

Attachment

Easy and convenient

- Bottom-mount drawbar with higher tongue loads
- Drawbar suspension for quiet running
- Hitch ball for high operator comfort

Bottom-mount drawbar
The ZX dual-purpose forage wagons have bottom-mount drawbars, which make for tongue loads of up to 4,000 kg (8,818 lbs) if used with ball hitch systems.

Suspended drawbar
The drawbar suspension system uses nitrogen tanks on the rams to absorb all shock loadings for superior operator comfort.

An ideal system

Bottom mount attachment systems on forage wagons transfer more load to the tractor's front axle and give the four-wheel drive system more grunt. The ball hitched ZX models impress by their quiet running and high ride comfort.

Easy
ZX features a foldable stand. The articulated drawbar adjusts hydraulically to the tractor's hitch height. It's easy.

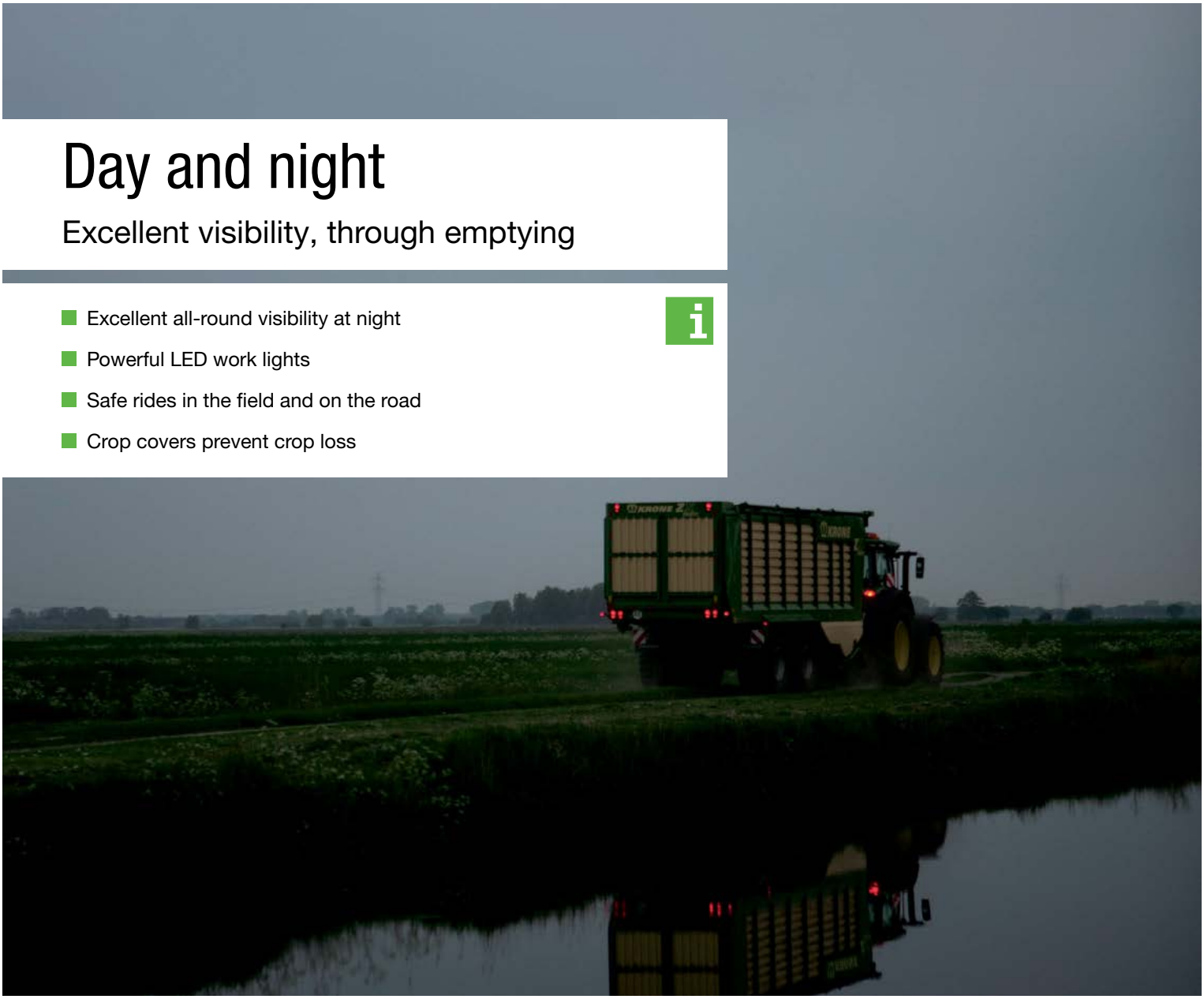
Convenient attachment
The operator can also control the articulated drawbar from these buttons on the front of the machine. This way, he monitors the hitching process.

