



**MASSEY FERGUSON**

# MF 2200

Large Square Balers





# Purveyors of the finest large square balers since 1978

The MF 2200 Series of four large square balers introduces a host of innovative features designed to provide farmers with improvements in capacity, bale density and operating efficiency, together with real savings in time and costs. These machines built on the foundation of the MF 2100 Series introduce a number of new features and countless benefits in this highly competitive sector of the market.

The design engineers at Hesston set out to create a family of balers that was simple to operate and maintain, but which incorporated a range of clever developments destined to produce

perfect bales – in less time, and transported at less cost. The sleek, modern lines of these machines underline their place at the forefront of baler design.

The MF 2200 Series covers all the common sizes of large square balers required by today's farmers, contractors, hay and straw merchants and industrial consumers of large square bales.

Ultimately, owners of these superb balers will have the reassurance that they have a machine based on proven technology, with 39 years specialist experience and leading edge innovation.

## The complete package

Massey Ferguson's range of large balers has a model for the precise size of bale you need

Model	Bale size (W x H)	Straw	Hay	Haylage	Silage
MF 2250	0.80 x 0.90 m	•	•	•	•
MF 2270 & MF 2270 XD	1.20 x 0.90 m	•	•	•	•
MF 2290	1.20 x 1.30 m	•	•	-	-

● = Baling capability - = Not applicable

- Designed and built by the experts in Hesston, Kansas
- Class-leading productivity
- Consistently high bale density
- Quality bales that are easy to stack and transport
- Tandem axle and cutter options offer excellent productivity on all models
- Highly efficient drive system compared to other makes of baler; reduces power requirement whilst maintaining low running costs
- Low component numbers and straightforward maintenance

# The start of a perfect bale begins with the MF 2200 Series

## Getting you the best output thanks to impressive features

One of the most impressive features on any MF 2200 Series model is the pick-up. The sheer volume of crop that each of these machines can consume has to be seen to be believed. And even though the pick-up capacity is great, the windguard with the roller crop press ensures it is still gentle on the crop.

The integrated design of the pick-ups compression spring flotation system, is key to the pick-up's terrain-following capability. The new design gives all-important ground clearance during baling and transportation.

The four quad augers for the non-cutter baler provide massive pick-up capacity in all crop conditions. Positive, even feed of the crop into the packer ensures the machine can be run to its full potential. A solid, fully floating wind guard with roller crop press is standard on all models, promoting better control of the crop at all times.

From the pick-up, the packer feeds the crop into the pre-compression chamber to form the perfect flake. Once full, the stuffer fork – timed with the plunger – feeds the flake into the bale chamber. Because the stuffer only cycles when the chamber is full, perfect even flakes are consistently produced every time.



Four quad augers ensure higher capacity feed on 'packer' balers.



Cutter balers are also fitted with 'Quad' augers ensuring a consistent feed into the ProCut Rotor.



Compression spring pick-up suspension designed for high speed operation.



The packer tines ensure even feed into the pre-compression chamber.

# Pre-compression system

MF 2200 balers retain the well proven high capacity packer forks ensuring material is positively moved into the pre-compression chamber for optimum flake formation and consistent bale shape. This system makes perfect 'flakes' with even density from the top to the bottom which are at the heart of the renowned Massey Ferguson baler's consistent bale shape.



Pre-Compression Chamber – filling.

# The heaviest and strongest plunger in the industry

Driven by an enormous gearbox with massive strength, the plunger is connected via two heavy duty connecting rods. Contained in these are load cells that measure the load on the plunger face. Information from the load cells is used to control the automatic density control system and also provides the operator with driving arrow guides if uneven swaths are encountered.



Gearbox and plunger.



Plunger.

MF 2270 XD increased door length of **17%**,  
MF 2290 increased door length of **22%**



## OptiForm™ bale chamber

The bale chamber on the MF 2200 Series is engineered to produce bales with perfect shape and incredible density. Its design will give massive strength and year after year of reliability.

The MF 2270 XD and the MF 2290 baler feature the new **OptiForm™** bale chamber, which ensures 'Optimal Formation' of the bale on these high capacity and high density models.

