



MASSEY FERGUSON

MF2200 BALERS

MF2250, MF2270, MF2270 XD, MF2290





Purveyors of the finest large square balers since 1978

The MF2200 Series of four big 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 MF2100 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 MF2200 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 35 years specialist experience and leading edge innovation. 2013 sees the 35th anniversary of production of large square balers at our Hesston plant and with over 25,000 large square balers produced, you don't need any more reassurance than that!

The complete package

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

Model	Bale size (W x H)	Straw	Hay	Haylage	Silage
MF2250	0.80 x 0.90 m	•	•	•	•
MF2270 & MF2270 XD	1.20 x 0.90 m	•	•	•	•
MF2290	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 MF2200 Series

Getting you the best output thanks to impressive features

One of the most impressive features on any MF2200 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. Cutter balers have a full-width positively driven top auger to give a smoother crop feed. 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.



A full width auger is fitter on the cutter balers.



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



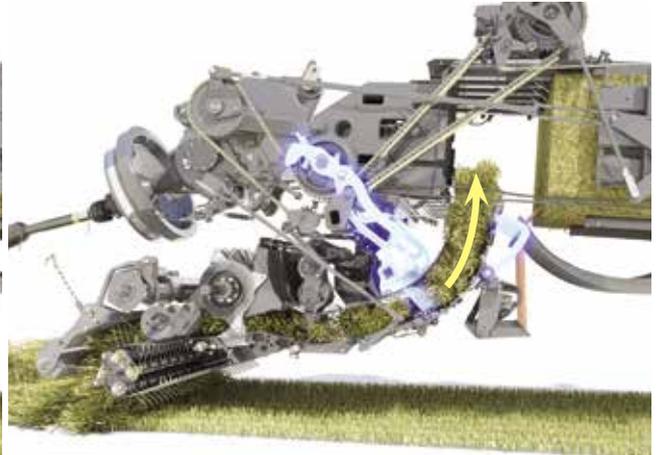
The packer tines ensure even feed into the pre-compression chamber.

Pre-compression system

Massive capacity, industry leading bale density and superb shape all stem from the award winning pre-compression chamber design. Only when the chamber is perfectly full will the trip door activate and stuffer fork powers the fully formed flake into the bale chamber.



Pre-Compression Chamber – filling.



Pre-Compression Chamber – stuffer fork in action.

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.

MF2270 XD increased door length of **17%**,
MF2290 increased door length of **22%**



OptiForm™ bale chamber

The bale chamber on the MF2200 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 MF2270 XD and the MF2290 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

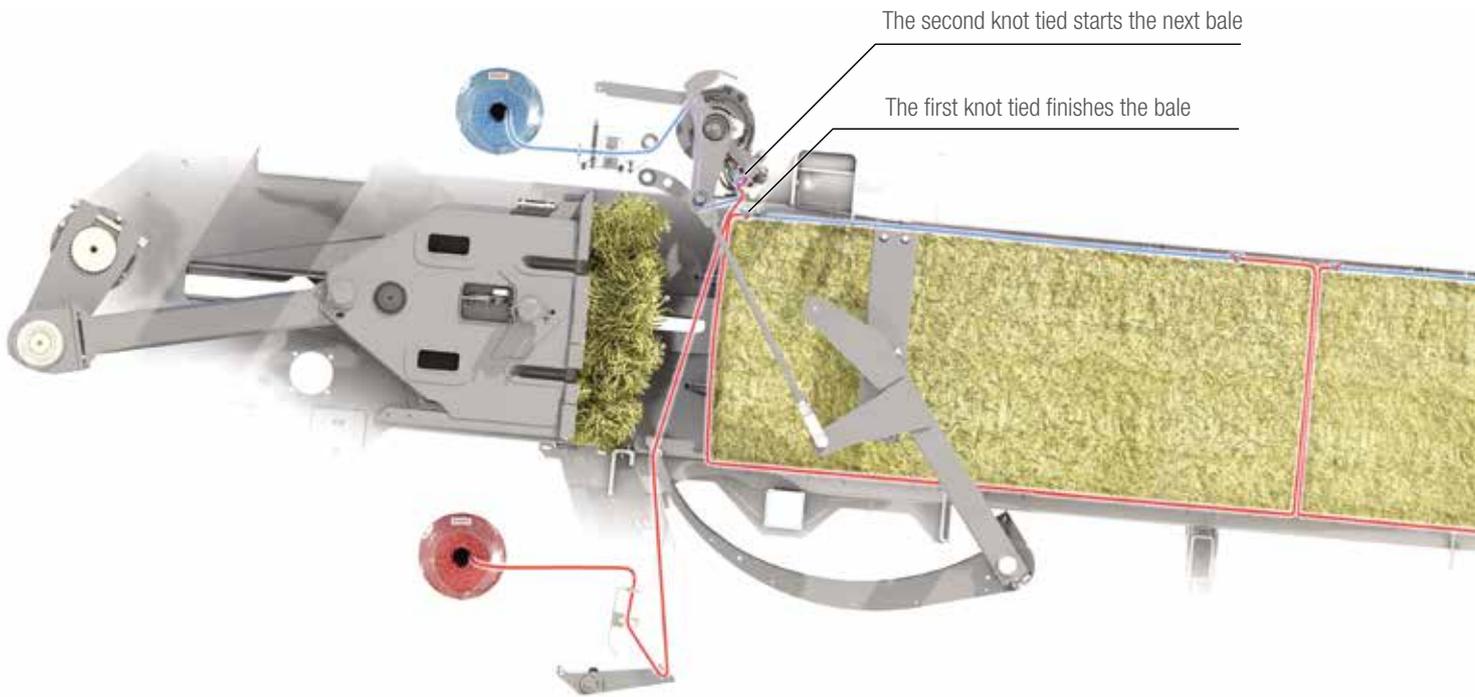
The double-knotter system pioneered at the Hesston factory has an unrivalled record of reliability, tying many millions of bales all over the world for over 35 years. It continues to perform this vital role in the MF2200 Series balers.

