



Fortima

Variable-chamber round balers





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Variable-chamber round balers

- The variable bale chamber produces 1.00-1.50 m (3'3"-4'11") or 1.00-1.80 m (3'3"-5'11") diameter bales
- The chain-and-slat elevator handles the most difficult conditions
- The camless EasyFlow pick-up boosts throughput and reduces wear and tear
- The selectable MultiCut cutting system features 17 knives
- QuattroSpeed – the new twine tying system for four threads
- The well-proven net wrapping system for even higher throughputs





Fortima – the powerful combination of proven engineering and innovative technology.

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EasyFlow

Pick-up without cam track

- Clean rakes for higher outputs
- Quiet running
- Minimum wear – minimum maintenance



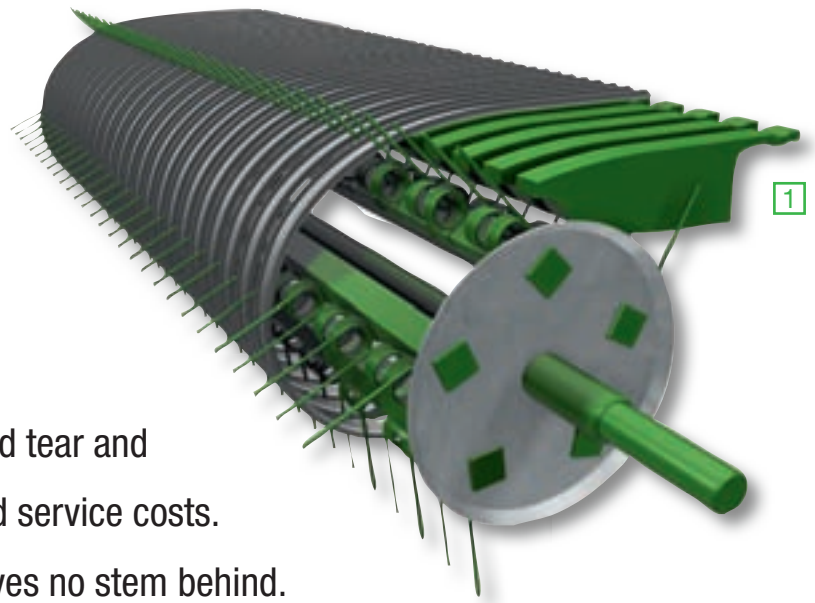
The ideal pick-up for harvesting wide swaths:

The KRONE EasyFlow pick-up system has feed augers on either side and works at a width as wide as 2.05 m (6'9") (DIN 11220), picking up every stem, also in corners and bends.



Reduced wear costs yet optimized crop collection

EasyFlow is a camless pick-up that does without a cam track, offering obvious advantages over controlled system: A simple assembly uses fewer moving parts than controlled cam tracks and gives extremely quiet running, which in turn reduces wear and tear and ultimately service and maintenance and service costs. EasyFlow – a powerful system that leaves no stem behind.



1. EasyFlow

This pick-up features galvanized scrapers and their special design lifts the crop from the tine for a smooth and consistent flow of crop into the machine and eliminates the need for a cam track.



2. Roller crop guard

The unit eliminates the risk of pushing up crop in uneven swaths. The machine operates at maximum pick-up and output levels while the crop is flowing smoothly and consistently through the machine.



3. Massive augers

Massive augers feed the material from the sides to the middle of the machine, ensuring a smooth flow from the wide pick-up unit into the narrow bale chamber.

4. Closely spaced tines

Boasting five rows of tines spaced 55 mm (2") apart, EasyFlow picks up even short stems. The deflector plates are galvanized for ultimate durability.



No tools required – height control is quick and easy:
Just reset a pin on the guide wheels. The pick-up unit runs particularly smoothly on pneumatic tyres.

