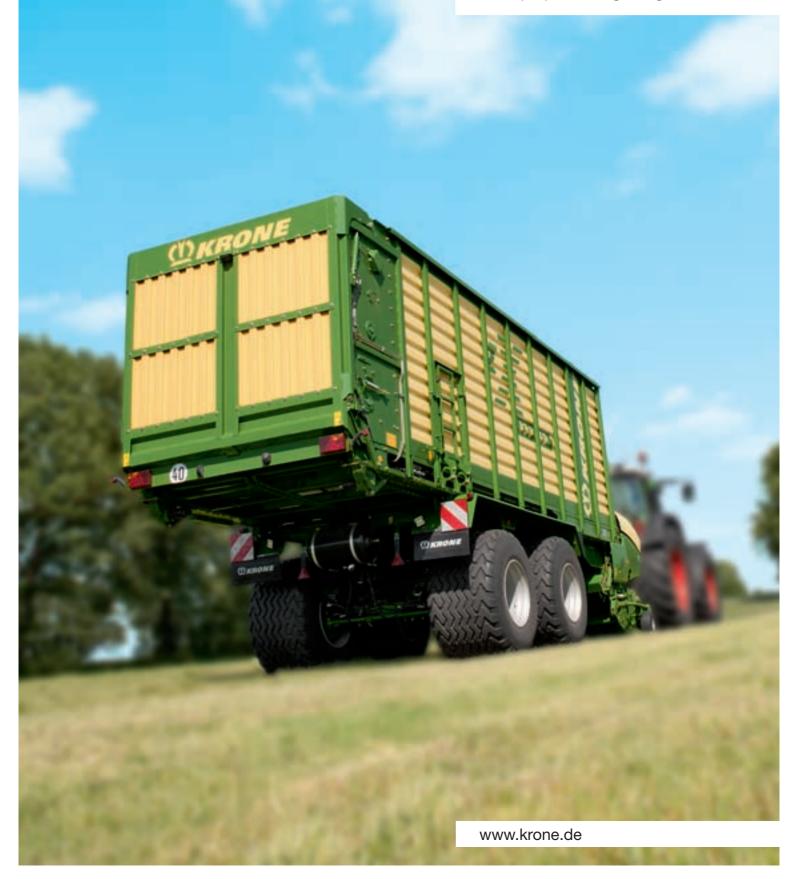


ZX

Dual-purpose forage wagons





Self-loading or harvester loaded forage wagons

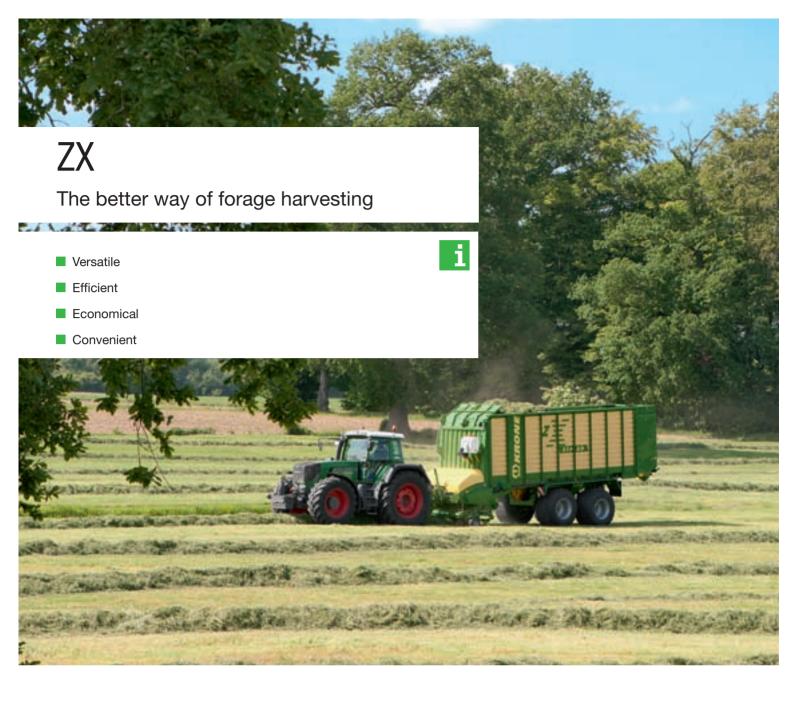
- Hydraulic hinged front flap
- Camless EasyFlow pick-up
- Massive cut-and-feed rotor with wide Hardox plated tines
- Central knife selection system activates 0, 23, 46 knives
- Steel floor slopes to the front
- Split chain-and-slat floor with flat link chains
- Discharge roller overload protection through main driveshaft
- EBS electronic braking option





ZX is KRONE's range of versatile forage wagons, which serve two purposes to boost your profitability.

