MF2100

Superior baling from Massey Ferguson
MF 2140, 2150, 2160, 2170, 2170 XD & 2190

VISION INNOVATION LEADERSHIP QUALITY RELIABILITY SUPPORT PRIDE COMMITMENT

MASSEY FERGUSON

Own the best, be the best

If you want consistently high output and superior bales, you need the right equipment. The Massey Ferguson 2100 Series of large square balers is best-in-class when it comes to excellent productivity and job satisfaction.
Be the best, choose the MF 2100 Series.

The complete package

- 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
- Cutter and tandem axle 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, minimum maintenance

Purveyor's of the finest large square balers since 1978

The MF 2100 Series of six big square balers introduces a host of innovative features designed to provide farmers with substantial improvements in capacity, bale density and operating efficiency, together with real savings in time and costs. These machines represent a whole new generation of big balers, 'raising the bar' significantly 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 addition of the MF 2140 baler meant that the MF 2100 Series now 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, more than 30 years specialist experience and leading edge innovation. 2008 saw the 30th anniversary of production of big balers at our Hesston plant, you don't need any more reassurance than that!

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

Model range						
Model	**Bale size (W x H)**	**Straw**	**Hay**	**Haylage**	**Silage**	**Miscanthus**
MF 2140	0.80 x 0.70 m	●	●	●	●	●
MF 2150	0.80 x 0.90 m	●	●	●	●	●
MF 2160	1.20 x 0.70 m	●	●	●	●	●
MF 2170 & MF 2170 XD	1.20 x 0.90 m	●	●	●	●	●
MF 2190	1.20 x 1.28 m	●	●	-	-	●

● = Baling capability, - = Not applicable

* Transportation heights and widths will depend on market legislation

Built for a lifetime of demanding harvests

Even in the toughest conditions, you don't want reliability problems in, what is often, a race against time. The MF 2100 Series balers will quickly earn your trust, with their day-in, day-out consistency and dependability.

01. Fully adjustable hitch.
02. Fully adjustable driveline to give smooth operation and increased reliability.
03. The heavy-duty flywheel gives greater force to the plunger, reducing the power requirement of the tractor. This weight increase also ensures heavier impact on the bale, increasing density.
04. Flywheel brake for safety.
05. Hydraulic pump for self-contained hydraulics.
06. Low profile pickup has a large entry area to maximise crop flow.
07. Quad augers for increased crop flow in heavy material, maximising throughput.
08. High speed main gearbox ensures high impact force onto the crop. It helps to increase the throughput of material and increases baler output.
09. Pick-up with ground following suspension for optimum performance in rough terrain.
10. Easily adjustable chop length of the optional cutter unit.
11. Constant feed packer system gives high crop throughput into the pre-compression chamber.
12. Heavy duty double supported feeder fork for extra durability.
13. Pre-compression chamber.
14. Simple yet highly efficient drive lines.
15. Large crank arms for efficient power transfer.
16. Heavy duty plunger with slot cleaners.
17. Double knotters for high density bales and reduced knotter wear.
18. Fully integrated, hydraulically driven knotter blower.
19. Low ground pressure tyres.
20. High speed tandem axle with immensely strong chassis made from high quality steel ensures long-term durability and reliability.
21. Work lights - In addition, three extra work lights have been fitted under the shielding for easier twine-loading and service area illumination at night.
22. Double-acting density cylinders for responsive density control.
23. High powered ejector system.
24. Hydraulic folding heavy duty roller bale chute.
25. Access to all areas of the baler for maintenance and service has been substantially improved by the design of large, lightweight side panels that can be opened in seconds.
26. Safety handrails are now easily folded to reduce overall height.
27. Optional heavy duty cutter unit with 11 or 19 knives* with easily selectable engagement.

* Depending on model

The start of a perfect bale begins with the MF 2100 Series

Getting you the best output thanks to impressive features
One of the most impressive features on any MF 2100 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, it is still gentle on the crop.

This is clear in the pick-up flotation system, The integrated design adds to the pick-up's terrain-following capability. The new design gives all-important ground clearance during baling and transportation.