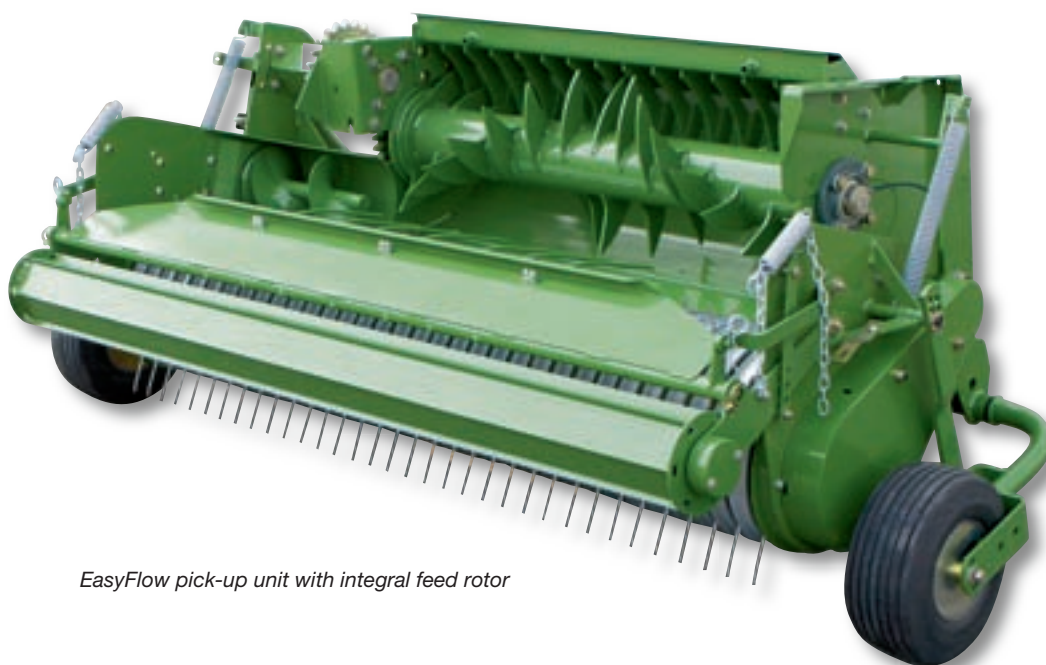


For top-quality work without relying on guide wheels:
The pick-up is easily secured at the desired height. The pictured setting is typical for conditions involving deep ruts and extremely rough straw swaths.



Optimized design for an optimized crop flow

The EasyFlow pick-up forms a compact unit that comprises either a feed rotor or a cutting rotor. The clearance between rotor and baling chamber was increased and the rotor was arranged right behind the pick-up itself to increase the intake capacity and ensure a consistent flow even in short stems.



EasyFlow pick-up unit with integral feed rotor

Consistent crop feed:

Fortima models that do not feature a cutting system have a standard feed rotor, which will boost their overall output.



Optimum protection from foreign objects:

Automatically tensioned pick-up chains, which is overload protected by a shear bolt clutch.



MultiCut

The cutting-edge concept

- Controlled cutting results in a superior quality
- 64 mm (2.5") chops by the full set of 17 knives
- Central knife selection system quickly changes cutting lengths



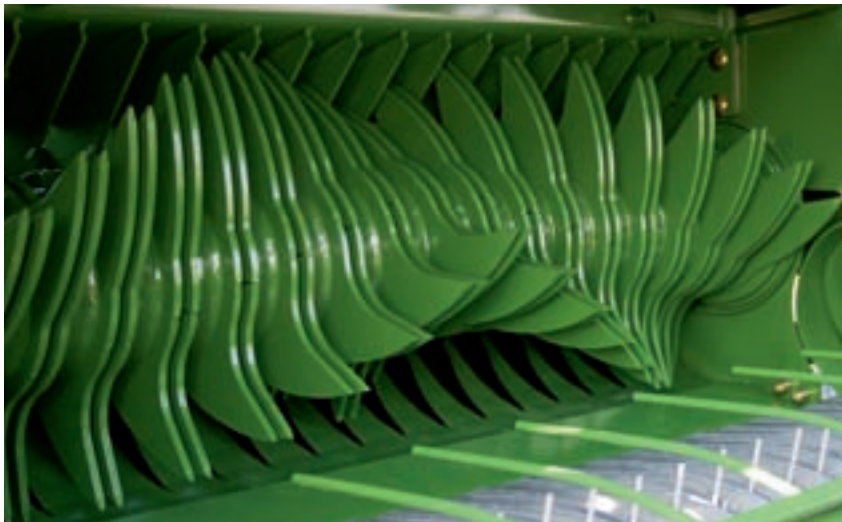
Perfect cuts:

A maximum of 17 knives are narrowly spaced at 64 mm (2.5") to produce bales that are easy to break up and spread. The knives are arranged in one row for an excellent quality of cut.



Finest quality of cut!

The KRONE MultiCut rotor cutter features 17 knives to produce short cuts that pay off quickly by higher bale densities, enhanced silage quality as well as easier and faster bale break-up on the feeding floor. It has been shown that short straw provides for easier spreading and better absorption of liquids while being easier to dispose of.