Hitch ball 80
This hitch ball offers maximum operator comfort and minimizes wear on your equipment as the combination runs smoothly without jolting or experiencing shockloads. Forced-steering systems require ball hitch attachment.

Day and night

Excellent visibility, through emptying

- Excellent all-round visibility at night
- Powerful LED work lights
- Safe rides in the field and on the road
- Crop covers prevent crop loss



Spot on
The powerful LED lamp inside the body illuminates the load area for effective work during those long working days into the night. Up to four extra sidelights are available for the ZX model as an option.

Optional camera
An optional camera is available for all ZX models. Its footage is shown on the colour screen monitor, providing enhanced visibility to the operator and making his job easier and safer.

Visible from far away
LED sidelights and optional reflective strips mark the contours of the machine so other operators recognize the full size of the machine from far away.

Safe travel

Night work is a challenge for all operators on the harvest team and therefore KRONE offers an optional light kit for ZX models that brings maximum safety to all involved in the campaign. Optional crop covers ensure no crop is lost during road transport and also increases road safety.

Flexible and safe
The optional crop covers are flexible to adapt to the contours of the forage mass. Hinged to the sides, they cover the material effectively and will not open as the combination travels at speed.

Covers down
The open covers fold simply down the sides of ZX wagons. There is nothing in the way that might obstruct filling.

Hydraulic control
The covers are operated by hydraulic motors for quick and dependable control.

Control unit

Tailored to your tractor

- Convenient
- Clear concept
- Easy
- CCI-ISOBUS – one box for all

The Delta control box

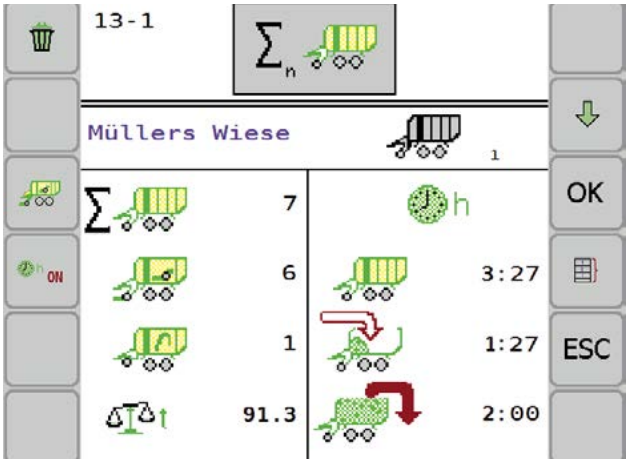
This terminal offers operators full fingertip control of all loading and unloading operations. Here you retrieve the number of hauls and operating hours and pin point potential malfunctions but also control the LED work lights, the crop covers and silage additive system. The backlit digital display screen provides an excellent overview of all machine functions. In addition, you control the auto loading and unloading system which automatically locks the steered axle, the electric forced steering system, the automatic drawbar and blade sharpener. In addition to the fingertip control option, you can also operate the blade bank from the ground on two controls by the side of the bank.

Practical and convenient

Easy operation is a must. Our shockproof operator terminals are compact, clear-cut and easy to operate. They feature backlit buttons to reduce operator fatigue during those long shifts well into the night. The CCI terminal is a universal operator control unit, which is compatible with a wide variety of ISOBUS implements from many manufacturers.