The doors on these two models are significantly longer than the previous models and have a refined profile which improves bale compression ensuring even better bale shape and consistent density throughout the bale.



## Automatic density control

Double acting density rams apply pressure to both the side and top chamber doors to give consistent bale density, all controlled automatically via the C1000 Baler Monitor.



Three-way double acting density system.



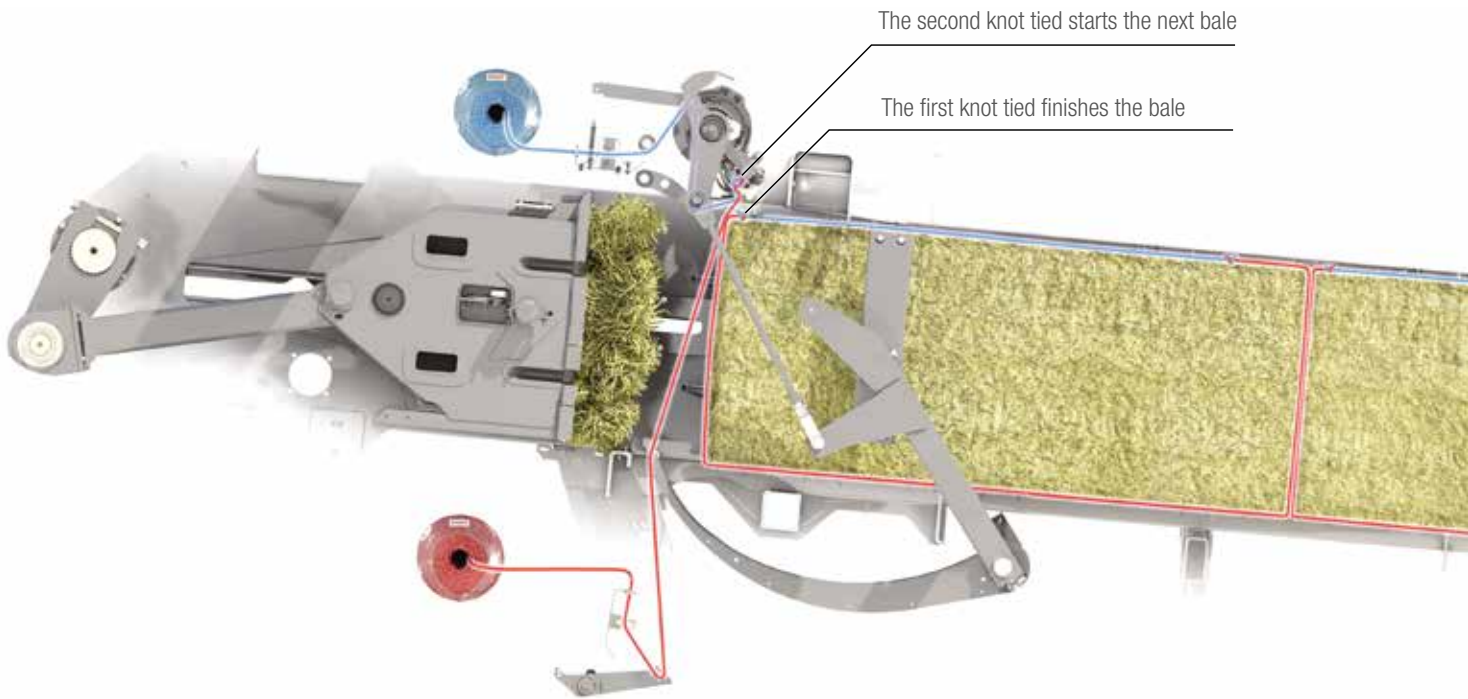
Density rams.

# Double-knotter system

The double-knotter system pioneered at the Hesston factory has an unrivalled record of reliability, tying many millions of bales all over the world since 1978. It continues to perform this vital role in the MF 2200 Series balers.

With the aim of perfect bale quality and protection, the knotters are chain-driven directly from the main gearbox, enabling plunger, knotters and needles to be precisely synchronised.