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 knotter AutoLube system regularly lubricates twenty-six key

points on the knotter stack helping to ensure trouble-free, reliable performance bale after bale.

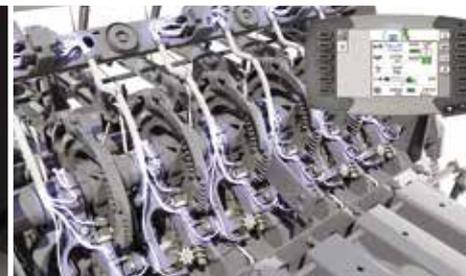
The Electronic Bale Length Control feature allows quick and simple setting of the bale length via the C1000 Baler Monitor.



Easily accessible knotter stock.



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



AutoLube system for reduced maintenance and superb knotter reliability.



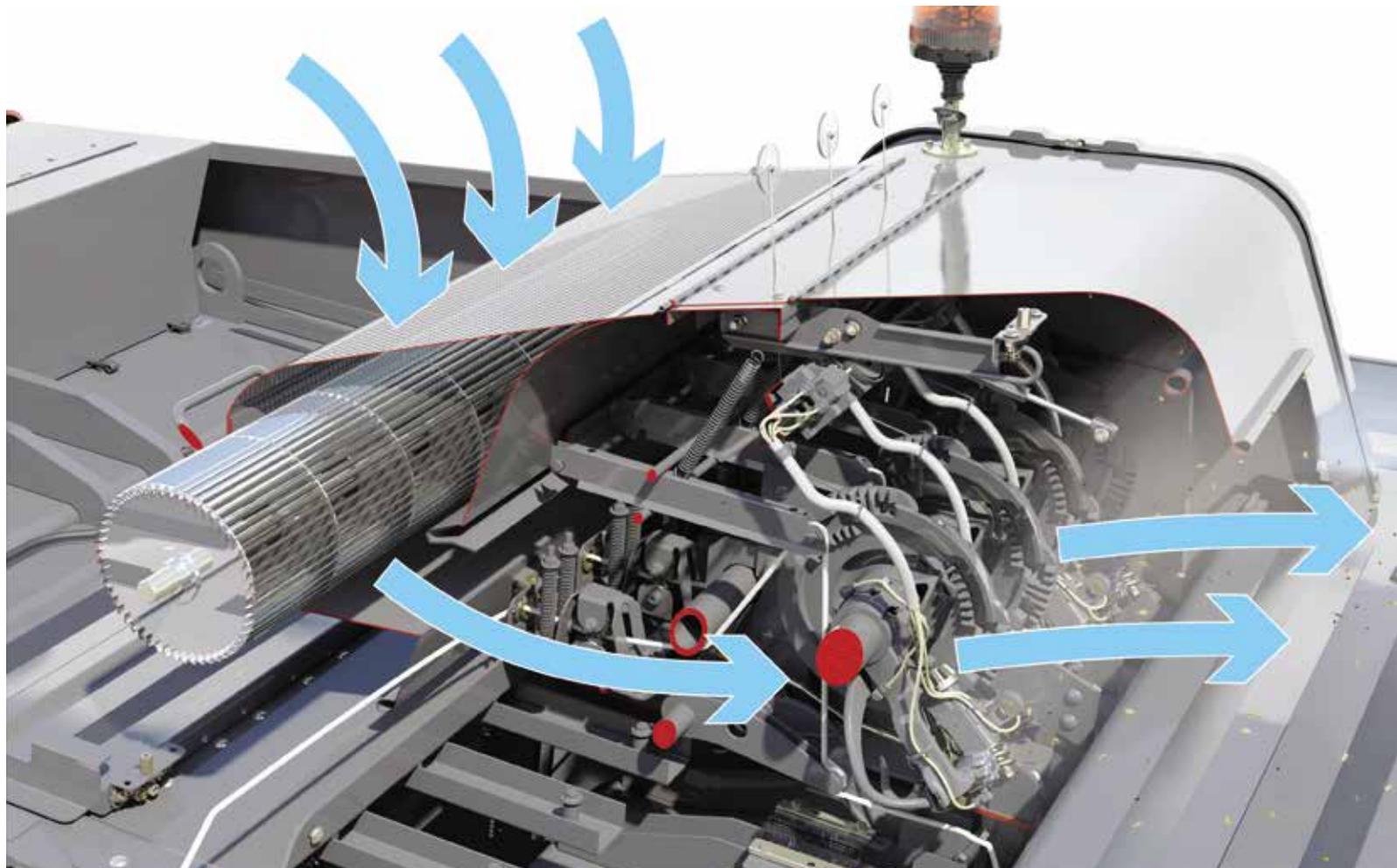
Knotter blower and twine storage

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. Acknowledged as the best monitor in the field, the console can be customised to display precisely the information that's required.

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



One of two operation information screens.



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

MF2270 Xtra Density baler

If you need a machine that produces bales of the highest density, then this is the machine for you. The MF2270 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 MF2270 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 updated 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 MF2270 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 the same design as those used on the top of the range and extremely well-proven, MF2190, large square baler. These larger crank arms can cope with the increased force required to generate denser bales.

* Than the standard MF2270 model baler. ** Using appropriate high specification twine.



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 MF2270. 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.

MF2270 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