The pick-up unit	4
The rotor cutter	6
The cutting system	10
The load area	14
ZX 400 GL, ZX 450 GL, ZX 550 GL	18
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ZX – the high-capacity range						
Model	Discharge rollers	Bodywork	Capacity (DIN 11714)	No. of knives		
ZX 400 GL	-	Solid steel	38 m³ (1,341 ft³)	46		
ZX 400 GD	+	Solid steel	38 m³ (1,341 ft³)	46		
ZX 450 GL	-	Solid steel	43 m³ (1,518 ft³)	46		
ZX 450 GD	+	Solid steel	43 m³ (1,518 ft³)	46		
ZX 550 GL	_	Solid steel	53 m³ (1,871 ft³)	46		
ZX 550 GD	+	Solid steel	53 m³ (1,870 ft³)	46		

One machine – many applications

Viable farming and contracting means boosting efficiency, cutting costs and utilizing machinery to its full potential all year round. This is the backdrop against which KRONE developed the ZX combination wagons. These forage wagons serve two purposes equally well, either running alongside or

behind the forage harvester or loading crops by themselves using their pick-up system.



# **Nothing is lost**

Lacking cross hoops and ropes as well as sliding tarp, the ZX models offer excellent loading from a forage harvester, allowing the stream of crop flowing from the chute into every corner of the loading space.



# Unloading without discharge rollers

The dual-purpose ZX 400 GL, ZX 450 GL, ZX 550 GL models are high-capacity machines with rigid steel sides, which ensure your valuable crop is clamped without loss. The two powerful chain-and-slat floors are driven by separate motors and move the material to the rear and through the huge opening, minimizing the amount of time spent on the clamp and maximizing your efficiency.



# Picking up fast and cleanly

The camless EasyFlow pick-up features a massive rotor cutter, which produces 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 system contractors ask for.



# Unloading via discharge rollers

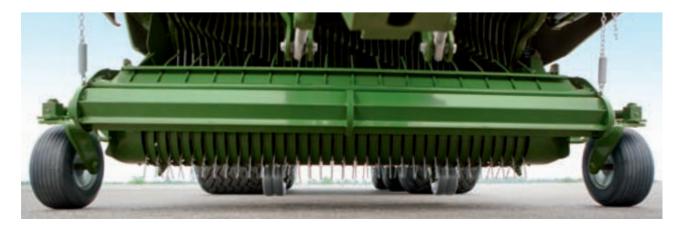
Their rigid steel structure and up to three discharge rollers make the ZX 400 GD, ZX 450 GD, ZX 550 GD models very versatile machines, which unload the material in uniform mats to reduce the workload on the clamp and provide the best conditions for high-quality silage.



# EasyFlow - more efficient and more effective

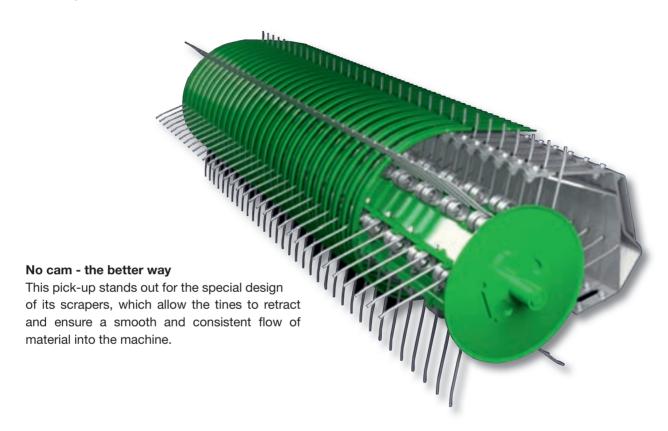
The camless EasyFlow pick-up is KRONE's response to the challenges posed by wide swaths, heavy crops and high workrates. Working at a width of 2,100 mm

(6'11") (DIN 11220) and spinning at a higher speed, EasyFlow is the safest bet for those who seek to boost their efficiency.



# Cost effective and powerful

EasyFlow is a camless pick-up that offers obvious benefits. Using fewer moving parts than a controlled cam track, this system is simpler by design and gives extremely quiet running, resulting in reduced wear and therefore less maintenance as well as fewer service costs. Operating at a 30 % higher speed, EasyFlow is even more effective and powerful now.



# Low-maintenance driveline

The chain is tensioned automatically and overload protected by a star ratchet clutch.

# Roller crop guard

This parallelogram-guided roller ensures a continuous flow of crop at maximum pick-up capacity.

# **Closely spaced tines**

Boasting six rows of tines spaced 55 mm (2.2") apart, EasyFlow also picks up the short stems.











# Absolutely adaptable

The pick-up pivots in a linkage system that pushes the unit over the ground. Pivoting freely, the unit adapts to ground undulations both axially and transversely, leaving behind an absolutely clean surface.



# **Excellent tracking**

The pneumatic guide wheels on either side of the pick-up offer height control for adaptation to any condition. Tracking excellently behind the tractor during headland turns, the system avoids scuffing and protects the turf.



