

Fortima

EN

ROUND BALERS

 **KRONE**



krone-agriculture.com

Fortima

Round balers



Fortima with two different baling systems –
fixed or variable

Page 4 – 9



Powerful EasyFlow pick-up
for a good swath pick-up

Page 12

Precision cutting system
MultiCut
Forced cutting for best cutting quality

Page 16

Twine tying or net wrapping
for a perfect bale shape

Page 22 – 25

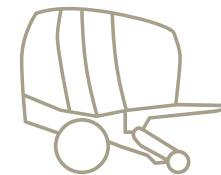
Slat and chain conveyor
and for every type of use

Page 20





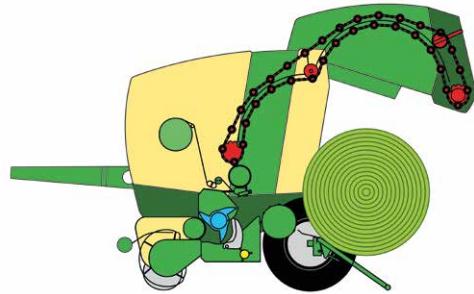
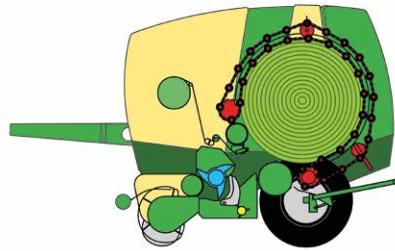
*KRONE Fortima –
clear-cut design, convenient and powerful*



KRONE Fortima – variable and versatile. The round baler convinces with its straightforward design and intuitive operation. Thanks to the slat and chain conveyor, all types of crops can be baled smoothly. Whether hay, straw and silage!

The Fortima F with fixed chamber

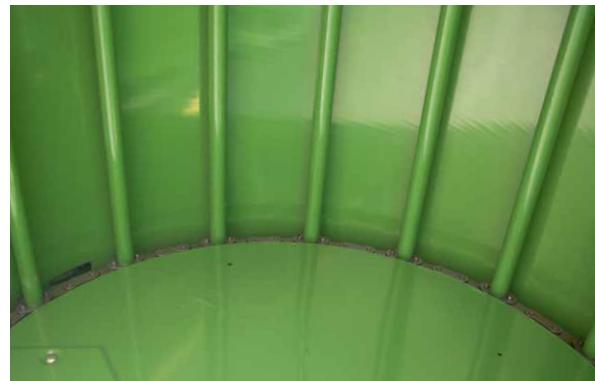
Straightforward *and convenient*



The KRONE fixed chamber principle

The chain-and-slat elevator adds layer after layer to the rolling bale, forming tight and well-shaped round bales. The chain-and-slat elevator scores especially on its superior feeding ability. Rolling starts earlier

and so the baling cycle finishes earlier as well. The elevator also creates a firmer core and packs more weight and density into each bale, which translates into higher quality silage and better exploitation of truck capacities.



The enclosed bale chamber

The KRONE concept of the all-enclosed bale chamber and the chain-and-slat elevator has proven paramountly well in the most diverse harvest conditions around the world.

Fixed chamber

■ The round baler

Fortima F 1250 and F 1600

■ The round baler with cutting system

Fortima F 1250 MC and F 1600 MC

■ 1.25 m (4'1") or 1.55 (5'1") m diameter bales

Take advantage of the headstart you get from the fixed-chamber round balers Fortima F 1250 and F 1600 with and without MultiCut cutting system. Boasting a host of unique features – the camless pick-up, the chain-and-slat elevator, the simple design, top durability and low maintenance – these balers mean quick payback on your investment.



The elevator tensioner

The chain-and-slat elevator has a tensioning system that makes sure the elevator maintains the correct tension and that frees operators from retensioning the elevator frequently.

The drives

The Fortima fixed chamber baler stands out for its simple design that requires only few drive chains, a concept that reduces tractor inputs and service and maintenance but offers extra dependability.

The bale ejector

The ejector throws the bale clear of the rear door and also serves as a tray that collects the bale. The benefit? You can start the next cycle while the rear door is still closing.