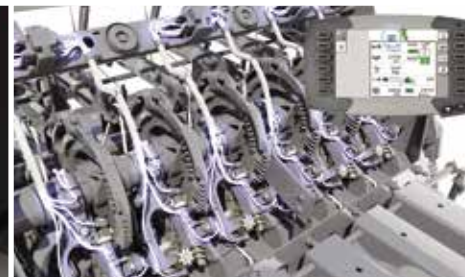
The knoter AutoLube system regularly lubricates twenty-four key points on the knoter stack helping to ensure trouble-free, reliable performance bale after bale.



Easily accessible knoter stock.



Each knoter head can easily be lifted for inspection and service.



AutoLube system for reduced maintenance and superb knoter reliability.



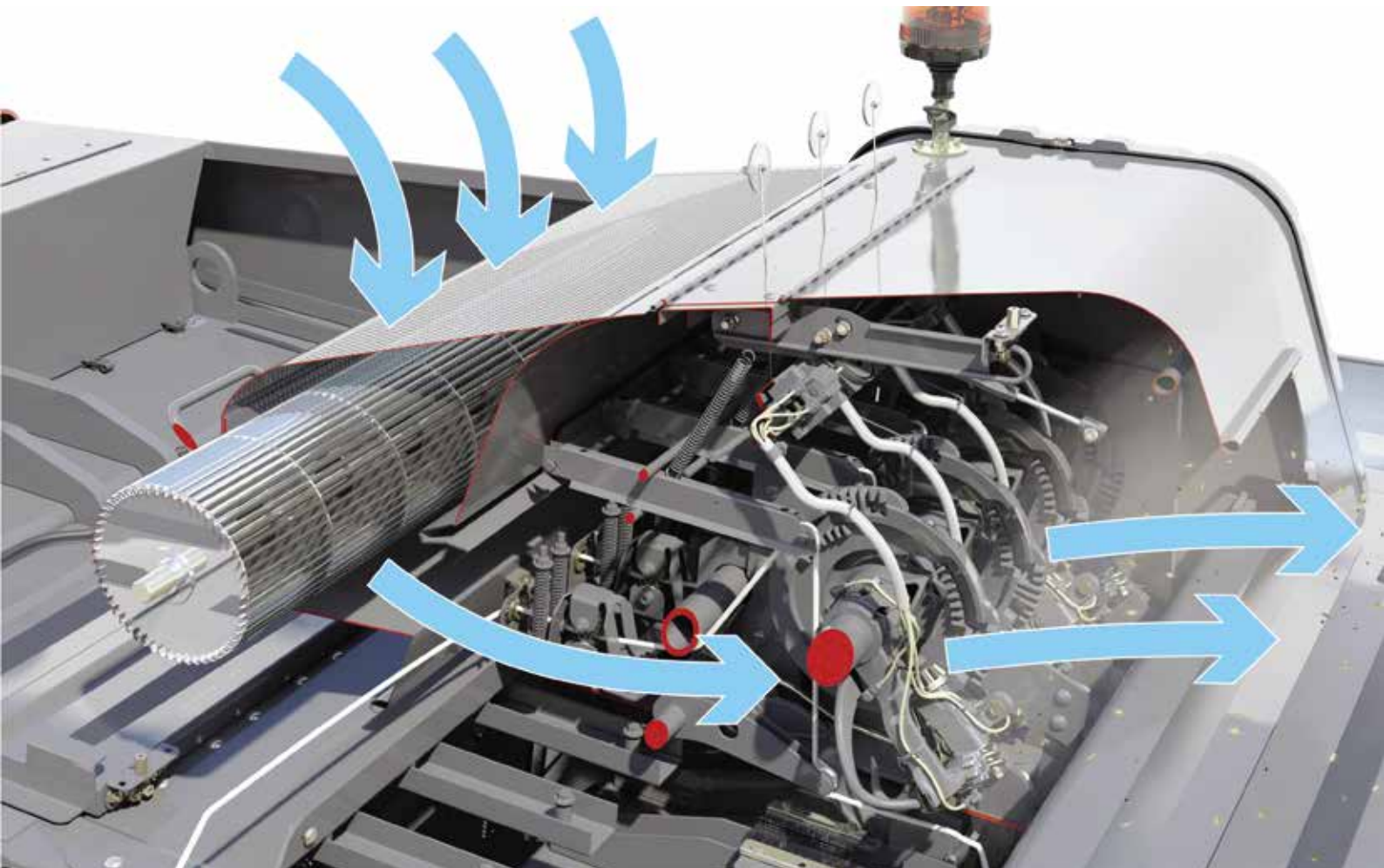
# Knotter blower and twine storage

## Knotter blower

Powered by a baler-mounted hydraulic pump, the standard knotter blower maintains a constant flow of air at 140 km/h through the knotter stack, instantly clearing any debris entering the knotter area. The design uses a full width, hydraulically driven turbine fan similar to the one used on our high capacity combines. These ensure superior, efficient air flow.

## Twine storage

All models carry 30 balls of twine in the 'Easy-Fill' twine boxes which is enough for the longest day's work. Productivity is increased as you don't have to refill during the day. The large dimension of each compartment allow 'super large' size twine spools to be used, enabling even more twine to be carried and therefore more bales produced per twine fill-up.



The consistently perfect knot.



'Easy-fill' twine storage.



Easy placement of twine that stays in place even on hill sides.



Twine box lighting allows easy night time refilling.

# Complete control at your fingertips

The entire baling operation can be monitored from start to finish by means of the highly versatile and simple-to-use C1000 Baler Monitor, giving the operator fingertip control over each stage of the process.

The on board electronics system automatically ensures that every bale is the same density, regardless of swath size and forward speed, and automatically diagnoses faults.

The high quality, easy-to-read, colour screen couldn't be clearer, whatever time of the day or night, and the baler itself is fully ISO-compliant so it can be used on any tractor with an ISO VT terminal.

The monitor is fully video compatible and can easily be linked up to a camera mounted at the rear of the baler.



C1000 Baler Monitor.



ISOBUS compatible.



Controlling the baler via the tractor ISO VT terminal.

## What the C1000 Baler monitor can do for you

- Set and view current load levels