# Guide wheels at the rear

Optional guide wheels at the rear of the unit enhance its overall running and ensure all material is picked up from soft and wet ground. Not running in the tractor wheelings, these height-adjustable wheels ensure the depth of the pick-up tines is maintained.



# Plenty of ground clearance

The articulated drawbar with double-acting ram is standard specification and provides for a generous ground clearance of up to 75 cm (2'6") – enough to roll on clamps without pushing up material.





# Higher outputs, better cuts

The 880 mm diameter and 1,840 mm wide ZX cut-and-feed rotor features eight helix rows of tines to deliver an enormous performance. The tines feature extra wide

feed plates to provide gentle crop treatment, enhanced quality of cuts and reduced power input.



# Faster and easier crop feed

The ZX cut-and-feed rotor evolved from decades of field experience.

It is powerful and soft on the crop as well as low-maintenance and modest in its power requirement. Depending on model and conditions, the ZX dual-purpose forage wagons can be operated by 143 hp+ tractors.





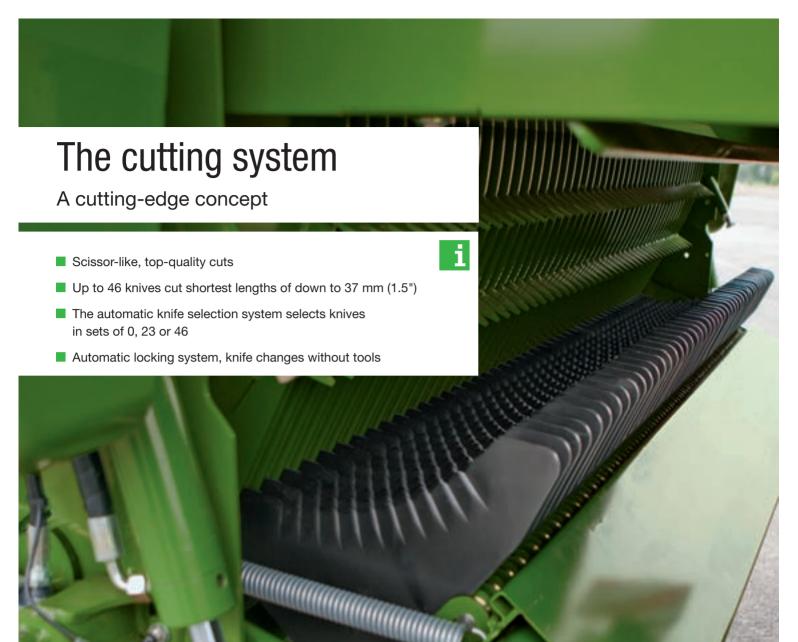
# Extra strong driveline

Drive power for the rotor comes from oilimmersed spur gears that require no attention at all. The driveline copes with highest loads and warrants dependable operation during the peak season.



# Hardox for longevity

The cut-and-feed unit is exposed to the highest strains; so we made its tine plates and scrapers from Hardox steel to reduce wear and increase the service life.



# The crop is pulled over the blades

The knives cut down their full lengths, so the system runs easier and quieter. The wavy blades maintain their sharpness over extended periods of time.



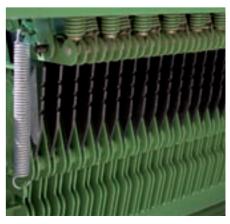
# **Cutting like scissors**

This technique prevents the stems from slipping through the small gap between the wide tine plates and the knives and eliminates the risk of mushing, ensuring perfect cuts.



# Individual knife protection

Each knife benefits from its own spring-loaded protection and retracts and swings back automatically after the object has passed.



# Finest quality cuts!

Cutting like scissors... The secret behind this system, which cuts the crop like scissors, are the extremely narrow gaps between the wide tine plates and the spring-loaded knives. As many as 46 knives are available to produce perfect chops. The central knife selection system operates them in sets of 23 or 46 for quick chop length adjustment.



# Operating the cutting system from the tractor

The operator lowers the knife bank hydraulically to sharpen the knives or remove potential blockages. Once the blockage is removed, the knife bank swings back into position. You can also operate the unit from the ground.