Die Fortima V with variable bale chamber

The right bale size *for every customer*

Fortima V

■ The round baler with feed rotor

Fortima V 1500

■ The round balers with cutting system:

Fortima V 1500 MC and V 1800 MC

■ Infinitely variable bale diameters

from 1.00 m to 1.50 m (3'3" - 4'11") or 1.00 to 1.80 m (3'3" - 5'11")

The variable chamber round balers Fortima V 1500 and V 1800 meet all requirements. One machine produces 1.00 m to 1.50 m (3'3" - 4'11") or 1.00 to 1.80 m (3'3" - 5'11") diameter bales to cater for grass silage applications where smaller bale sizes are preferred as well as applications in hay and straw where larger bales are typical.



Small-diameter bales

Small diameters are typical in silage making, because small bales are easier to handle, break up and feed. The 1.00 - 1.30 m (3'3" - 4'3") diameter bales produced by Fortima V 1500 suit most wrappers perfectly.

Big bales

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



The chain-and-slat elevators

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



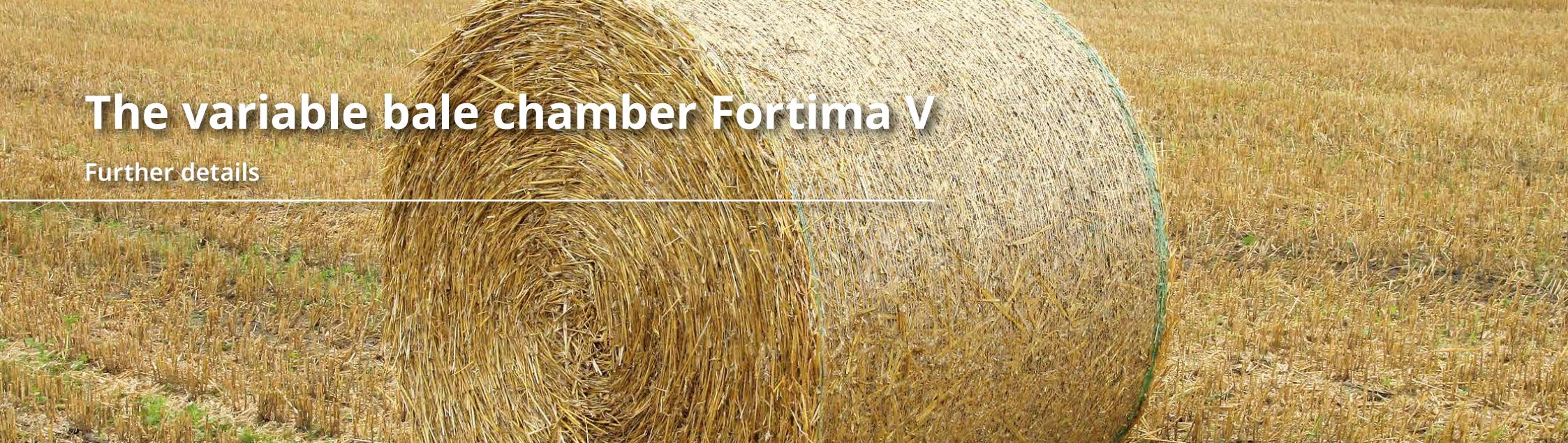
The variable bale chamber

As more material enters the bale chamber, the two chain elevators press layer by layer to form 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.



The variable bale chamber Fortima V

Further details



Adjusting the bale density

The variable bale chamber features two hydraulic rams that alter the bale density infinitely variably after the pressure is set on a spool valve that comes with a pressure gauge.

High-density and well-shaped bales

On the variable chamber model, two hydraulic rams, one on either side of the rear door, exert the full baling pressure at the rear of the baling chamber.

Positive bale starts

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.