- Productivity display – bales per hour
- Bale count – total and current job records
- PTO speed
- Pick-up slippage
- Bale weight
- Hydraulic system pressure
- Flakes per bale
- Knotter cycle and fault warnings
- Driving arrows to help ensure an even feed and consistent bale shape
- The ability to store and download field and job information via SD card or USB stick
- Full colour video compatible
- Electronic bale length control (if fitted)



One of two operation information screens.





Massive **XD Flywheel** **91%** heavier,  
and more than twice the thickness of the standard version

## MF 2270 Xtra Density baler

If you need a machine that produces bales of a high density, then this is the machine for you. The MF 2270 XD has immense capabilities and easily produces between 15% and 20% more material per bale.\*

The Massey Ferguson 2270 XD, Extra Density, large square baler packs between 15%-20% more material into bales.\*\* Designed specifically to lower transport costs with 1.2m x 0.90m bales, this machine produces much denser and heavier bales, further helping to optimise transport space and cut costs.

The MF 2270 XD baler is capable of producing high density bales in a range of crops including hay, haylage and straw. To produce the high density, engineers at Hesston have re-specified the driveline, enormously strengthening the components and main chassis structure to handle extra loads.

### Massive XD Flywheel maintains momentum

The extra-strength '**XD Flywheel**' has been designed to create additional inertia and maintain the momentum needed to produce the extra density during baling operations.

Weighing in at 545 kg and, with a width of 250mm, it is both 91% heavier and more than twice the thickness of the standard version. These flywheel dimensions produce greater plunger inertia, which increases the impact force onto the crop and helps to create the extra density.

### Extra heavy duty XD Gearbox transmits the power

To handle the extra load and flywheel force, Hesston engineers have developed a new, 35% heavier gearbox encased in a much thicker casting than the standard version. Inside, all the gears and bearings have been upgraded to manage the transmission of the exceptional power throughput with, for example, the output shaft that is nearly 20% larger than the standard.