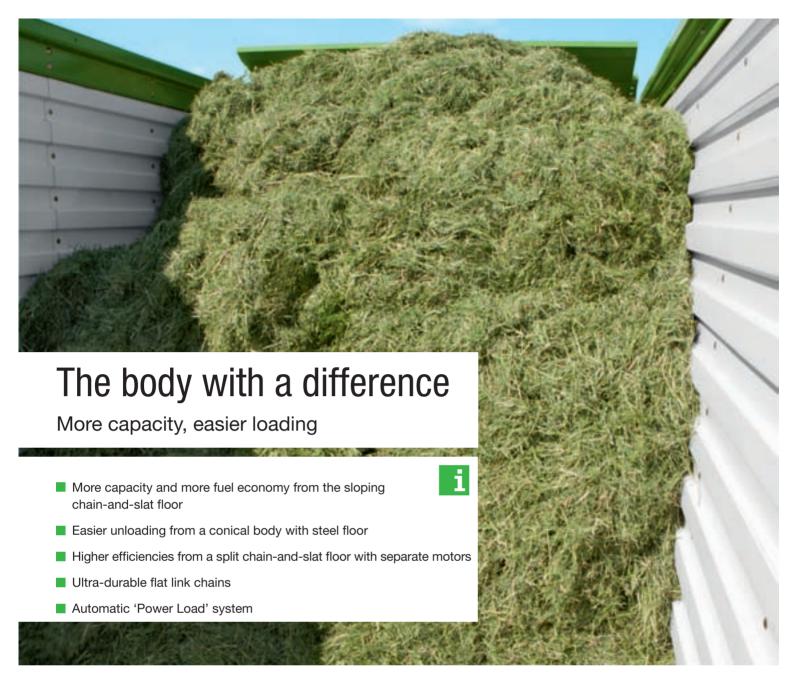
# Automatic knife selection system

The central knife selection system makes it easy for the operator to set the desired chop length. ZX operators can select sets of 23 or 46 knives and set the nominal chop lengths to 74 mm (3") or 37 mm (1.5"). 0 means the system will not chop the crop.



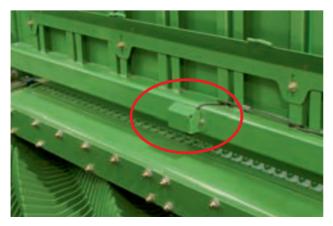
# Knife fitting/removal without tools

Lower the knife bank hydraulically, move the knives to position 0, unlock and remove them from above – it's convenient and user-friendly.



# Automatic 'Power Load' system

A strain gauge measures the load on the cross beam that braces the lower part of the front wall. As soon as the gauge senses a load and the crop density in the wagon reaches the limit, the chain-and-slat floor starts moving automatically, filling the machine uniformly to capacity while keeping fuel consumption low.



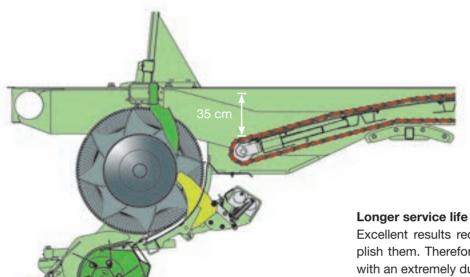
# Filling to capacity

The volume sensor on the front flap at the top senses the degree of filling. As soon as the flap moves beyond a preset angle, the system activates the chain-and-slat floor. The operator can use either the load sensing system or the volume sensing system or both systems together.



# Advancing to success

The ZX range was designed with the contractor in mind. The sloping chain-and-slat floor is an achievement that brings efficiency and easy-loading plus boosted capacity – all at the same time.



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



# Powerful chain-and-slat floor

As the chain-and-slat floor slopes at the front it shortens the passageway through which the crop moves into the machine. As a result, less power is required to feed the material into the load area and the process is faster and gentler on the crop at the same time for maximum efficiency at minimum consumption.







# WRONE.



# 1. Strong

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-galvanised, powder coated and plastic-laminated sides to give ultimate durability and strength.

# 2. Professional

Two chain-and-slat floors and the conical design of the load area combine to ensure smooth and fast unloading – bracing you for wet and heavy crops.

# 3. Powered from either end

The gearboxes and their respective hydro motors are integrated in the chassis – one motor on each end and for each moving floor. The operator can double the floor's advance speed from a spool.

# 4. Flat link chains

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











# Folding front flap

The top section of the headboard folds down 90° to provide for easier loading from the forage harvester. It is in vertical position when the wagon is running alongside the forager and inclines to rear when operating as a self-loading forage wagon. The automatic loading system is integrated in this top section.



# No crop is lost

You can fit this plate when using the wagon as a maize trailer to run alongside or behind the forage harvester. The plate keeps the rotor and passageway clean and free of crops.

# Spot on

The powerful LED lamp inside the body illuminates the load area for effective work during those long working days into the night.





# Dependable in the heat of harvest

The GL models are the heavy-duty models in the ZX range. Rated to a gross weight of up to 31 tonnes, these massive machines boast huge capacities, highest workrates, a superior quality of cut as well as absolutely

dependable operation – qualities that are crucial in silage harvesting. The ZX bodies are particularly strong and robust. Lacking top hoops and ropes, they make perfect trailers to run in the corn harvest chain.



# Harvesting without losses

Offering capacities of 38 m³ to 53 m³ (DIN 11714) in versatile applications and featuring solid steel sides and no discharge rollers, the ZX dual-purpose 400 GL, 450 GL, and 550 GL models are our 'contractor' machines. These machines are designed to deliver highest levels of efficiency and profitability.