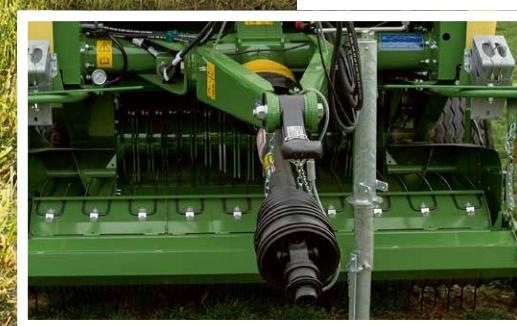
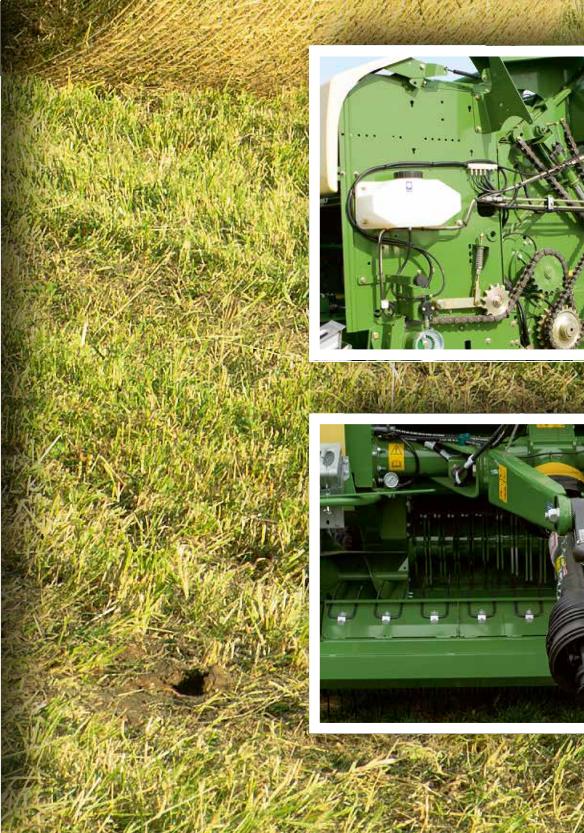




Fortima V

- The bale density is controlled infinitely variably
- The extra spiral roller speeds up bale starts
- The optional bale ejector ejects the bale actively

We at KRONE understand the needs of farmers. Providing high bale densities, KRONE balers are extremely robust, uncluttered and perfectly specified. Last but not least, they offer superior operational reliability.



Bale ejection guaranteed

On the variable chamber model, the optional ejector is linked to the rear door and tips as the door opens, allowing the bale to roll onto the ground and clear of the closing door. There is no need to reverse the tractor at the end of a wrapping cycle.

The perfect solution

Drive chains are few and far between. Few chains mean greater efficiency and better operational reliability.

Powerful driveline

The main gearbox (540 rpm) is arranged centrally. Here, the incoming power is split and sent on to either side, a design that cuts down on driveline lengths and optimizes the power flow to the pick-up, the feed rotor or rotor cutter and the chain-and-slat elevator.

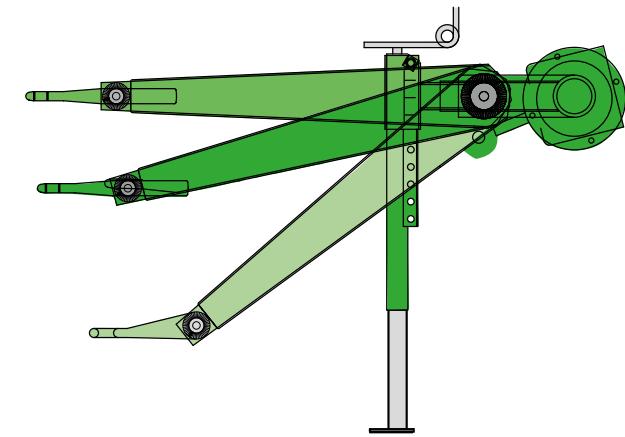
The hitch options and the running gears

Slim, compact *and agile*

The running gear

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

Special conditions require special equipment. To meet all our customers' requirements, Fortima is available with a wide range of running gear. Whether single or tandem axle, braked or unbraked. For some countries, the Fortima is optionally available with a compressed air brake system or hydraulic brakes.