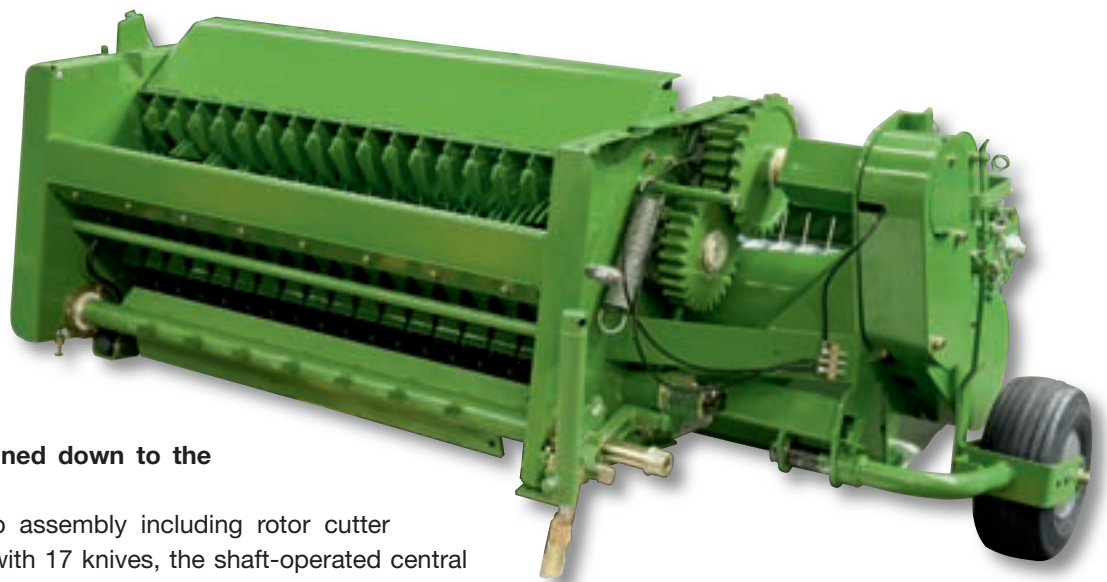
Massive rotor for excellent cuts:

Measuring 530 mm (1'9") in diameter, the cut-and-feed rotor is able to 'swallow' massive amounts of material. Its double tines in chevron formation pull the material consistently through the knives, thereby reducing the risk of peak loads as stems are cut 'one after the other'.



Powerful driveline:

All rotors are driven by massive spur gears, which absorb even the highest loads and which provide a positive and dependable drive – even in less than uniform swaths.



Carefully designed down to the smallest detail:

The full pick-up assembly including rotor cutter and feed rotor with 17 knives, the shaft-operated central 17-15-7-0 knife selection system, the hydraulic 0-knife selection system for blockage removal and the massive spur gears.



1. One operation:

The KRONE knife selection system selects the knives in sets of 17-15-7 or 0. The operator operates a selector shaft, which swings the desired number of knives into the feed channel. As he alters the spacing between the knives he varies the length of cut by up to 64 mm (2.5"). Position 0 means all knives are swung out for cutting. It couldn't be easier.





2. The controlled cutting system by KRONE:

The double tines pull the crops consistently through the knives. The clearance between the knives and the double tines is very narrow so the crop cannot escape and the cuts are clean and precise.

3. Fully protected:

The automatic 'Non-Stop' auto-reset system and the hydraulic 0-knife selection system are standard specification. The hydraulic 0-knife selection is used to remove potential blockages from the feed channel.

4. Central knife locking system:

To remove the knives from the knife bank, release them by rotating the shaft, which rotates through 90°. Then remove them quickly and conveniently from above.

5. Rotor blocked up – no problem for the KRONE reverser:

The Fortima rotor cutter either reverses manually or hydraulically as an option.



Convenient:

Unlock the knives and remove them from above for grinding or replacement. No tools required.



Easy cutting:

The Fortima knife blades cut the crop down their full length. As the stems are pulled across the blades, the system requires less power. Their wavy edges retain their sharpness for a long period of time.