# It's safe, too

This sensor switch on the tailboard stops the chainand-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.



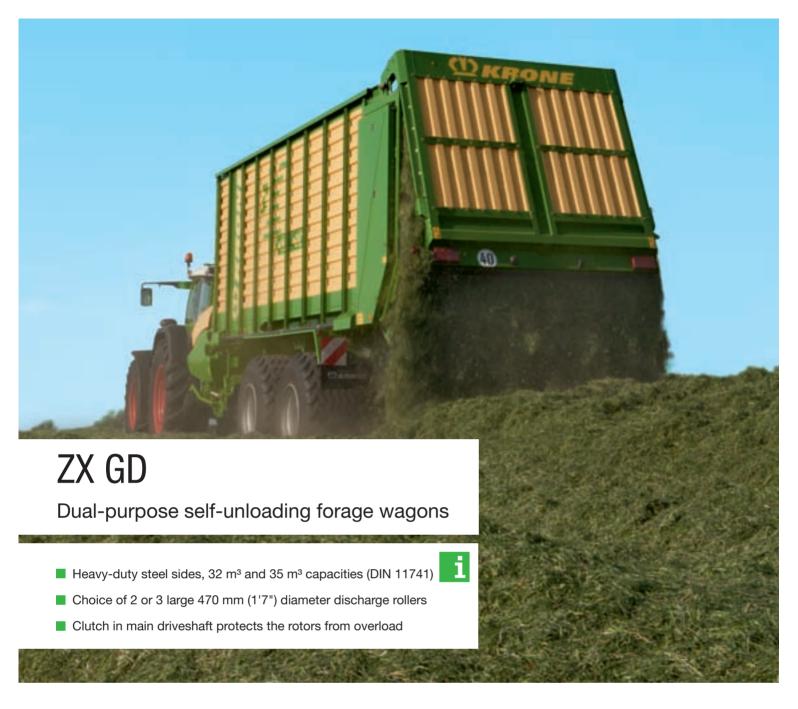


### Cab based control

The steel tailboard is operated by two single-acting rams on the sides – a convenient and time-saving system.

# Clearing out effectively

Featuring a wide opening tailboard, two chain-and-slat floors as well as vertical and smooth sides, the ZX GL model effectively pumps out huge masses of forage.



# Useful

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.



# **Fast**

The direct driveline to the discharge rollers gives dependable efficiency during the unloading process. The main driveshaft has an integral overload clutch that protects the rotors and speeds up the unloading process.



# Reaping success

The first step in making quality silage is spreading the material in uniform mats 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 heap for effective clamping.





# The chain-and-slat floor stops automatically

When the machine is filled to capacity and material starts pushing the bottom rotor to the rear, the motion detector stops the advance and the discharge rotors start off smoothly.



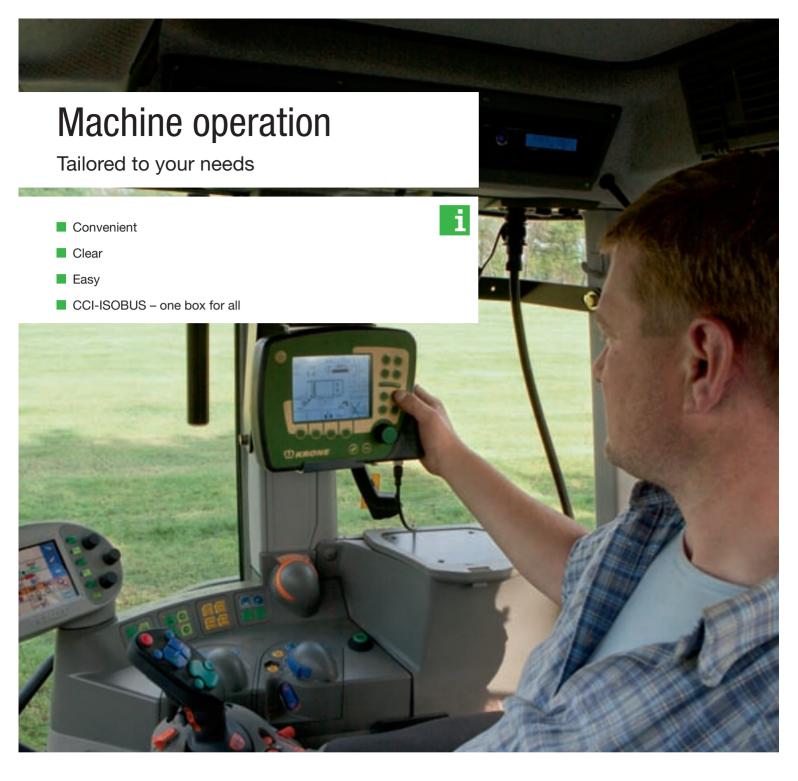
# The heavy-duty driveline

Strong chains and spring-loaded chain tensioners transfer the drive power efficiently and without losses to the rollers. A motion detector on the bottom roller shuts off the floor to ensure smooth unloading.