Tractor attachment

Pin hitch, swinging drawbar, trailer hitch or ball hitch: You can order the Fortima balers with a 40mm hitch ring for top hitching, a 40/50mm hitch ring for bottom hitching, the 80 hitch ball or the height-adjustable drawbar to suit your specific tractor back end.

The stand

The stand adjusts to different heights thanks to a threaded head spindle. Its telescoping end can be retracted to increase the ground clearance in voluminous windrows.



The tyre choice

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 prevent rutting.

The tandem axle

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.

The air brake

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

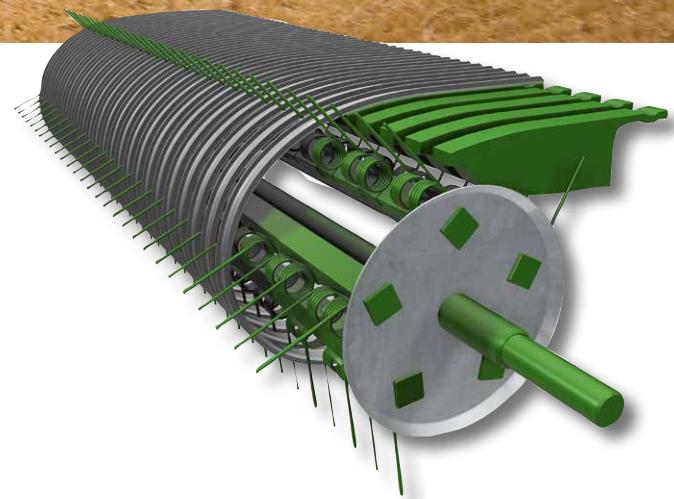
The KRONE EasyFlow pick-up

For clean and consistent rakes



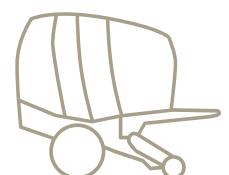
EasyFlow

The KRONE EasyFlow pick-up offers a 2.05 m (6'9") working width (to DIN 11220), picking up every stem, also in corners and bends.



The scrapers

The highlight of this pick-up is the special design of the galvanized scrapers that ensure a continuous and smooth crop flow when the tines retract, and eliminates the need for a cam track.





EasyFlow pick-up

- Impeccable pick-up for higher outputs
- Smooth running
- Minimum wear – minimum maintenance

EasyFlow is a camless pick-up. The advantage of this is plain to see – a simple assembly uses fewer moving parts than controlled pick-ups with cam tracks and results in extremely quiet running, less wear and ultimately lower service and maintenance costs. EasyFlow – a powerful system that leaves no stem behind.

The crop press roller unit

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



The feed augers

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



The tine spacing

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



The KRONE EasyFlow pick-up

For clean *and consistent rakes*



Powerful feeding and cutting rotor

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.



The feed rotor

The Fortima models without cutting system have a powerful feed rotor as standard specification.



Protection against foreign objects

Automatically tensioned pick-up chains are overload protected by a shear bolt clutch.





The height control system

The EasyFlow height control system consists of pin/hole setting systems on the gauge wheels for quick height adjustment. The pick-up unit runs particularly smoothly on pneumatic tyres.

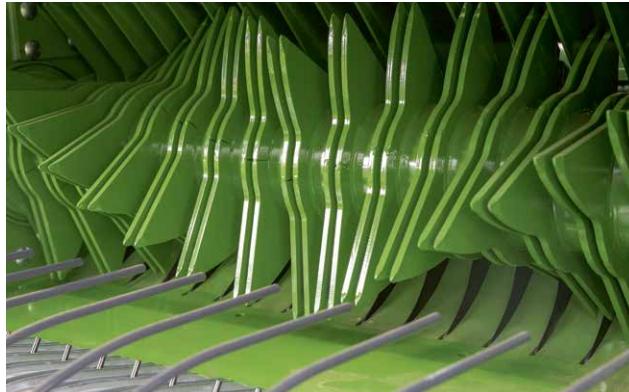


Working without gauge wheels

The pick-up is easily secured at the desired height. The pictured setting is typical for conditions involving deep ruts and extremely rough straw windrows.