### Built to handle heavy loads

The entire driveline and structure on the MF 2270 XD has been developed specifically to provide the strength and integrity needed to handle the extra density. Heavy duty mountings now support the '**XD Gearbox**' within the robust chassis, which has also been designed to accommodate the larger '**XD Flywheel**'.

The plunger crank arms from the gearbox are top of the range and extremely well-proven. These larger crank arms can cope with the increased force required to generate denser bales.

\* Than the standard MF 2270 model baler. \*\* Using appropriate high specification



Produces between **15% & 20%**  
more material per bale

A new **OptiForm™** bale chamber design not only increases the compression on the material to form the XD bales, but also does this at a lower hydraulic pressure than the standard MF 2270. Engineers at Hesston have achieved this using new '**XD Density Doors**' on the side of the chamber. These have a new, refined profile with a gradual curve which improves bale compression.

#### MF 2270 XD Extra Density features:

- '**XD Flywheel**' – twice the weight for increased energy and inertia
- '**XD Gearbox**' – with stronger, larger components and mounting points
- Improved structural integrity to handle the higher loads
- **OptiForm™** bale chamber with XD density cylinders
- High speed individually suspended self-steering tandem axle (up to 60 kph depending on market legislation)
- Integrated Bale Weighing System

#### MF 2270 XD Extra Density benefits:

- More material per bale
- Less bales per field – reduced field clearance time
- Reduced field transportation costs
- Reduced twine usage
- Reduced storage volume
- Reduced haulage costs

## Single or tandem axle

All models come with a choice of single or tandem axle, with hydraulically actuated brakes.

The single axle is rated at 40 kph and suits many customers' needs.

Alternatively customers may wish to opt for a tandem axle version. This high specification axle features self-steering rear wheels to ensure no tyre scrubbing when turning tightly.

On higher specification Massey Ferguson tractors this feature can be set to activate automatically when reverse is engaged.

For operating convenience, the steering axle can be hydraulically locked in the mid position for reversing, transport and when operating on steep side hills. An axle lock status display is shown on the C1000 Baler Monitor.

The Massey Ferguson tandem axle features independent leaf springs for each wheel helping to ensure a smooth safe ride.

In-field operation is considerably smoother and the baler can safely operate at higher working speeds without causing undue stress and loads on the baler when hard and uneven ground conditions are encountered.

The tandem axle is rated to 60 kph (where local legislation allows) to allow very high speed and safe road movements between fields.



MF 2270 tandem axle baler.



Optional 620 / 40R22.5 radial floatation tyres.



Rear axle hydraulic steering lock.



Independent leaf-springs for each wheel.



The tandem axle allows for high road speed and gives superb ride comfort between fields.

The tandem axle is rated to **60 kph**  
to allow high speed and safe road movements between fields

# Exceptional Cutting Capabilities

For high quality silage or chopped straw, MF 2250 to MF 2270 XD balers can be factory fitted with a heavy-duty cutter unit.

ProCut chops the crop to your required length and the packer tines ensure high capacity crop transition into the pre-compression chamber. The packer system ensures consistent flake formation producing perfect bale shape regardless of windrow shape and density.