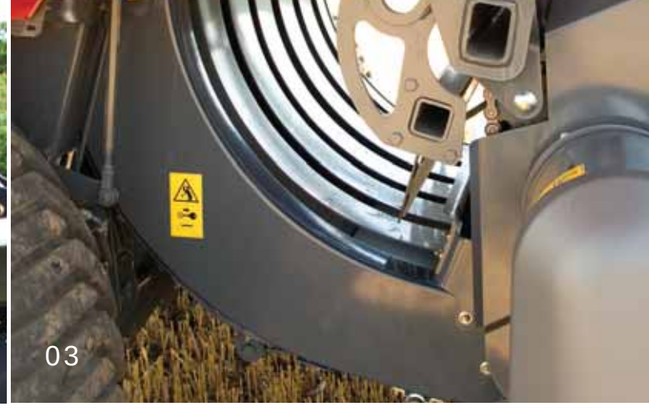
The four 'quad' augers for the non-cutter baler provide improved pick-up capacity in all crop conditions. Positive, even feed of the crop into the packers ensures the machine can be run to its full potential. Cutter balers have a full-width top auger to give a smoother crop feed. A solid, fully floating wind guard is standard on all models, promoting better control of the crop at all times.

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

No settings are needed – this simple system does all the working out. Even density silage bales retain their optimum nutritional value, while hay and straw bales are consistently solid and square for efficient transport and storage.

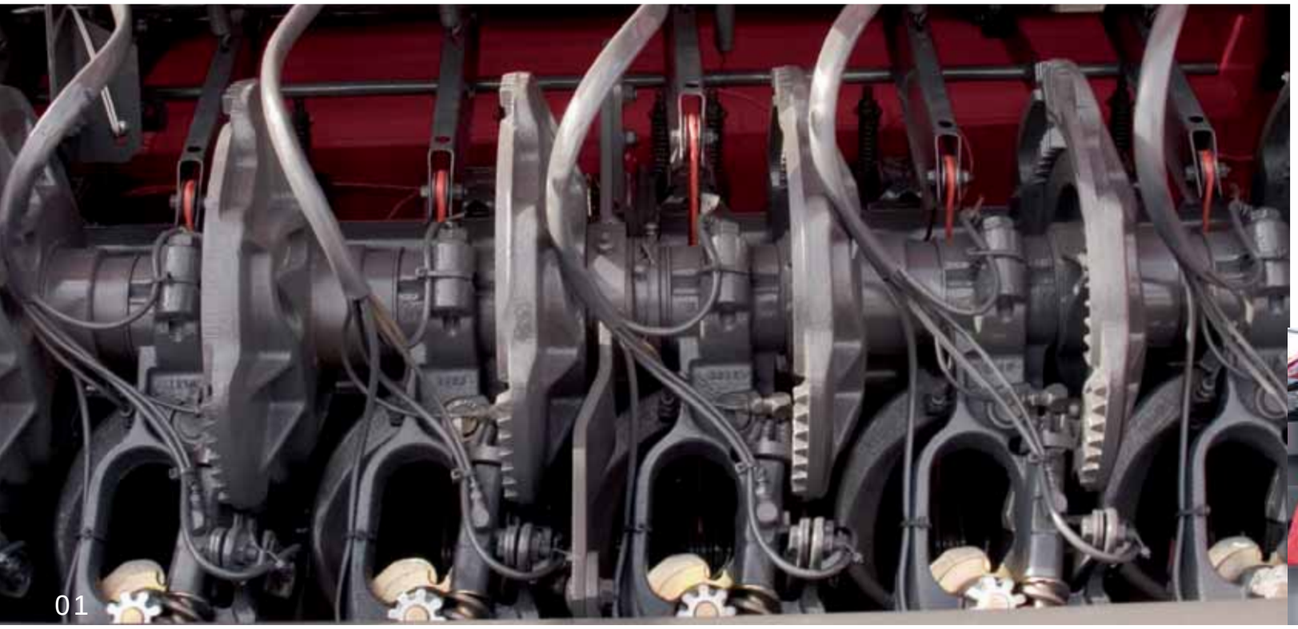
Reliability and durability is enhanced by the extensive use of sealed bearings, low component numbers and simple design. All reducing the cost of ownership.

01. The MF pick-up with high throughput.
02. Four 'quad' augers ensure higher capacity feed.
03. Durable and trustworthy stuffer system.
04. Packer crank ensures even feed into the pre-compression chamber.
05. Excellent capacity for the largest swaths.