The KRONE MultiCut cutting unit

High throughputs, *short chop lengths*



The rotor cutter

Measuring 415 mm (16") in diameter, the cut-and-feed rotor boasts a particularly high feed capacity. The double tines are arranged chevron-style and pull the crops consistently through the blades, thereby reducing the risk of peak loads as the stems are cut 'one after the other'.



The 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.



The blade cassette

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

MultiCut

- **Top cutting quality**
by controlled cuts
- **64 mm (2.5") chops**
by the full set of 17 blades
- **Quick LOC change**
by selecting a different number of blades in
the cutting system

Up to 17 blades in the KRONE MultiCut rotor cutting system deliver short chops that make for quick payback on your investment thanks to higher bale densities, enhanced silage quality as well as easier and faster bale break-up on the feeding floor. Short straw chops absorb liquids more readily, spread more easily.



The KRONE MultiCut cutting unit

High throughputs, *short chop lengths*



The cut-and-feed rotor

The complete cut-and-feed rotor assembly contains 17 blades and features central blade group control that allows operators to select groups of 17-15-7-0 blades via a selector shaft. A hydraulic blade retracting feature ensures blockages are removed conveniently and the spur gearbox provides powerful drive.



The blade group control system

The KRONE blade group control system allows operators to select only a specific number of blades (17-15-7-0 blades). The operator operates a selector shaft, which swings the desired number of blades into the feed channel. As he alters the spacing between the blades he varies the length of cut by up to 64 (2.5") mm.



Controlled cuts

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





The central blade locking system

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



The rotor reverser

The cut-and-feed rotors can be reversed manually or hydraulically as an option.



Protection from foreign objects

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



The Fortima blades

The Fortima blades cut across the 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.



Changing the blades

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



The KRONE slat and chain conveyor

One solution *for all application conditions*

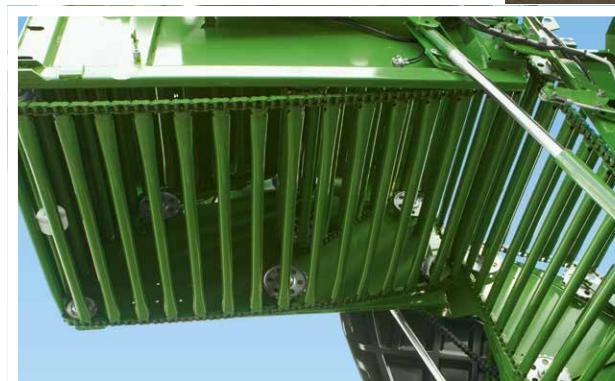
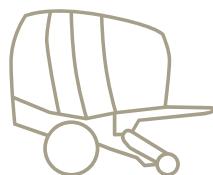
Slat and chain conveyor

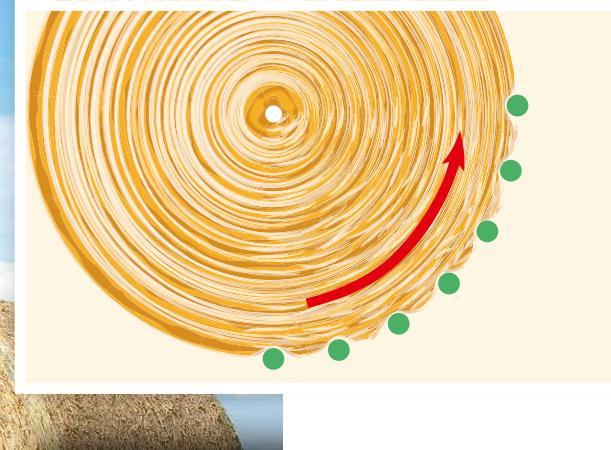
- High baling densities
- Effective bale starts
- Less fragmentation
- Low power input

Round balers harvest straw, hay and wilted silage around the world in a wide variety of conditions that require full operational reliability. The chain-and-slat elevators respond to these requirements and operate dependably in all these conditions.