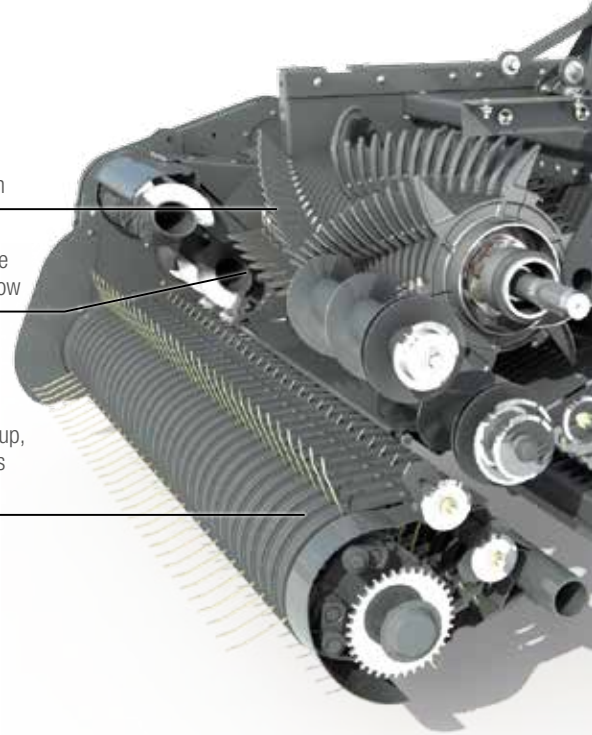
The MF 2250 has a cutter with 17 knives, whilst the MF 2270 and MF 2270 XD both have 26 knives. The knives are arranged in two banks which can be simply engaged and disengaged from the cab using the C1000 monitor and spool valve. Both knife banks engaged gives a chop length of 43.5 mm, while 87mm is achieved with a single knife bank.

Each bank of knives is protected by hydraulic accumulators that provide a very responsive safety system should a foreign object enter the cutting area.

All new ProCut 'V' shaped rotor design

Quad augers ensure unrestricted crop flow

High capacity pick-up, effective in all crops and conditions.



## Packer Cutter

Available on the MF 2250, the 'Packer Cutter' combines excellent cutting capabilities with high output and lower power consumption.

The Packer Cutter features a three stage packer to actively pull the crop across six stationary knives located in the floor of the packer chamber.

As with the full cutter baler, each cutter knife on the Packer Cutter has its own spring loaded knife breakaway system to protect against foreign object damage.



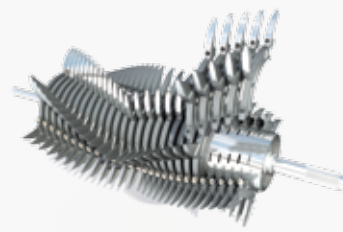
Heavy duty knives.



MF 2250 Packer Cutter.

### Packer Cutter benefits:

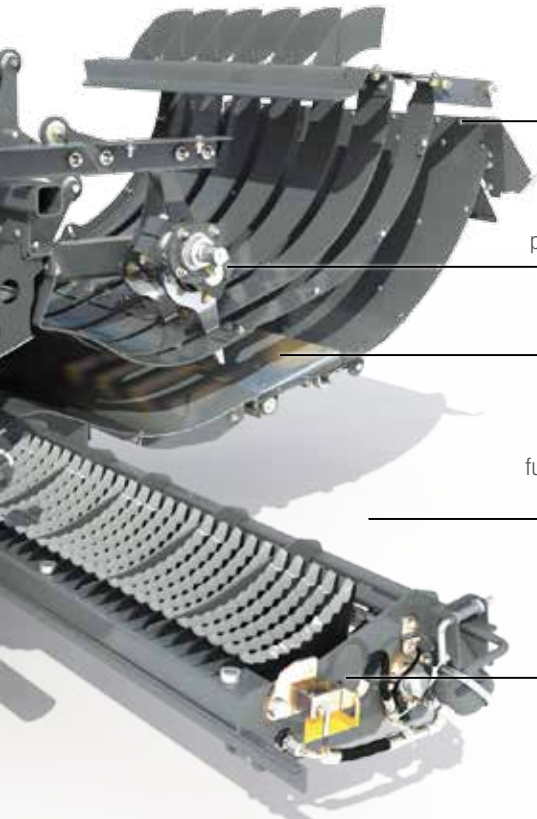
- Blades that can be removed or changed easily
- Individual spring loaded protection system for each knife
- High work rates
- Low power requirement
- Dense and well formed bales



High speed, large diameter, serviceable rotor with replaceable finger sections

**ProCut benefits:**

- Huge capacity from the ProCut rotor
- Finer chopped material from the 43.5mm knife spacing
- Highly responsive hydraulic twin knife-bank protection
- Cutter bed can be easily lowered from the cab
- Superb accessibility for cleaning, inspection and maintenance once the knife draw is rolled out
- Knives can be easily removed or changed
- ProCut knife engagement status is displayed on the monitor