# Three rotors for triple power

Specify your forage wagon with an optional third roller and an adjustable tailboard and you will spread the material in even more uniform mats. Studded with V-tines, the rotors spread the crop across the full machine width, with the bottom rotor spinning faster than the top rotors to cut down on unloading time.





# The Gamma terminal

This terminal offers operators full fingertip control of all loading and unloading operations. Here you retrieve the number of hauls and operating hours as well as diagnose potential malfunctions. In addition, you control the automatic loading and unloading processes, lock the steered axle and activate the automatic silage additive feed system. The backlit digital display screen provides an excellent overview of all machine functions. In addition to the fingertip control option, you can also operate the knife bank from the ground on two controls by the side of the bank.

# Practical and convenient

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

# The CCI 100 terminal

CCI 100 offers the same functions as our Gamma terminal plus the ability to link up with other makes of ISOBUS machinery. The unit offers an ultimate level of operator comfort including a colour touchscreen, a shut-off key that stops all current electric functions, the task controller for job data processing and inputs for an extra joystick (AUX) and a CCTV camera.





# **ISOBUS** tractor terminal

The ISOBUS terminal for the tractor offers the extra feature of having the steered axle locked automatically when reversing the combination or when exceeding a preset speed (e.g. 30 km/hr (18 mph)).



# **Optional weighing system**

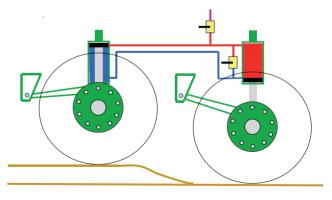
The electronic weighing system uses sensor pins inside the drawbar and on the tandem/tridem axle with hydraulic levelling. The system determines the weight of the unloaded material by computing the difference between the load when filled to capacity and the amount of material left inside the machine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





# Peace of mind

EBS is the optional electronic brake system, which comprises ALB and ABS as well as RSS, a roll stability system that intervenes by braking whenever there is a risk of rollover. The system warrants ZX will not roll over when managing narrow bends at speed.



# The system

When the machine is running on undulating ground, the oil flows from a cylinder on the front wheel to another cylinder on the rear wheel and vice versa. The concept of using two separate circuits inside one axle assembly eliminates the risk of rolling and maintains the body level at all times.

# On the road of success

Large wheels and high sides pose high demands on the running gear. The caster

steered tandem axle offers hydraulic levelling to cater for all

requirements and needs. The running gear offers stability when travelling at speed and around corners and on slopes. KRONE's tandem axles are specialist axles and give you safest and high-comfort rides.



# Gentle on the turf

You can lock the caster steered rear axle via a ram to protect the turf during headland turns and the silage when unloading on the clamp.



# Extremely adaptable

The axles benefit from large suspension travel, thereby distributing the load uniformly to both axles at all times. The assembly provides for easy climbing and unloading on high and steep clamps.



Radial ply tyres Flotation Pro Radial 800/45 R 26,5 TL 174 D



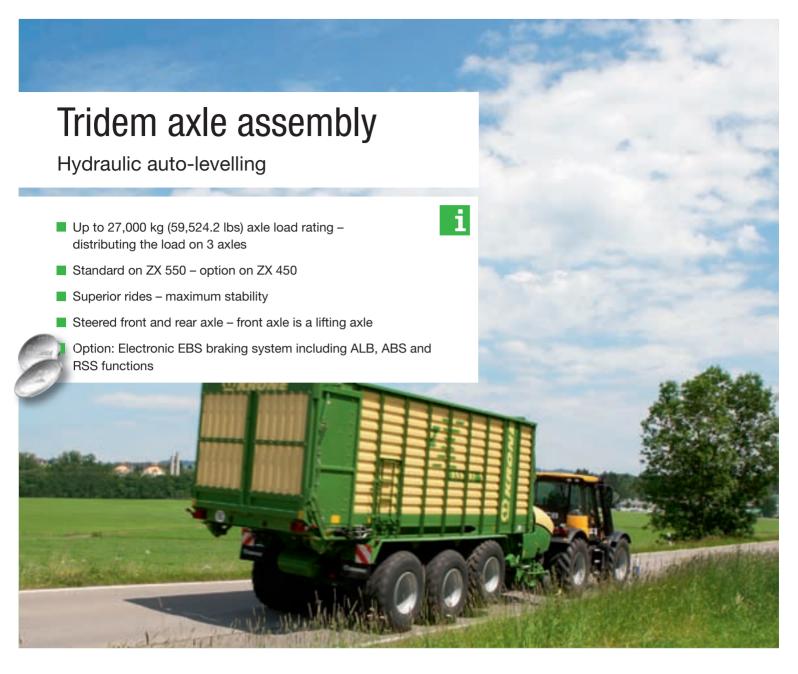
Radial ply tyres Michelin Cargo X-BiB 710/50 R 26,5 170 D



Radial ply tyres Flotation Trac 750/45 R 26,5 TL 170 D

# Large 26.5" wheels

Choose between Flotation Pro Radial 800/45 R 26.5 TL 174 D, Michelin Cargo X-BiB 710/50 R 26.5 170 D or 750/45 R 26,5 TL 170 D tires for the tandem axle, which ensure easy pulling, soft treading and protection of the turf.