The elevator chains

The heavy-duty chain-and-slat elevator runs on massive guide and drive rollers. The use of more chain links distributes the load more evenly and the use of massive rollers increases the angle at which the chains change direction, reducing the wear on the elevator, increasing its capacity and leading to smooth running. Individual chain links are easy to replace as required.



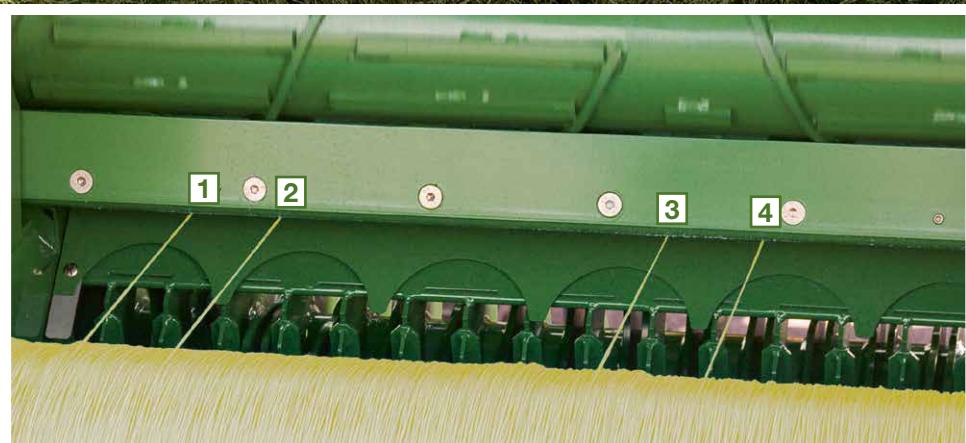


The meshing effect

The KRONE chain-and-slat elevator is gentle on the crop. By meshing with the material, it ensures effective bale roll and highest densities.

The KRONE twine tying system

Fast wrapping process, *simple in design*

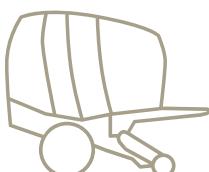


The twine feed system for four strings

A coned pulley controls the number of twine layers applied per cycle. Two guide blocks are used to distribute the four threads uniformly across the full width of the chamber. As the ball starts to roll, the rubber roller and the pressure roller start feeding the twine into the chamber where they are picked up by the rolling bale.

Well-shaped bales

Four threads (1-4) tie the bale a number of times, which allows applying extra wraps along the edges, depending on the settings. Four threads warrant well-shaped bales that will not lose shape as they are handled several times over.





Twine tying

- **Choice of double and quad twine wraps**
- **Short tying cycles**
- **High hourly rates**

The Fortima fixed-chamber balers are available either with Medium or Comfort on-board electronics. Depending on the chosen system, the machine can be equipped with a double or a quadruple twine tying system. Comfort electronics is comprised in the in the variable bale chamber as a standard. Accordingly, these types can only be equipped with the time-saving quadruple twine tying system.



The storage compartment

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

Starting the tying cycle

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.



The KRONE net wrapping

Visible from the cabin, *reliable functionality*



The storage compartment

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.



Fitting the roll

Replacing the net roll is convenient and safe, because the operator can stand upright when reloading. 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.



Setting the number of net layers

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



Net wrapping

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

Fortima's net wrapping system is straightforward by design and offers superior functionality. Net wrapping is faster than twine wrapping and increases output rates. The net wrap system accepts rolls with a total net length of up to 3,600 m (11,811 ft).



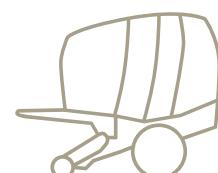


The net start

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

The net/twine brake

This brake ensures the net or twine is applied tightly so the bale keeps in shape when it's being handled.