Chain-and-slat elevator

A firm grip on the bale

- Positive bale rotation, no standstill, less fragmentation
- Variable 1.00-1.50 m (3'3"-4'11") or 1.00-1.80 m (3'3"-5'11") bale diameters
- Two separate and endless chain-and-slat elevators ensure dependable operation in the most difficult conditions

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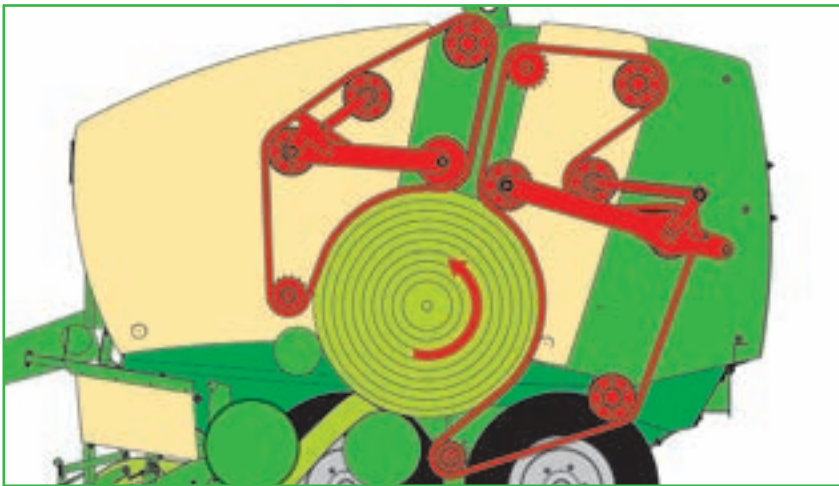
One of the guide rollers and the chain-and-slat elevator

Longevity and high baling density:

Heavy-duty chain-and-slat elevators run on massive guide and drive rollers, spreading the load on more chain links. At the same time, larger guide and drive rollers increase the chain angle, reducing wear and providing extremely smooth running. The individual chain links are easy to replace as required.

Well-proven

The chain-and-slat elevator concept has proven extremely well in silage, hay and straw all over the world. Running on massive guide and tensioning rollers, the two endless chain-and-slat elevators form bales of extremely high densities. As the slats 'mesh' with the bale, they rotate it without standstill – also in chopped and dry material. As a further benefit, it reduces fragmentation and power input.



The two chain-and-slat elevators

A combined grip on the bale:

Fortima is equipped with two chain-and-slat elevators, one operating at the front end and the other at the rear end to develop high baling pressures and perfectly shaped bales.



The main gearbox is arranged centrally

Powerful driveline:

The main gearbox (540 rpm) is arranged in the middle of the machine. The incoming power is taken off to either side, cutting down on driveline lengths and optimizing the power flow to the pick-up, the feed rotor or rotor cutter and the chain-and-slat elevator.



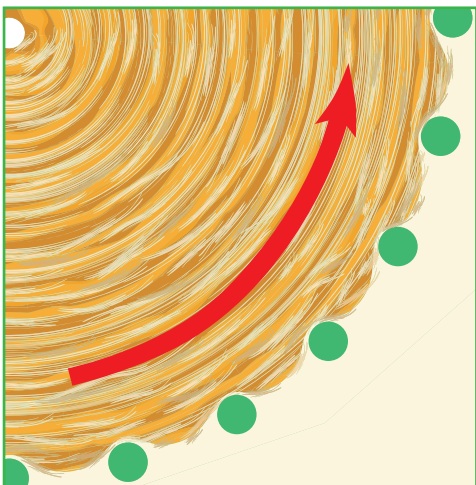
The KRONE chain-and-slat elevator

The 'grippy' system for straw, hay and silage bales

Round balers harvest straw, hay and wilted silage around the world in a wide variety of conditions that require full operational reliability. The challenges are well-known: In periods of sustained drought, straw and hay are prone to fragmentation whereas in periods of sustained rain wilted forage may even be wet and heavy. Crops high

in sugar also tend to be very sticky. The chain-and-slat elevators respond to these requirements and operate dependably in all these conditions. These elevators will deliver – gentle but firm on the material, with slats 'meshing' with the bale to provide positive rotation and maximum baling pressure.

Great versatility





Variable chamber for unprecedented versatility

Variable bale chamber for variable bale diameters of up to 1.80 m (5'11")

Versatility and high utilization are important parameters for cost-effective round baling. Our variable Fortima V 1500 and V 1800 round baler ticks all boxes, giving 1 m-1.50 m (3'3"-4'11") or 1 m-1.80 m (3'3"-5'11")

diameter bales from one single machine. Smaller bale sizes are often preferred in grass silage whilst larger diameter bales are typical in hay and straw.