MF2270 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 high specification MF7600 and MF8600 Series 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.



MF2270 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

Rotary Cutter

For high quality silage or chopped straw, all MF2200 Series balers can be factory fitted with a heavy-duty cutter unit.

This unit chops the crop to your required length and the packer tines take the crop and fill the pre-compression chamber. By retaining the packer tines, the all-important quality of the flakes is not compromised.

The MF2250 has a cutter with 11 knives, whilst the MF2270 and MF2290 all have 19 knives. Three pre-set chop lengths can easily

be selected using a simple selection rod and offer average chop lengths of 48, 96 or 192 mm.

Each cutter knife has its own spring loaded breakaway system to protect against foreign object damage. Combined with the superior density control of the MF baler, this allows you to achieve the finest quality feed bales and high density straw bales.



Heavy duty cutter rotor with full width powered feed auger.



Lowering of the knife bed gives easy access to the knives and aids removal of foreign objects.



Three pre-set chop lengths can be easily selected using this selection rod.



Heavy duty four-lobed spiral cutter rotor for smooth crop flow.

Packer Cutter

Available on the MF2250, 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.

Rotary Cutter benefits:

- Cutter bed can be lowered easily
- Blades can be removed or changed easily
- Cutter information is shown on the C1000 screen



Heavy duty knives.



MF2250 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



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 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 GSM 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.