# Easy ride

The six wheels on the tridem assembly give absolutely soft treading and full adaptation to the ground no matter what the conditions are like. 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

Heavy-duty axle assemblies are a requirement on a high-capacity machine that is designed for swift travels between field and clamp. The ZX 450 and ZX 550 models with tridem axles,

bottom-mount ball hitches, a 31,000 kg (68,342.6 lbs) gross weight and 40 km/h or 60 km/h (25 or 37 mph) maximum speeds tick every box. The heavy-duty chassis features hydro-pneumatic suspension and hydraulic levelling to give superior stability.



A steered front or rear axle provides excellent tracking in every curve, protecting the turf and minimizing drawbar power.

# Forced steering

The two steering rods are ball hitched to either side of the drawbar and feature hydraulic rams for control.

# Lifting axle

Raise the front axle by operating the single acting spool on the tractor. Lift the axle during empty hauls and save on tire costs.









Radial ply tyre Flotation Trac 750/45 R 26,5 TL 170 D

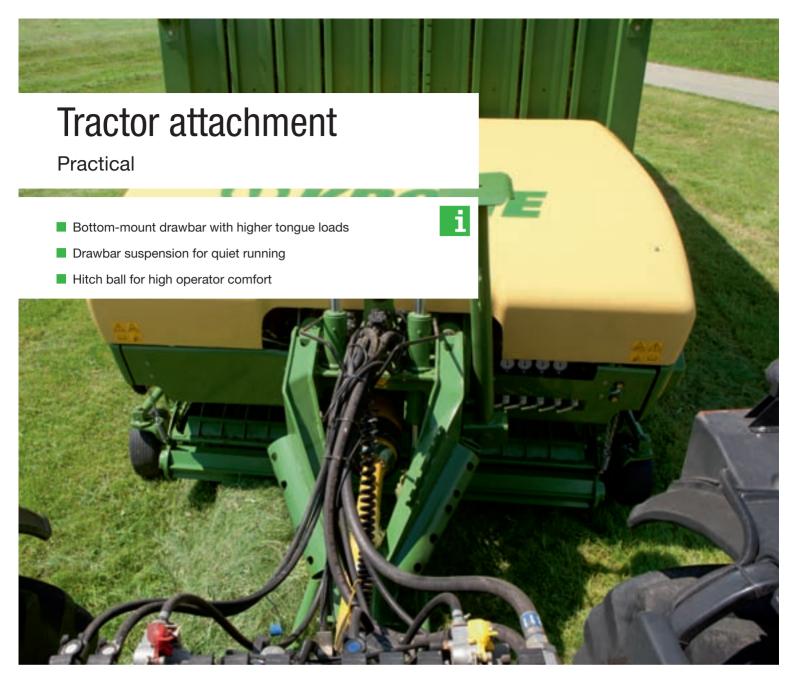


Radial ply tyre Flotation Pro Radial 800/45 R26,5 TL 174 D



Radial ply tyre Michelin Cargo X-BiB 710/50 R 26,5 170 D

Choose between radial ply Flotation Trac 750/45 R 26.5, Flotation Pro Radial 800/45 R 26.5 TL 174 D and Michelin Cargo X-BiB 710/50 R 26.5 170 D tires for the tridem axle. These easy-pull tires ensure soft treading and excellent protection.



# **Bottom-mount drawbar**

The ZX dual-purpose forage wagons have bottom-mount drawbars. In this configuration, the ball hitch on ZX 450 and 550 offers a tongue load of up to 4,000 kg (8,818.4 lbs).



# Suspended drawbar

The optional drawbar suspension system uses nitrogen tanks on the rams to absorb all shock loadings and provide a superior operator comfort.



# The ideal hitch

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.





# An ideal system

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 the ground on these standard controls. So, you can watch the hitching process.



# K 80 hitch ball

This hitch ball offers maximum operator comfort and minimizes wear on your equipment as the combination runs smoothly without jolting or experiencing shock loads. The ball hitch is a requirement on tridem axle models with forced steering.



# Hitch ring

The ID 50 mm hitch ring for pin hitch or Piton Fix is available for the ZX 400 and 450 models and is rated to 3,000 kg (6,613.8 lbs).