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 30 years. It continues to perform this vital role in the MF 2100 Series balers.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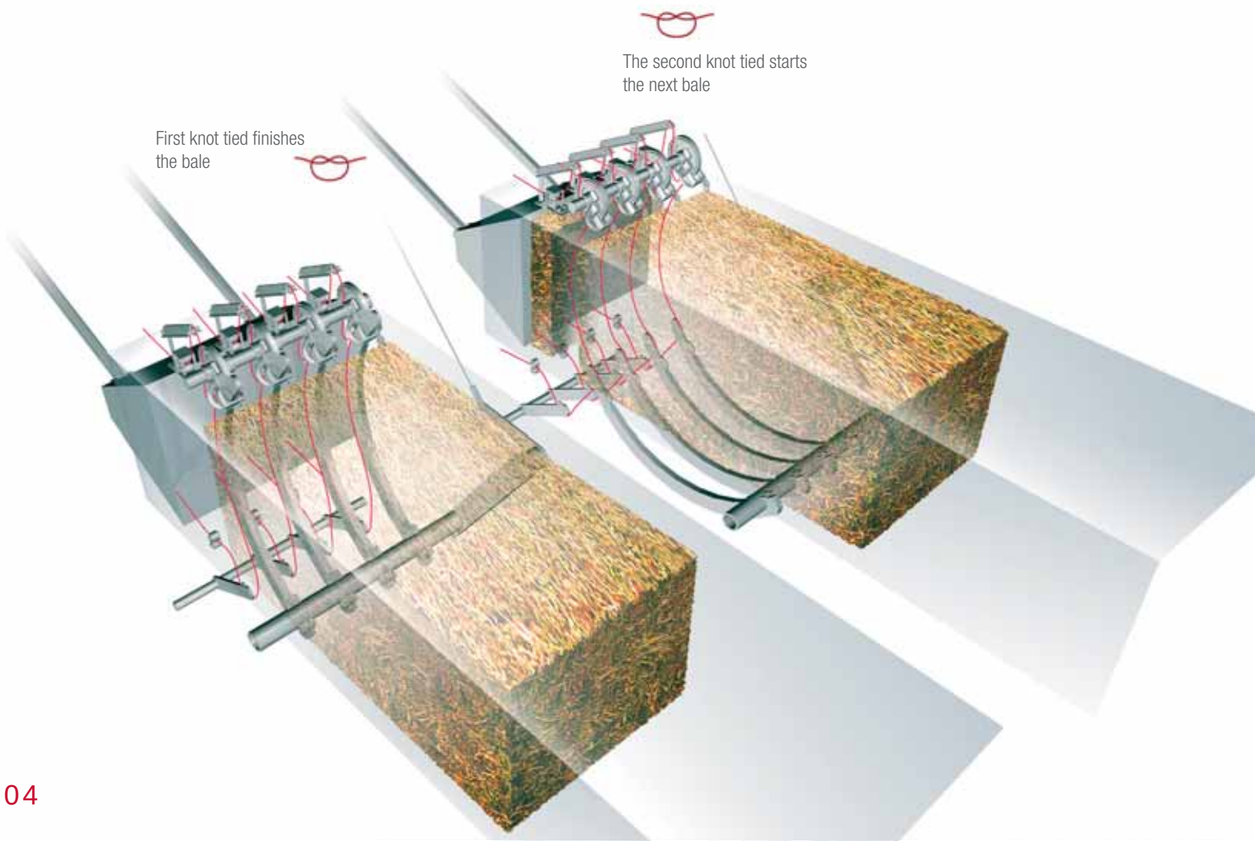

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With the aim of perfect bale quality and protection, the knotters are chain-driven directly from the gearbox, enabling plunger, knotters and needles to be synchronised precisely.

Some the best engineering designs are simple and straightforward – this system is a superb example, further enhanced by the knotter blower.

Powered by the baler-mounted hydraulic pump, the 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.

Extensive use of sealed bearings throughout the knotter stack prolongs component life and, again, minimises maintenance and lowers the cost of ownership.

Mounted in the centre of the bale chamber, the bale length star-wheel floats with the top chamber door, ensuring that the star-wheel gets firm traction in all crop conditions for improved bale length accuracy.

The knotters are lubricated by an AutoLube system, controlled from the C1000 Monitor – lubrication intervals can be varied to take account of intensity of use.