Heavy duty plastic liner for unhindered flow of the stickiest crop

Packer tines ensure efficient transition of material into the pre-compression chamber

Hard wearing stainless steel trip door

Total accessibility with a full width one piece roll out knife draw

Hydraulic twin knife-bank protection



Ample accessibility offering straightforward knife removal



Precision cutting from the new ProCut heavy duty knives

# Serviceability

Good design makes for easy work



1. Comprehensive Operators Manual.



2. Excellent access to the knotters.



3. Checking the cutter gearbox oil level.



4. Checking the pick-up chain tensions.



5. Adjusting the flywheel slip clutch.



6. Greasing the PTO shaft.



Excellent all round access.

# AGCOMMAND baler telemetry

AGCOMMAND takes information gathering of the machine and the bales it produces to a new level.

By gathering information from the balers CANBUS system and transmitting it to a secure AGCO server, AGCOMMAND (available as an option) can provide the owner with detailed information on exactly where the baler is operating, how it is set up and what it is producing.

It is a fully automatic system that allows the operator to continue his baling operation without interruption.

Information about the baling operation is stored by a data collection unit on the machine, which is connected to a GPS antenna and module. This data, with position information, is then transmitted via the mobile phone network to a secure AGCO

server. From here owners and operators can view the information, in near 'real time', through a password protected webpage on a PC, smartphone or tablet.

AGCOMMAND collects a huge amount of information from the CANBUS to provide greater depth and detailed machine analysis. This information is quickly and easily collated into a very beneficial 'Field Summary Report' – this shows the field and crop details, bale count along with the number of flakes per bale. On machines equipped with the Integrated Bale Weighing System it also shows bale weight and a summary of field efficiencies. Much of the data can also be displayed on a field map.



AGCOMMAND field data points.



AGCOMMAND dashboard.

Field Summary Report	
<b>Fields: Beaufort Field</b>	
Resource	Wheat Straw
Variety	Solstice
Time entered field	04/10/2012 11:51:03
Time left field	04/10/2012 17:32:31
<b>Variables</b>	
Difference Bale Count - Total [ ]	184
Minimum Bale Flakes - Last [ ]	28
Maximum Bale Flakes - Last [ ]	52
Average Bale Flakes - Last [ ]	39.7
Difference Bale Weight - Total [kg]	95590
Minimum Bale Weight [kg]	430
Maximum Bale Weight [kg]	597
Average Bale Weight [kg]	527

AGCOMMAND Field Summary Report.



AGCOMMAND combined GPS & GSM antenna.



AGCOMMAND data collection unit.



AGCO's overarching technology strategy is called Fuse Technologies and provides professional growers around the globe seamless integration and connectivity across all their farm assets. It transforms farming by delivering precision agriculture solutions that lead to reduced input costs, greater efficiency and profitability.