Small-diameter bales

Small diameters are typically required in silage baling. Small bales are easier to handle, break up and feed. The

1 m-1.30 m (3'3"-4'3") diameter bales produced by Fortima perfectly suit most conventional bale wrappers.



Large-diameter bales

Large-diameter bales are often preferred in straw and hay as they increase efficiency, save on wrapping material and reduce labour costs.



Stunning simplicity



This is how variable-chamber baling works for Fortima: As more and more material enters the bale chamber, the two chain-and-slat elevators press layer by layer, forming tight and well-shaped round bales. The slats mesh with the crop to provide positive bale rotation at any stage of the baling cycle. The baling pressure is supplied by a hydraulic ram that actuates the tensioning arms at the front and rear ends. As soon as the bale has reached its preset diameter,

twine or net wrapping is triggered. As a last step, the tailgate opens and the bale is ejected.



Fortima – carefully designed down to the smallest detail

Buying a Fortima means tapping into KRONE's vast experience and expertise gained in decades of baler manufacturing. We at KRONE understand the needs of farmers. Our round balers operate everywhere around the world and have proven excellently in a wide variety of conditions. In addition to providing high bale densities, KRONE balers are extremely robust, simple by design and perfect in specification. Last but not least, they offer a superior level of operator comfort.



1. Convenient:

The quality of a round baler is assessed by two criteria – functionality and technical design. Fortima stands out for its uncluttered and efficient design that minimizes service and maintenance costs.



2. Simple and proven

Fortima is built from components that have proven well for decades of dependable field operation. The bale ejector is an optional extra.

3. Convenient:

Drive chains are few and far between. Few chains require less input power while increasing operational reliability at the same time.

4. Positive bale start:

Fortima features an extra spiral roller with raised bars that is fitted in addition to the starter roller – a design that ensures quick bale starts and optimizes the baling process.





Bale density is controlled infinitely variably:

The leading elevator is tensioned by two hydraulic rams – one on either side of the machine. As the tension increases, bale density increases, too.



High-density and well-shaped bales

Hydraulic rams on either side of the tailgate provide the full baling pressure to the rear area of the baling chamber.



QuattroSpeed

The revolution in twine wrapping
A KRONE exclusive

- Quadruple twine wrapping
- Shortest tying cycles, shorter than cycles using twin twine
- More bales per hour
- Less fuel and less labour cost

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Convenient functionality:

The tying cycle is triggered by an electric motor. The motor tensions the drive belt, which drives the rubber wheel and this in turn pulls the twine into the chamber.



Plenty of storage capacity

The large storage compartment holds up to 11 balls of twine. Hoops hold the rolls in place for smooth uncoiling.



Four threads bring four-fold quality

QuattroSpeed is the new KRONE tying system that provides considerable cuts in tying times over the existing twin twine tying system. Simple by design, KRONE QuattroSpeed is an extremely dependable system, which ensures good overlap and multiple wraps along the edges. QuattroSpeed translates into well-shaped bales and maximum density at minimum costs.



Perfect twine guidance:

A coned pulley controls the number of twine wraps applied per cycle. Two guide blocks are used to distribute the four threads uniformly across the full width of the bale. As the

wrap cycle starts, the threads run over the rubber wheel and the pressure roller into the bale chamber, where they are picked up by the rotating bale.