All models carry 30 balls of twine in the Easy-Fill twine boxes which is enough for the longest days work. Productivity is increased as you don't have to refill during the day.

01. Easily accessible knotter stock.
02. Knotter blower.
03. AutoLube system for increased knotter reliability.
04. The double-knotter cycle.
05-06. 'Easy-fill' twine storage. Easy placement of twine that stays in place even on hill sides.

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 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.

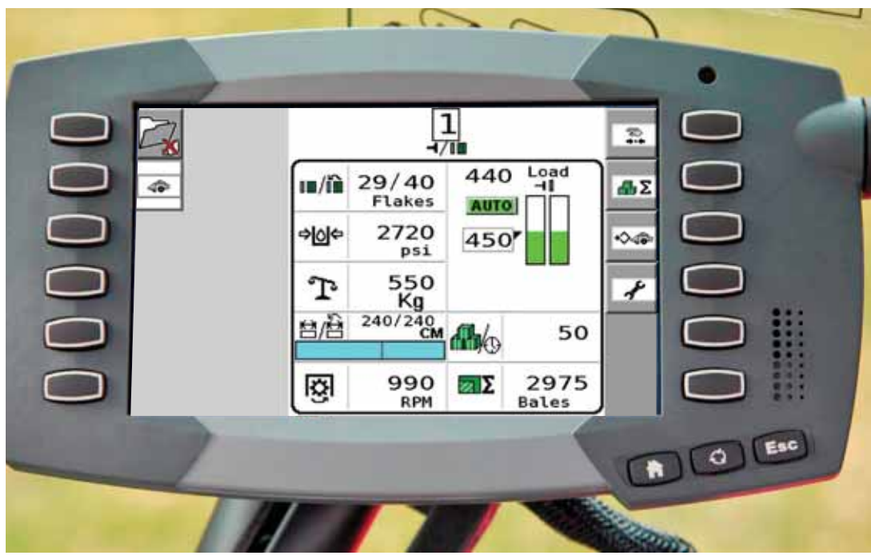
The system ensures that every bale is the same density, regardless of swath size and forward speed, and automatically diagnoses faults.

The high quality, easy-to-read, colour screen couldn't be more clear, whatever time of the day or night, and the baler itself is 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.

What the C1000 Baler monitor can do for you

- Set and view current load levels
- Productivity display
- Flakes per bale
- Performance slip guide
- Hydraulic system pressure
- PTO speed
- Knotter cycle and fault warnings
- Bale count - total and current job
- Work rates - bales per hour
- Driving guide 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
- Video compatible

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MF 2170 Xtra Density baler

If you need a machine that produces bales of the highest density, then this is the machine for you. The MF 2170 XD has immense capabilities and easily produces between 15% and 20% more material per bale.*

The new Massey Ferguson 2170 XD, Extra Density, large square baler packs between 15%-20% more material into bales. Designed specifically to lower transport costs with 1.2m x 0.88m bales, this new machine has a higher output and makes much denser and heavier bales, further helping to optimise transport space and cut costs.

The MF 2170 XD baler is capable of producing high density bales in a range of crops including hay, haylage, straw and miscanthus. To produce the high density, engineers at Hesston have re-specified the driveline, enormously strengthening the components and main chassis structure to handle extra load.

Massive XD flywheel maintains momentum

A new, 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 up rated to manage the transmission of the exceptional power throughput with, for example, a new output shaft that is nearly 20% larger than the standard. PTO input is now via a heavy duty Type 3, 1 ¾in, 20-spline shaft to match the power requirement.

Built to handle heavy loads

The entire driveline and structure on the MF 2170 XD has been developed specifically to provide the strength and integrity needed to handle the extra density. New, heavy duty mountings now support the new 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 as those used on the top of the range and extremely well-proven, MF 2190, large square baler. These larger crank arms can cope with the increased force required to generate denser bales.

* Than the standard model baler

A new bale chamber design not only increases the compression on the material to form the Extra Density bales, but also does this at a lower hydraulic pressure than the standard MF 2170. 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. New 115mm diameter XD hydraulic density cylinders, 25mm larger than standard, now act on the chamber. These are mounted in new cast, bell crank pivot supports, designed specifically to handle the extra pressure. Although these provide considerably more compression than the standard baler's rams they require less pressure, which reduces the load on the on-board hydraulic system and increases longevity of the components.