# Technical Data

# ZX dual-purpose forage wagons

ZA dadi parpood forago wagono				
		ZX 400 GL	ZX 400 GD	
DIN volume (DIN 11741)	Approx. m <sup>3</sup>	38	38	
Overall length	Approx. mm	9.750 (32')	9.750 (32')	
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")	
GVWR	kg/lbs	23.000/50,705.8 (24.000/52,910.4)	23.000/50,705.8 (24.000/52,910.4)	
Drawbar tongue load	kg/lbs	3.000/6,613.8 (4.000/8,818.4)	3.000/6,613.8 (4.000/8,818.4)	
Chop length: 23 knives 46 knives	Approx. mm Approx. mm	74 (3") 37 (1.5")	74 (3") 37 (1.5")	
Pick-up width	Approx. mm	2.100 (6'11")	2.100 (6'11")	
Clearance under hydr. artic drawbar	Approx. mm	750 (2'6")	750 (2'6")	
Tire size on tandem axle (Option)		(710/50 R 26.5 TL)	- 800/45 R 26.54 TL (710/50 R 26.5 TL) (750/45 R 26.5 TL)	
Tire size on tandem axle (Option)		- -	-	
Discharge rollers		_	3 (2)	
Power requirement	Approx. kW/hp	105/143	105/143	
Hydraulic tandem axle		+	+	
Hydraulic tridem axle		-	-	

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



ZX 450 GL	ZX 450 GD	ZX 550 GL	ZX 550 GD
43	43	53	53
10.500 (34'5")	10.500 (34'5")	12.000 (39'4")	12.000 (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")
23.000/50,705.8 (24.000/52,910.4) (31.000/68,342.6)	23.000/50,705.8 (24.000/52,910.4) (31.000/68,342.6)	31.000/68,342.6	31.000/68,342.6
3.000/6,613.8 (4.000/8,818.4)	3.000/6,613.8 (4.000/8,818.4)	4.000/8,818.4	4.000/8,818.4
74 (3") 37 (1.5")	74 (3") 37 (1.5")	74 (3") 37 (1.5")	74 (3") 37 (1.5")
2.100 (6'11")	2.100 (6'11")	2.100 (6'11")	2.100 (6'11")
750 (2'6")	750 (2'6")	750 (2'6")	750 (2'6")
- 800/45 R 26.5 TL (710/50 R 26.5 TL) (750/45 R 26.5 TL)	- 800/45 R 26.5 TL (710/50 R 26.5 TL) (750/45 R 26.5 TL)	- 800/45 R 26.5 TL (710/50 R 26.5 TL) (750/45 R 26.5 TL)	- 800/45 R 26.5 TL (710/50 R 26.5 TL) (750/45 R 26.5 TL)
800/45 R 26.5 TL (710/50 R 26.5 TL)			
_	3 (2)	-	3 (2)
118/160	118/160	140/190	140/190
+	+	_	-
(+)	(+)	+	+

<sup>\*</sup> Base specification, depending on tyres and axle assemblies

() Option





Discover the world at KRONE and browse through our website pages to find facts and figures and also new developments plus a wide range of services. Explore our website and find out how versatile the KRONE world is.



### News

Click here to find up-to-the minute information about KRONE — from new product presentations to show reviews. Here you are at the pulse of KRONE life.



### **Products**

Find extensive information on our full product range. This section holds everything you need – from video clips to manuals.



### Sales organisation

Here you find a distributor in Japan as well as your local KRONE dealer who will be pleased to support you. This is where you find your KRONE partner who will be pleased to assist you.



# Jobs

Would you like to join our company? KRONE is often looking for diligent and motivated staff to work at our farm machinery factory as well as at our commercial trailer production plant. So, this section is always worth a visit.



### Media center

The KRONE 'database' holds thousands of documents, pictures, test reports and much more. Here you find very detailed information on KRONE products that are of special interest to you.



# **Events**

Are you in for a KRONE live experience? Check out for KRONE events and look at a machine on show or watch it during a demonstration. After all, there is little that is more effective than a hands-on experience.





### Service

Here you find all the service information you require — from a point of contact at the factory to finance schemes for your KRONE machine as well as training schemes for staff and users.



### **Download Center**

Are you looking for a KRONE calendar for your desktop or a smart picture for your presentation? Here, at the KRONE download center, you will find plenty of useful material for a wide range of projects.



### **Used Machinery**

KRONE often has a wide range of demonstration or exhibit machinery on offer. This is a good site to find your KRONE machine. Then contact your local KRONE dealer to arrange the details of a potential purchase.



### **Parts**

24/7... This service gives you the opportunity to find your KRONE part at any time and without waiting. The KRONE Agroparts Portal has an article number and exact description for every part. You can order the part instantly at your local KRONE dealer by sending an e-mail to Agroparts.



### **KRONE** shop

Are you looking for a gift or are you a collector of farm models? Then you should definitely shop around at our KRONE shop. We take your orders at any time of the day.

### **Maschinenfabrik Bernard KRONE GmbH**

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