Perfect bales every time

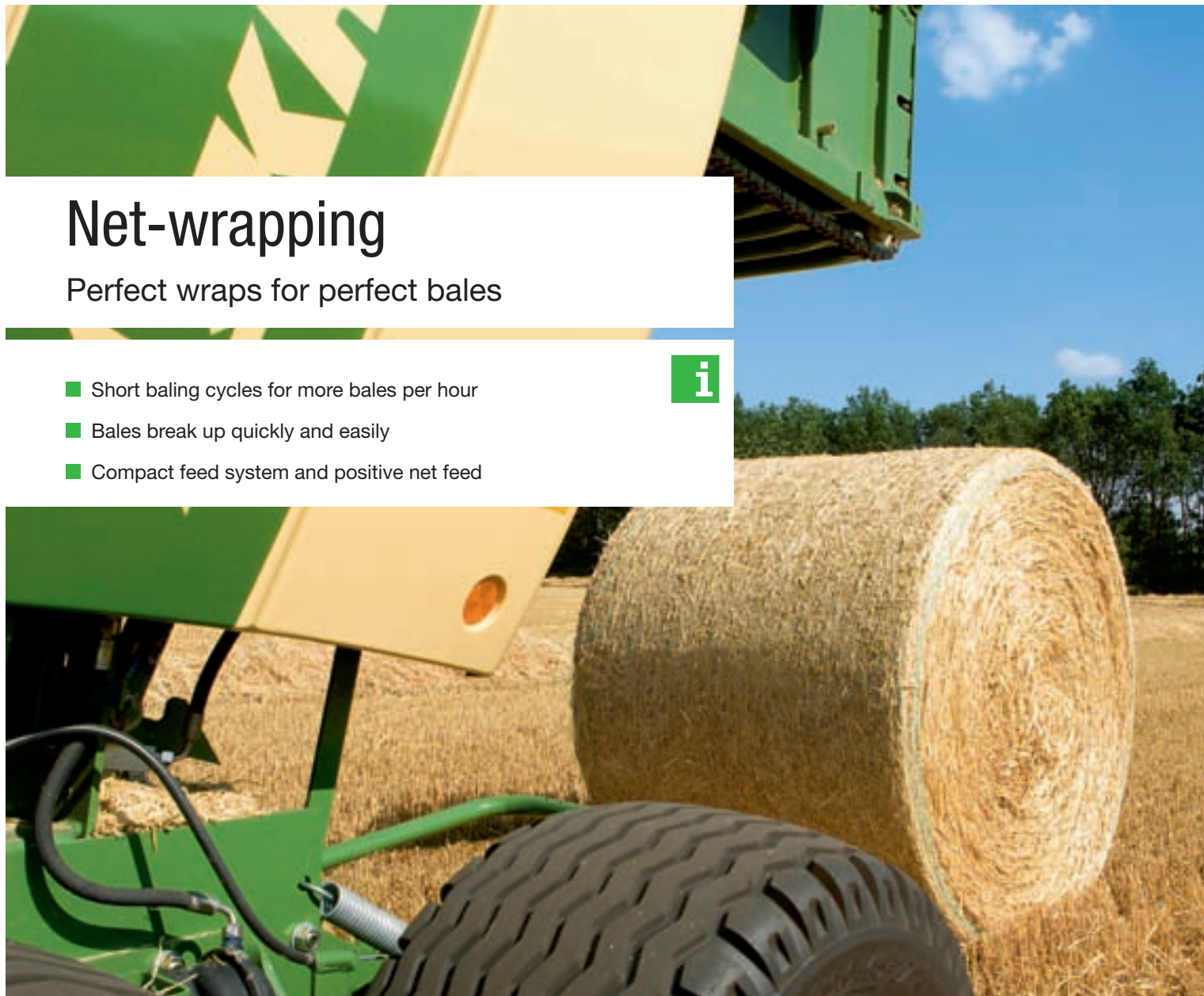
Each of the four threads ([1]-[4]) wraps the bale a number of times. The tying cycle starts and ends in the middle of a bale and allows applying extra wraps along the edges, depending

on the settings. You won't find any twine sticking out from the edges. QuattroSpeed ensures lasting bale integrity – also after repeated handling and transport.

Net-wrapping

Perfect wraps for perfect bales

- Short baling cycles for more bales per hour
- Bales break up quickly and easily
- Compact feed system and positive net feed



Bale watch:

A sensor on a toothed wheel measures the number of wraps applied and transfers the information to the cab computer. Once the set number of wraps have been applied, the net is cut automatically.



Well-shaped bales

The adjustable net brake wraps the bales tightly and ensures they retain their integrity in transport.



Less fuel per bale

Fortima's net wrap system is straightforward by design and offers superior functionality. The advantage of net wrapping is that it is faster than twine wrapping and helps you produce more bales per hour. Higher throughputs free up valuable time that can be spent on other jobs and cut the tractor's fuel consumption per bale. The net wrap system accepts rolls with a total net length of up to 3,600 m (11,811 ft).



Convenient functionality

At the end of the baling cycle, the electric motor triggers net wrapping – either automatically or manually.



For long working days

The large storage compartment holds three net rolls and protects them from rain. The rolls may provide up to 3,600 m (11,811 ft) of netting and are secured by a retainer.



Easy fitting

Fitting the rolls or balls is easy and convenient from the ground. To replace an empty net roll, simply swing out the dispenser arm and slide the fresh roll onto it. Then the net is fed into the net wrap system.

Operation

More comfort, less fatigue

- High operator comfort from a graphical user interface
- Clear design
- Compact size



Adjustable bale densities:

This pressure valve controls bale density via hydraulic rams that tension the chain-and-slat elevators – a quick, easy and accurate system. The gauge shows the current baling pressure.