# Specifications

		<b>MF 2250</b>	<b>MF 2270</b>	<b>MF 2270 XD</b>	<b>MF 2290</b>
<b>Bale Size</b>					
Cross section (width x height)	mm	800 x 900	1,200 x 900	1,200 x 900	1,200 x 1,300
Length (maximum)	mm	Up to 2,740	Up to 2,740	Up to 2,740	Up to 2,740
<b>Dimensions and Weights</b>					
Overall width – pick-up wheels installed	mm	3,000	3,000	3,230	3,300
Overall length – bale chute in raised position	mm	8,300	8,330	8,730	8,820
Overall height – to top of folded hand rail	mm	2,970	2,695	2,870	3,320
Overall height – to top of raised hand rail	mm	3,270	3,270	3,270	3,580
Weight (single axle / tandem axle, less cutter)	kg – approx.	6,840 / 7,440	8,940 / 9,690	9,830 / 10,580	10,520 / 11,030
Weight (single axle / tandem axle, with cutter)	kg – approx.	7,670 / 8,270	9,880 / 10,630	10,770 / 11,520	11,460 / 11,970
<b>Main Drive System</b>					
Flywheel diameter	mm	750	870	990	870
Flywheel width	mm	110	130	250	130
Flywheel weight	kg	170	290	545	290
Protection		Slip clutch, overrunning clutch and shear bolt			
<b>Pickup</b>					
Overall width – less pickup wheels	mm	2,600			
Effective working width	mm	2,260			
Number of tine bars		4 tine bars with centre carrier			
Tine spacing – tine to tine	mm	66			
Drive protection		Slip and overrun clutches			
Suspension		Compression Spring Floatation			
<b>Packer Balers</b>					
Packer system		Fork type			
Packer tines		4 hardened tines	6 hardened tines	6 hardened tines	6 hardened tines
Drive protection		Splined slip clutch			
<b>Packer Cutter Balers</b>					
Packer system		Fork type	N/A	N/A	N/A
Packer tines		6 double hardened tines	N/A	N/A	N/A
Number of knives		6	N/A	N/A	N/A
Knife protection		Spring loaded	N/A	N/A	N/A
<b>Cutter Balers</b>					
Rotor diameter	mm	650	650	650	N/A
Rotor width	mm	740	1,131	1,131	N/A
Number of knives	rpm	17	26	26	N/A
Knife protection	mm	Hydraulic accumulators			

# Specifications

		MF 2250	MF 2270	MF 2270 XD	MF 2290
<b>Plunger</b>					
Speed	strokes / min	47	47	47	33
Length of stroke	mm	740	740	740	820
<b>Tying Mechanism</b>					
Number / type of knotters		4 double knot	6 double knot	6 double knot	6 double knot
Twine type / capacity		High quality polypropylene / 30 ball storage			
Knotter blower		Standard – hydraulically driven			
Knotter lubrication		Standard – AutoLube automatic lubrication system to 24 points			
<b>Selectable Length Bale Ejector</b>					
Number of teeth		8 teeth in 4 rows		10 teeth in 5 rows	
Number of selectable rows		3 rows selectable			
Operation		Independent hydraulic cylinder operated from the rear of the baler			
<b>Bale Chute</b>					
Heavy duty roller bale chute		Standard			
Bale drop indicator		Standard			
Folding system for transport		Independent hydraulic cylinder operated from the rear of the baler			
<b>Axes and Tyres</b>					
Single axle tyre size		600 / 50 – 22.5	700 / 50 – 22.5		28L x 26
Single tyre ply rating		12 ply	16 ply	N/A	16 ply
Tandem steering axle tyre size		500 / 50 – 17	500 / 45 – 22.5	620 / 40 – 22.5 Radial	
Tandem tyre ply rating		16 ply	16 ply	16 ply	16 ply
Single axle maximum rated speed *	kph	40	40	40	40
Tandem steering axle maximum rated speed *	kph	60	60	60	60
<b>Control and Monitoring System</b>					
ISOBUS		ISOBUS 11783 Compatible Implement			
Implement monitor		C1000 Baler Monitor – full colour console – video compatible			
<b>Tractor Requirements</b>					
Recommended PTO horsepower – Packer	hp / kW	150 / 112	170 / 127	200 / 150	200 / 150
Recommended PTO horsepower – Packer Cutter	hp / kW	165 / 123	N/A	N/A	N/A
Recommended PTO horsepower – Cutter	hp / kW	180 / 135	200 / 149	250 / 186	250 / 186
PTO type		Type II 1 <sup>3</sup> / <sub>8</sub> " (35 mm) 21 Spline CV PTO Shaft	Type III 1 <sup>3</sup> / <sub>4</sub> " (44 mm) 20 Spline CV PTO Shaft		
Hydraulics spool valve requirement	min / rec	2 or 3 double acting depending on specification			

\* Where local legislation permits.

Every effort has been made to ensure that the information contained in this publication is as accurate and current as possible. However, inaccuracies, errors or omissions may occur and details of the specifications may be changed at any time without notice. Therefore, all specifications should be confirmed with your Massey Ferguson Dealer or Distributor prior to any purchase.



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