All under ISOBUS control

The MF 2170 XD, like all the balers in the MF 2100 Series, comes with an ISOBUS 11783 compliant terminal, which controls and monitors the entire baling sequence.

MF 2170 XD Extra Density features:

- New XD flywheel - twice the weight for increased energy and inertia
- New XD gearbox with stronger, larger components and mounting points
- Improved structural integrity to handle the higher loads
- New XD density chamber design with new density cylinders
- Standard high speed individually suspended self steering tandem axle (up to 60 kph depending on market legislation)
- Optional Integrated Bale Weight System

MF 2170 XD Extra Density benefits:

- More material per bale
- Reduced field-transportation costs
- Reduced twine costs
- Reduced haulage costs
- Reduced storage volume

Single or Tandem axle

Five models come with a choice of single or tandem axle and either hydraulic or optional pneumatically actuated brakes.

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01. The MF 2140 single axle baler.
02. The MF 2170 tandem axle baler.
03. Up to 20º steering on rear wheels.
04. Rear axle hydraulic steering lock.
05. Unique independent leaf-springs for each wheel.
06. The tandem axle allows for high road speed and gives superb ride comfort between fields.

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

Alternatively some 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.

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 is unique because it 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.

The MF 2140 and MF 2150 tandem axle balers are fitted with 500/50-17 tyres and the larger MF 2160, MF 2170 and MF 2190 tandem axles are fitted with 500/45-22.5 tyres for higher ground clearance and reduced compaction.

06

Exceptional cutting capabilities

For high quality silage or chopped straw, all MF 2100 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.

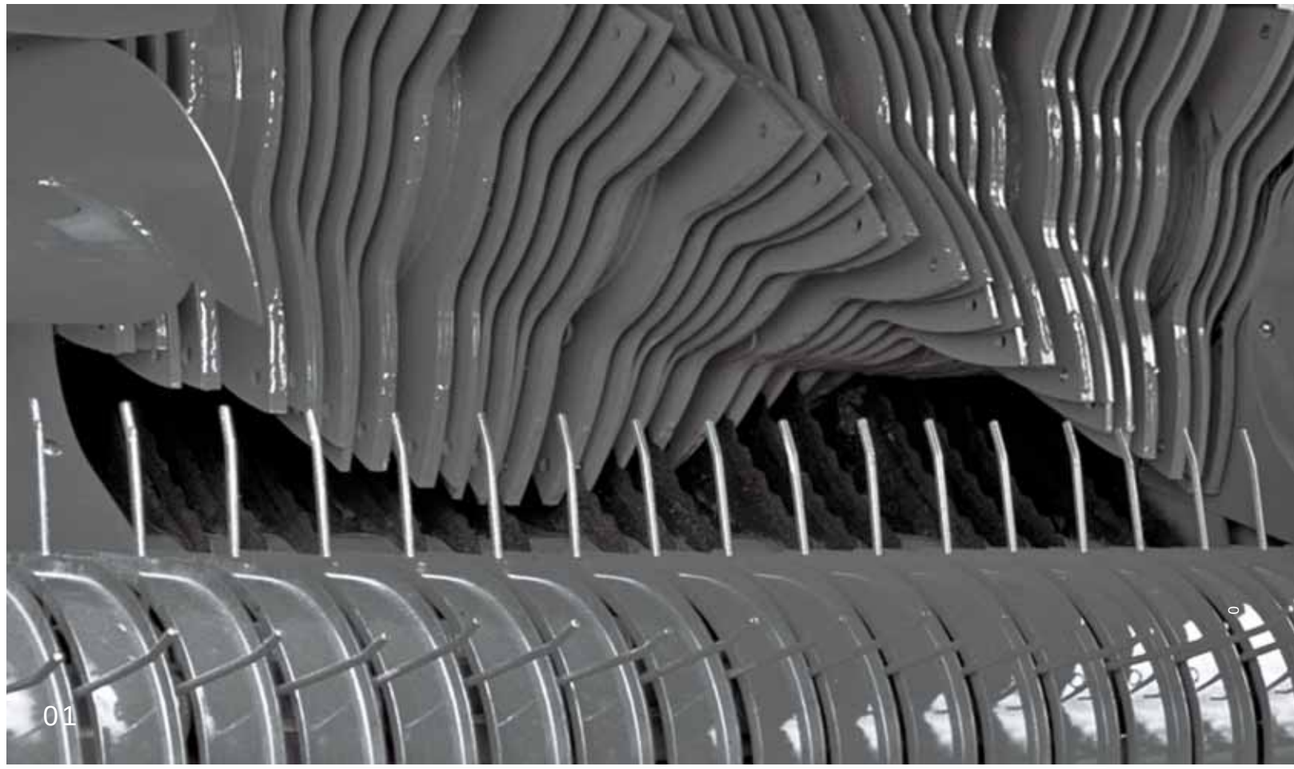
The MF 2140 & MF 2150 have a cutter with 11 knives, whilst the MF 2160, MF 2170 and MF 2190 all have 19 knives. Three preset chop lengths can easily be selected using a smple selection rod and offer average chop lengths of 48, 96 or 192 mm.