CCI 1200 terminal
CCI 1200 is the universal terminal for ISOBUS-compatible machines. Offering a large 12" colour touch screen and all Delta functions, CCI 1200 allows users to split the screen and view all machine control elements on one screen and the camera footage on the other.

ISOBUS tractor terminal
The ISOBUS terminal on the tractor offers the extra feature of locking the steered axle automatically when reversing the combination or when exceeding a default speed (e.g. 30 km/h (19 mph)).



Optional weighing system
The electronic weighing system uses sensor pins inside the drawbar and on the tandem/tridem axle with hydraulic levelling. The system determines the weight of the load by computing the difference between the gross weight and the weight of the material left on the machine after unloading is completed.

Technical Data

Dual-purpose forage wagons

		ZX 430 GL	ZX 430 GD	
DIN volume (DIN 11741)	m^3	43	43	
Total length	approx. mm	9,845 (32'4")	9,845 (32'4")	
Total width*	approx. mm	2,950 (9'8")	2,950 (9'8")	
Total height*	approx. mm	3,990 (13'1")	3,990 (13'1")	
Platform height	approx. mm	1,700 (5'7")	1,700 (5'7")	
Track width	approx. mm	2,050 (6'9")	2,050 (6'9")	
Drawbar tongue load	kg (lbs)	4,000 (8,818)	4,000 (8,818)	
Gross weight c/w tandem axle	kg (lbs)	24,000 (52,910)	24,000 (52,910)	
Gross weight c/w tridem axle	kg (lbs)	–	–	
Pick-up work width (DIN)	mm	2,125 (7')	2,125 (7')	
Hydr. artic drawbar ground clearance	mm	750 (2'5.5")	750 (2'5.5")	
Crop feed width	mm	1,910 (6'3")	1,910 (6'3")	
Cutting rotor diameter	mm	880 (2'11")	880 (2'11")	
Chop length 24 blades 48 blades	 mm mm	 74 (2.9") 37 (1.5")	 74 (2.9") 37 (1.5")	
Discharge rollers	mm	–	3 (2)	
Available tyres 800/45 R 26.5 TL 174 D 710/50 R 26.5 TL 170 D 800/45 R 26.5 TL 174 D Trac Profil		 Standard Option Option	 Standard Option Option	
Input power	approx. kW/hp	155/210	155/210	

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

**depending on specification*

	ZX 470 GL	ZX 470 GD	ZX 560 GL	ZX 560 GD
	47	47	56	56
	10,595 (34'9")	10,595 (34'9")	11,990 (39'4")	11,990 (39'4")
	2,950 (9'8")	2,950 (9'8")	2,950 (9'8")	2,950 (9'8")
	3,990 (13'1")	3,990 (13'1")	3,990 (13'1")	3,990 (13'1")
	1,700 (5'7")	1,700 (5'7")	1,700 (5'7")	1,700 (5'7")
	2,050 (6'9")	2,050 (6'9")	2,050 (6'9")	2,050 (6'9")
	4,000 (8,818)	4,000 (8,818)	4,000 (8,818)	4,000 (8,818)
	24,000 (52,910)	24,000 (52,910)	–	–
	31,000 (68,343)	31,000 (68,343)	34,000 (74,956)	34,000 (74,956)
	2,125 (7')	2,125 (7')	2,125 (7')	2,125 (7')
	750 (2'5.5")	750 (2'5.5")	750 (2'5.5")	750 (2'5.5")
	1,910 (6'3")	1,910 (6'3")	1,910 (6'3")	1,910 (6'3")
	880 (2'11")	880 (2'11")	880 (2'11")	880 (2'11")
	74 (2.9") 37 (1.5")	74 (2.9") 37 (1.5")	74 (2.9") 37 (1.5")	74 (2.9") 37 (1.5")
	–	3 (2)	–	3 (2)
	Standard Option Option	Standard Option Option	Standard Option Option	Standard Option Option
	155/210	155/210	175/240	175/240

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, round and square balers as well as the high-capacity and self-propelled BiG M mower conditioners and our BiG X forage harvesters.
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Heinrich-Krone-Straße 10
D-48480 Spelle

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

info.ldm@krone.de | www.krone.de

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