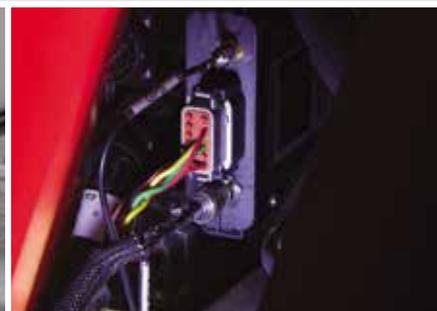
AGCOMMAND dashboard.

Field Summary Report	
Fields: Beaufort Field	
Resource	Wheat Straw
Variety	Solstice
Time entered field	04/10/2012 11:51:03
Time left field	04/10/2012 17:32:31
Variables	
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 new technology strategy is called Fuse Technologies and it will provide professional growers around the globe seamless integration and connectivity across all their farm assets. It will transform farming by delivering precision agriculture solutions that lead to reduced input costs, greater efficiency and profitability.

Specifications

	MF2250	MF2270	MF2270 XD	MF2290
Bale Size				
Cross section (width x height)	mm 800 x 900	1200 x 900	1200 x 900	1200 x 1300
Length (maximum)	mm Up to 2740	Up to 2740	Up to 2740	Up to 2740
Dimensions and Weights				
Overall width – pick-up wheels installed	mm 3000	3000	3000	3300
Overall width – optional 620 / 40 x 22.5 tyres	mm 3000	3230	3230	3230
Overall length – bale chute in raised position	mm 8300	8330	8730	8820
Overall height – to top of folded hand rail	mm 2970	2695	2870	3320
Overall height – to top of raised hand rail	mm 3270	3270	3270	3580
Weight (single axle / tandem axle, less cutter)	kg – approx. 6840 / 7440	8940 / 9690	9830 / 10580	10520 / 11030
Weight (single axle / tandem axle, with cutter)	kg – approx. 7670 / 8270	9880 / 10630	10770 / 11520	11460 / 11970
Main Drive System				
Flywheel diameter	mm 750	870	990	870
Flywheel width	mm 110	130	250	130
Flywheel weight	kg 170	290	550	290
Protection	Slip clutch, overrunning clutch and shear bolt			
Pickup				
Overall width – less pickup wheels	mm 2600			
Effective working width	mm 2260			
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			
Packer Balers				
Packer system	Fork type			
Packer tines	4 hardened tines	6 hardened tines	6 hardened tines	6 hardened tines
Drive protection	Splined slip clutch			
Packer Cutter Balers				
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
Cutter Balers				
Rotor diameter	mm 600	600	600	N/A
Rotor width	mm 765	1190	1190	N/A
Number of knives	rpm 0, 3, 8 or 11	0, 7, 12 or 19	0, 7, 12 or 19	N/A
Knife protection	mm	Individual knife spring loaded		

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.

Specifications

	MF2250	MF2270	MF2270 XD	MF2290	
Plunger					
Speed	strokes / min	47	47	47	33
Length of stroke	mm	740	740	740	820
Tying Mechanism					
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			
Selectable Length Bale Ejector					
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			
Bale Chute					
Heavy duty roller bale chute		Standard			
Bale drop indicator		Standard			
Folding system for transport		Independent hydraulic cylinder operated from the rear of the baler			
Axles and Tyres					
Single axle tyre size		600 / 50 – 22.5	700 / 50 – 22.5	N/A	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	500 / 45 – 22.5	500 / 45 – 22.5
Tandem tyre ply rating		16 Ply	16 Ply	16 Ply	16 Ply
Optional tandem tyre size		620 / 40 – 22.5 Radial	620 / 40 – 22.5 Radial	620 / 40 – 22.5 Radial	620 / 40 – 22.5 Radial
Single axle maximum rated speed *	kph	40	40	40	40
Tandem steering axle maximum rated speed *	kph	60	60	60	60
Control and Monitoring System					
ISOBUS		ISOBUS 11783 Compatible Implement			
Implement monitor		C1000 Baler Monitor – full colour console – video compatible			
Tractor Requirements					
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 ³ / ₈ " (35 mm) 21 Spline CV PTO Shaft		Type III 1 ³ / ₄ " (44 mm) 20 Spline CV PTO Shaft	
Hydraulics spool valve requirement	min / rec	2 or 3 double acting depending on specification			
Variable Equipment					
Air braking system		Yes			
Dealer Installed Accessories					
		Integrated Bale Weighing System, Hydraulic Parking Jack, Video Camera, Agcommand Telemetry			

* Where local legislation permits.

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