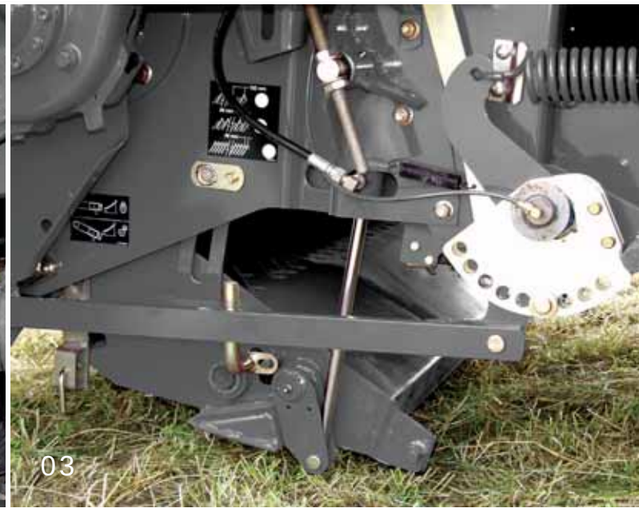
Each cutter knife has its own spring loaded breakaway system to protect against foreign object damage. Combined with the superior density control of the MF baler, this allows you to achieve the finest quality feed bales and high density straw bales.

Cutter benefits:

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

01. Heavy duty four-lobed spiral cutter rotor for smooth crop flow.
02. Individual spring loaded protection system for each knife.
03. Lowering of the knife bed gives easy access to the knives and aids removal of foreign objects.
04. Three preset chop lengths can be easily selected using this selection rod.





Accessories

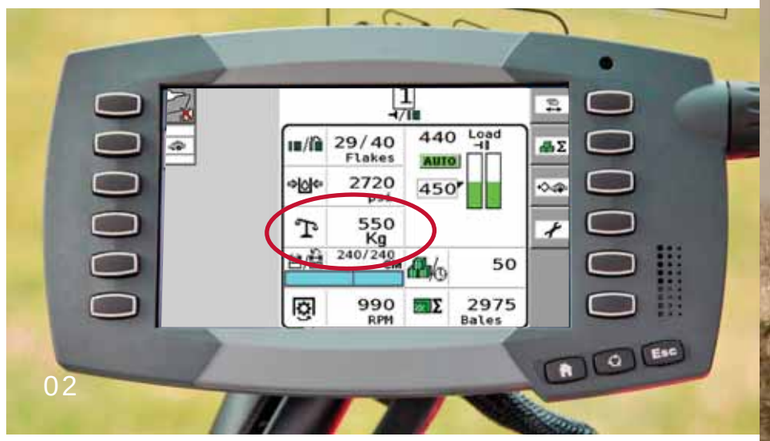
Optional extras are available to increase productivity, make light work of tough jobs and even help your business to grow.

01

Integrated Bale Weighing System for increased accuracy

The new Integrated Bale Weighing System (IBWS) is an option that operates through the C1000 baler monitor. This allows the operator to monitor individual bale weight, flake width, bale length and total bale weight, which provides the great benefit of enabling contractors to buy straw or sell forage by the precise tonnage, rather than on a per bale or area basis.

Another significant advantage of weighing the bales is it allows operators to reduce costs by achieving maximum truck payloads, without the risk of overloading.



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01. The IBWS weighs the bale as it exits the chamber onto the roller bale chute.
02. Bale weight.