The control center

This is the all-important box: The job processor records all sensor pulses and sends them on to the control unit as well as triggers automatic wrapping.



Logical operation for long working days

Long working days call for high operator comfort. The 'Comfort' operator terminals provide the operator with all current machine data and allow him to interfere instantly as required. The optional bale ejector makes the job easier and increases efficiency.



The Beta terminal

The Beta terminal offers icon based navigation and shows the current bale diameter, triggers the wrapping cycle either automatically or manually, sets and controls the number of wraps and shows bale counts as well as retrieves valve and sensor functions.



The CCI 100 terminal

The CCI terminal offers all functions that are available from the Beta terminal plus compatibility with ISOBUS implements of other makes. The colour touchscreen, high-quality controls, a shut-off key that stops all current electric functions as well as inputs for an extra joystick (AUX) and a CCTV camera provide a very high standard in operator comfort.



Bale ejection guaranteed

The optional ejector is linked to the tailgate and tilts as the gate opens, allowing the bale to roll onto the ground and clear of the closing tailgate, eliminating the need to reverse the machine.



Fortima

High in output, low in maintenance

- Easy access for easy maintenance
- Automatic chain lubrication
- Automatic chain tensioning



Scoring on long service life:

The automatic chain lubrication system benefits from a large oil reservoir and eccentric pump for minimum maintenance and added viability.

Automatic chain lubrication:

An eccentric pump supplies oil to the chain drives at a rate set on the eccentric shaft.



Easy maintenance for reduced costs

Not only is Fortima designed for highest densities and outputs but also for an uncluttered layout and easy access to all service points. Service and maintenance are as easy as it can get, with lubrication banks and automatic chain lubrication cutting effort and time down to a minimum. We took care of every detail.



Clean:

To avoid downtime due to contaminated oil, we fitted an oil strainer with a visual indicator – to ensure optimum functionality and peace of mind.



Operating like clockwork:

Spring-loaded and automatic chain tensioners reduce the time spent on maintenance and provide for extended chain service life. Longevity is one of KRONE's major concerns.



Maximum operator comfort:

All 'hidden' lubrication points are grouped in easy-access lubrication banks, making service and maintenance less time-consuming and more convenient.

The running gear

You'll go for this!

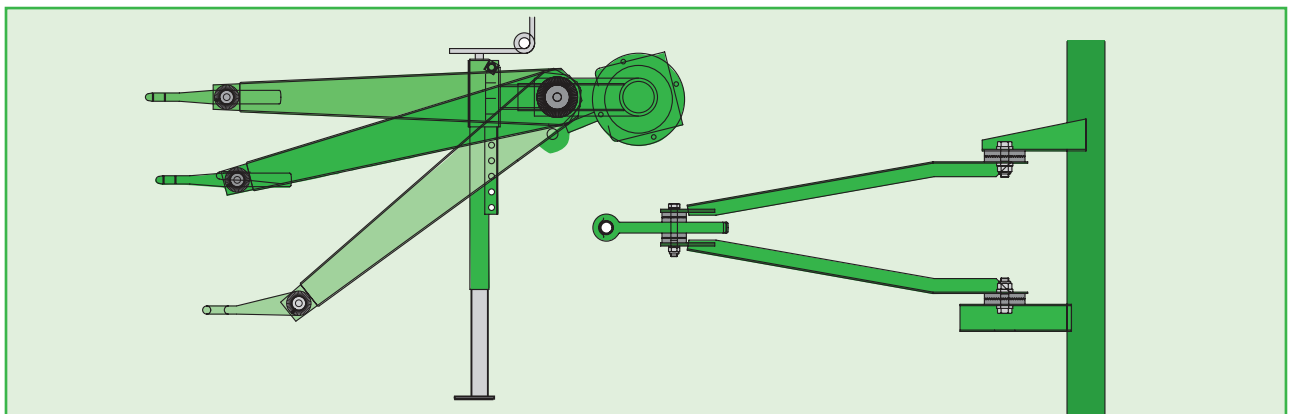
- Auto-levelling in undulating terrain
- Outstanding operator comfort
- Excellent tracking

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Ultimate flexibility

The drawbar is equipped with a gear cam to adjust easily to any height and tractor end – pin hitch, floating hitch, hitch hook and ball hitch.



The universal machine

Special conditions require special equipment. To meet all our customers' requirement, Fortima is available with a wide range of running gear. Choose from standard and tandem setups, braked and unbraked versions as well as air and hydraulic brakes (export version).