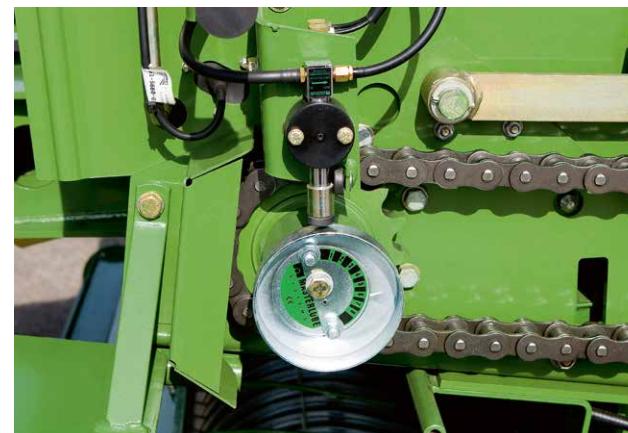
KRONE service and maintenance

Low maintenance - *highest reliability*



The automatic chain lubricator

The automatic chain lubrication system benefits from a large oil reservoir and eccentric pump for minimum maintenance and added viability. An adjustable eccentric pump supplies the oil to the drive chains.



The oil filter

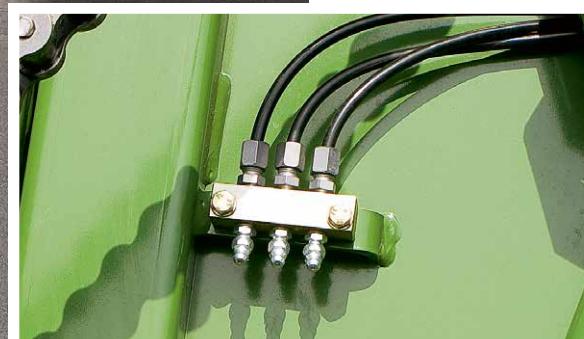
To avoid downtime due to contaminated oil, the variable chamber Fortima features an oil strainer with a visual indicator to ensure optimum functionality and peace of mind.





The chain tensioner

A spring-loaded and automatic chain tensioner minimizes the time spent on service and maintenance and increases chain life.



The grease banks

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

The KRONE terminals and on-board electronics variants

Clear, intuitive *and convenient*



The control box

The Fortima F has a standard control box which indicates the target pressure, switches from net to twine wrap and activates the blade group control and controls the pick-up.



The on-board electronic options

All Fortima fixed chamber balers have the Medium electronics as standard specification. In this specification they have two pointers at the front end which indicate the current pressure on either side of the bale chamber. The optional Comfort electronics process the sensor signals and control the control boxes automatically. The variable Fortima baler are equipped with the Comfort variant as a standard.

The DS 100 control unit

The DS 100 control unit controls all Fortima functions from the convenience of the cab. The intuitive arrangement of the keys makes controlling machine features especially convenient and easy.



Operation and terminals

- **High operator comfort**
from a graphical user interface
- **Clear design**
- **Easy use**

KRONE offers a choice of electronic control units that help reduce operator fatigue. Each control box features a clear and uncluttered screen that displays all relevant machine data and a user-friendly interface.



The DS 500 operator terminal

The DS 500 operator terminal has a 5.7" colour touchscreen, 12 function keys and a dial control for very easy use. Among other parameters, the unit displays baling pressures, bale diameters, start of tying/wrapping or number of bales. and allows operators to retrieve all valve and sensor functions.



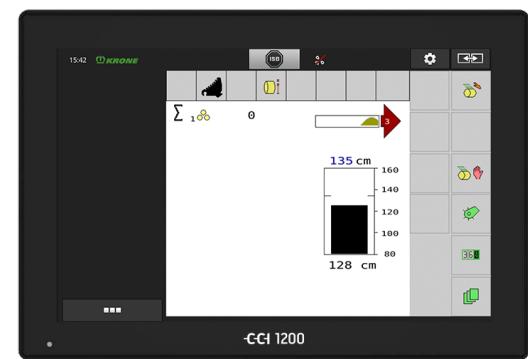
The camera system

A camera enhances operator comfort and road safety by monitoring the machine functions and ensuring good visibility around the machine. The camera feeds are viewed either on a separate screen or on a CCI terminal.



The CCI terminals

You can operate Fortima either from a CCI 800 or CCI 1200 terminal, both of which are ISOBUS-compatible and offer an 8- or 12-inch colour touchscreen for a clear overview of operation. Offering two side-by-side views, with one view showing the camera feeds and one the machine functions, these terminals eliminate the need for a second display screen in the cab when fitting a camera.