Customer support

Dedicated service and dynamic support

Massey Ferguson is a true global brand with machines operating all over the world, and behind every Massey Ferguson machine is the powerful after sales support of AGCO's Customer Support organisation.

Industry benchmarking shows that AGCO offers customers world-class parts and service support, and this is never truer than in support of our harvest machinery both in and out of season.

In season excellence
The Harvest Support Programme is designed to be extremely dynamic and able to adapt immediately to changing conditions. Each harvest experience in every country is used to continuously enhance the comprehensive service.

Key elements include:
- A dedicated harvest parts warehouse guaranteeing superb parts supply and availability, and enabling a direct and rapid logistical response.
- 24/7 AGCO Parts warehouse and Customer Service facilities for MF European combine markets.
- Dealer direct access to on-line parts ordering 24/7 with full visibility of parts availability throughout the European warehouse network round-the-clock.
- Exceptional services such as late cut-offs, special transport, 'Eurodirect' deliveries throughout Europe direct to MF dealers and customers, and collection services
- Specialist technicians with expert product knowledge supporting local markets.
- Local dealer commitment to the highest levels of service by operating 'out of hours' parts and service support.

Year round distinction
Naturally we recognise that supporting our harvest equipment goes beyond the harvest period.

All Massey Ferguson machinery benefits from year round focus in the form of both the exceptional standards provided by AGCO Parts as well as specific servicing packages:

- Industry-leading parts supply through AGCO Parts' state-of-the-art warehousing and logistics.
- Genuine parts from AGCO Parts, the only genuine supplier, guaranteeing the right fit, first time, every time.
- Well-qualified parts specialists and highly-trained service technicians providing dedicated service support and technical solutions.
- After sales solutions for all ages of machinery for maximum uptime in every situation.
- Specific focus on preventative maintenance through comprehensive pre- and post-season health checks.
- Long term reliability from affordable servicing and maintenance packages.

After sales support from AGCO Customer Support is about providing the best solution to our customers' needs through world-class parts and service; providing the local service to the global brand.

Bale Size		MF 2140	MF 2150	MF 2160	MF 2170	MF 2170 XD	MF 2190
Cross section (width x height)	mm	800 x 700	800 x 900	1200 x 700	1200 x900	1200 x 880	1200 x 1280
Length (maximum)	mm	Up to 2740	Up to 2740	Up to 2740	Up to 2740	Up to 2740	Up to 2740
Dimensions and Weights							
Overall width - single/tandem axle	mm	2550/ 2549	2550/ 2549	3000/ 2990	3000/ 2990	2990	3300/ 2990
Overall length – bale chute folded	mm	8329	8329	8329	8329	8329	8492
Overall height – to top of hand rail	mm	3270	3270	3270	3270	3270	3576
Weight (single axle/tandem axle, less cutter)	kg	7413/ 7984	7639/ 8211	8461/ 9214	8936/ 9689	10580	10522/ 11032
Weight (single axle/tandem axle, with cutter)	kg	8068/ 8639	8295/ 8866	9351/ 10104	9839/ 10579	11470	11394/ 11904
Main Drive System							
Flywheel diameter	mm	750	750	865	865	990	865
Flywheel width	mm	110	110	130	130	250	130
Flywheel weight	kg	165	165	287	287	545	287
Protection		Slip clutch, overrunning clutch and shearbolt					
Gearbox type		Enclosed, double reduction					
Pick-up							
Overall width - less pick-up wheels		2597					
Effective working width		2260					
Width - outside tine to outside tine		2046					
Number of tine bars		4 tine bars with centre carrier					
Number of double tines		64					
Tine spacing - tine to tine		66					
Drive protection		Slip and overrun clutches					
Tyre size		122 x 203 (4.8 x 8 inches)					
Feeding system							
Packer system	kg	Fork type	Fork type	Fork type	Fork type	Fork type	Fork type
Packer tines		4 hardened tines	4 hardened tines	6 hardened tines	6 hardened tines	6 hardened tines	6 hardened tines
Protection		Splined slip clutch					
Cutter system							
Rotor diameter	mm	600	600	600	600	600	600
Rotor width	mm	765	765	1190	1190	1190	1190
Rotational speed	rpm	107	107	107	107	107	107
Knife bed width	mm	810	810	1210	1210	1210	1210
Number of knives		0, 3, 8 or 11	0, 3, 8 or 11	0, 7, 12 or 19	0, 7, 12 or 19	0, 7, 12 or 19	0, 7, 12 or 19
Knife protection		Individually spring loaded					