1. Choice of tyres to suit your needs:

The standard axle is available with 11.5/80 -15.3/10 PR to 500/50 -17/10 PR sized tyres. Large flotation tyres reduce the risk of ground compaction and rutting.



2. Light-footed and smooth-running

The optional tandem axle gives soft, quiet and safe running. The choice of tyres available ranges from 11.5/80 -15.3/10 PR to 19.0/45 -17/10 PR.



3. Safety is key

An air brake system is available as optional specification for Fortima V 1500. Export models can be specified with hydraulic brakes.



4. High-stability stand:

The crank height adjustable stand has a telescoping end that can be retracted to increase the ground clearance in voluminous swaths.





Technical Data

Fortima

		Fortima V 1500	Fortima V 1500 MC	Fortima V 1800	Fortima V 1800 MC
Bale width	mm	1,200 (3'11")	1,200 (3'11")	1,200 (3'11")	1,200 (3'11")
Bale diameter	mm	1,000 - 1,500 (3'3" - 4'11")	1,000 - 1,500 (3'3" - 4'11")	1,000 - 1,800 (3'3" - 5'11")	1,000 - 1,800 (3'3" - 5'11")
Length	mm	4,570 (14'10")	4,570 (14'10")	4,960 (16'3")	4,960 (16'3")
Length incl. bale ejector	mm	4,955 (16'3")	4,955	5,270 (17'3")	5,270 (17'3")
Height	mm	2,700 (8'10")	2,700 (8'10")	2,850 (9'4")	2,850 (9'4")
Width of single-axle models if fitted with the following tyres					
11.5/80 -15.3/10 PR	mm	2,570 (8'5")	–	2,570 (8'5")	–
15.0/55 -17/10 PR	mm	2,570 (8'5")	2,570 (8'5")	2,570 (8'5")	2,570 (8'5")
19.0/45 -17/10 PR	mm	2,670 (8'9")	2,670 (8'9")	2,670 (8'9")	2,670 (8'9")
500/50 -17/10 PR	mm	2,700 (8'10")	2,700 (8'10")	2,700 (8'10")	2,700 (8'10")
Width of tandem-axle models if fitted with the following tyres					
11.5/80 -15.3/10 PR	mm	2,735 (9')	–	2,735 (9')	–
15.0/55 -17/10 PR	mm	2,840 (9'4")	2,840 (9'4")	2,840 (9'4")	2,840 (9'4")
19.0/45 -17/10 PR	mm	2,950 (9'8")	2,950 (9'8")	2,950 (9'8")	2,950 (9'8")
Camless pick-up					
Work width (DIN 11220)	mm	2,050 (6'9")	2,050 (6'9")	2,050 (6'9")	2,050 (6'9")
Number of tine rows		5	5	5	5
Feed rotor		Standard	–	Standard	–
Rotor cutter		–	Standard	–	Standard
Maximum number of knives		–	17	–	17
Minimum knife spacing	mm	–	64	–	64
Available tyres for single-axle models					
		11.5/80-15.3/10 PR	–	11.5/80-15.3/10 PR	–
		15.0/55-17/10 PR	15.0/55-17/10 PR	15.0/55-17/10 PR	15.0/55-17/10 PR
		19.0/45-17/10 PR	19.0/45-17/10 PR	19.0/45-17/10 PR	19.0/45-17/10 PR
		500/50-17/10 PR	500/50-17/10 PR	500/50-17/10 PR	500/50-17/10 PR
Available tyres for tandem-axle models					
		11.5/80-15.3/10 PR	–	11.5/80-15.3/10 PR	–
		15.0/55-17/10 PR	15.0/55-17/10 PR	15.0/55-17/10 PR	15.0/55-17/10 PR
		19.0/45-17/10 PR	19.0/45-17/10 PR	19.0/45-17/10 PR	19.0/45-17/10 PR
Power requirement	approx. kW/hp	36 / 50	36 / 50	40 / 55	40 / 55
Power input		12 V	12 V	12 V	12 V
Driveshaft speed	r / pm	540	540	540	540
Hydraulic couplers		2 sa free return line	2 sa free return line	2 sa free return line	2 sa free return line

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



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.

Your KRONE dealer

Maschinenfabrik Bernard KRONE GmbH

Heinrich-Krone-Straße 10
D-48480 Spelle

Telefon: +49 (0) 5977.935-0
Telefax: +49 (0) 5977.935-339

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