Panoramic view

Technical data

KRONE round balers with fixed and variable bale chamber



| Fixed chamber Fortima models | | | | | | Variable chamber Fortima models | | |
|---------------------------------------|------------|--------------------|--------------------|--------------------|--------------------|---------------------------------|----------------------------|----------------------------|
| | F 1250 | F 1250 MC | F 1600 | F 1600 MC | | V 1500 | V 1500 MC | V 1800 MC |
| Bale width | m | 1.20 (3'11") | 1.20 (3'11") | 1.20 (3'11") | 1.20 (3'11") | 1.20 (3'11") | 1.20 (3'11") | 1.20 (3'11") |
| Bale diameter | m | 1.25 (4'1") | 1.25 (4'1") | 1.55 (5'1") | 1.55 (5'1") | 1.00 - 1.50 (3'3" - 4'11") | 1.00 - 1.50 (3'3" - 4'11") | 1.00 - 1.80 (3'3" - 5'11") |
| Machine length | m | 4.20 (13'9") | 4.20 (13'9") | 4.36 (14'4") | 4.36 (14'4") | 4.52 (14'10") | 4.52 (14'10") | 4.86 (15'11") |
| Machine height | m | 2.49 (8'2") | 2.49 (8'2") | 2.62 (8'7") | 2.62 (8'7") | 2.70 (8'10.5") | 2.70 (8'10.5") | 2.85 (9'4") |
| Machine width* | m | 2.57 (8'5") | 2.57 (8'5") | 2.57 (8'5") | 2.57 (8'5") | 2.57 (8'5") | 2.57 (8'5") | 2.57 (8'5") |
| Pick-up unit without cam track | | | | | | | | |
| Work width (DIN 11220) | m | 2.05 (6'9") | 2.05 (6'9") | 2.05 (6'9") | 2.05 (6'9") | 2.05 (6'9") | 2.05 (6'9") | 2.05 (6'9") |
| Number of tine rows | | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Feed rotor | | Standard | - | Standard | - | Standard | - | - |
| Cutting rotor | | - | Standard | - | Standard | - | Standard | Standard |
| Maximum number of blades | | - | 17 | - | 17 | - | 17 | 17 |
| Minimum blade spacing | mm | - | 64 | - | 64 | - | 64 | 64 |
| Tyre choices | | 11.5/80-15.3 10 PR | 11.5/80-15.3 10 PR | 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 |
| | | 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** |
| Tractor power | min. kW/hp | 36 / 50 | 36 / 50 | 36 / 50 | 36 / 50 | 36 / 50 | 36 / 50 | 40 / 55 |
| Power input | | 12 V | 12 V | 12 V |
| Driveshaft speed | rpm | 540 | 540 | 540 | 540 | 540 | 540 | 540 |
| Hydraulic couplers | | 2 sa | 2 sa | 2 sa | 2 sa | 2 sa, free return line | 2 sa, free return line | 2 sa, free return line |

*Dimensions may vary depending on tyre and axle specification

** on single-axle models only

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

Genuine KRONE wrapping

With KRONE nets and twine



KRONE excellent Edge X-tra

The tried-and-tested KRONE excellent Edge X-tra is ideal for any crops and any round baler and covers the bale slightly beyond its edges. Its perfect edge to edge spreading technology protects your valuable crop and achieves optimum results.



KRONE excellent SmartEdge

To be able to offer a good alternative to customers which have simple product requirements, a "smart" version of our proven high-end net wraps excellent Edge X-tra has been developed – the KRONE excellent SmartEdge². This is a net wrap with a good cost-benefit ratio which, at a reasonable price, far exceeds basic quality requirements and achieves good results at any time.



KRONE excellent StrongEdge

This is the extra strong net among the KRONE net wrap products. With two warp threads combined into one thread, this net offers an enormous resistance to tearing, larger meshing and excellent UV-stability – properties that make it particularly suitable for use in hot and sunny regions and coarse material.



The KRONE excellent Round Baler Twine

This twine is the high-strength and high-quality option for round balers with twine tying systems.





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