Plunger		MF 2140	MF 2150	MF 2160	MF 2170	MF 2170 XD	MF 2190
Speed	strokes/ min	47	47	47	47	47	33
Length of stroke	mm	740	740	740	740	740	820
Tying Mechanism							
Number / type of knotters		4 double knot	4 double knot	6 double knot	6 double knot	6 double knot	6 double knot
Knotter spacing	mm	176					
Twine type / capacity		High quality polypropylene/30 ball storage					
Knotter blower		Standard - hydraulically driven					
Knotter lubrication		Standard - AutoLube automatic lubrication system to 24 points					
Bale Ejector System							
Number of teeth		8					
Slide type		Two rail with ball bearing rollers					
Power		Hydraulic cylinder operated from rear of baler					
Bale Chute							
Heavy duty roller bale chute		Standard					
Bale drop indicator		Standard					
Folding system for transport		Hydraulic cylinder operated from rear of baler					
Axles and Tyres							
Single axle tyre size		600/50 - 22.5	600/50 - 22.5	700/50 - 22.5	700/50 - 22.5	N/A	28L x 26
Single tyre ply rating		12 Ply	12 Ply	16 Ply	16 Ply	N/A	16 Ply
Tandem steering axle tyre size		500/50 - 17	500/50 - 17	500/45 - 22.5	500/45 - 22.5	500/45 - 22.5	500/45 - 22.5
Tandem tyre ply rating		16 Ply	16 Ply	16 Ply	16 Ply	16 Ply	16 Ply
Single axle maximum rated speed*	Kph	40	40	40	40	NA	40
Tandem steering axle maximum rated speed*	Kph	60	60	60	60	60	60
Lights							
Road lighting		CE compliant road lighting, with three work lights & three service lights					
Rotating beacon		Standard - can be fitted on either side of baler depending on road legislation in local market					
Control and Monitoring System							
ISOBUS		ISOBUS 11783 Compatible Implement					
Monitor		C1000 Baler Monitor - full colour console					
Tractor Requirements							
Recommended PTO horsepower - Packer	Hp/kW	140/103	150/110	160/118	170/125	200/147	200/147
Recommended PTO horsepower - Cutter	Hp/kW	170/125	180/132	190/140	200/147	250/184	250/184
PTO operating speed	rpm	1000					
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					
Optional Equipment							
		Cutter, Tandem axle, Air Braking System					
Optional dealer fit accessories		Integrated Bale Weighing System					

* Depending on market legislation

MF 2100 highlights

Here's a quick reminder of some of the advanced features of the MF 2100 Series balers that continues to take them to new levels of efficiency and output.

01 Six models to choose from.
Covering all the common sizes required by today's farmers, contractors, hay & straw merchants and industrial consumers of large square bales.

02 Choice of configuration:
Models are available as a standard 'packer' or 'cutter' variant, single or tandem self steering axle. The tandem axle allows safer, higher road speeds and significantly enhanced suspension - both in field and during transportation.

03 Pre-compression chamber ensures a full amount of material is loaded into the bale chamber even when baling a small swath.

04 2.26m wide high capacity pick-up with four 'Quad augers' for superb feeding. Able to efficiently handle the widest of windrows.

05 'Easy-fill' string boxes. Enough for a full days work with capacity for 30 balls of twine.

06 Fully integrated on-board hydraulics.
It does not matter which hydraulic system the tractor has, whether it's 'open centre' or 'closed centre load sensed', the baler hydraulics are completely independent.

07 Fully integrated, hydraulically driven, knotter blower, ensures trouble free knotter performance.

08 Built-in, auto-lube knotter lubrication as standard.

09 New integrated Bale Weighing System option.
- This simple yet accurate design weighs the bales precisely as they exit the chamber and pass onto the roller bale chute.

10 ISOBUS 11783 compatible implement. Allows for simple and easy connection to an ISOBUS compatible tractor.

11 NEW MF 2170 XD baler produces bales of immense density with between 15 % and 20 % more material per bale.

AGCO Your Agriculture Company

MASSEY FERGUSON