

MF 185/187/190



Big balers with serious history



MASSEY FERGUSON

## Over 25 years of building big square balers



**More than a quarter of a century ago, engineers from a baler factory in Hesston, Kansas, USA developed the big square baler.**

Today, at this same factory, the original design concepts from 1978 form the foundations of Massey Ferguson's current big square baler range. This range of balers is superior not only in terms of performance and durability, but also in terms of rapid payback for you.

Simplicity is the key. The Massey Ferguson big square balers were designed by engineers who understand baling and understand your needs. And it shows. You'll find no unnecessary complications here – just the latest features for built-in long term reliability and durability.

Whichever MF model you choose, you can be sure that you are working with the same proven technology that is helping some owners to produce over 40,000 bales a year with a single baler.

That technology also means that, when you come to exchange your baler for a new model, you can depend on high residual values from the industry benchmark machine.

## Capability with versatility

**Whatever the crop, Massey Ferguson big square balers are ready for the job at hand.**

Whether it's silage, hay, straw, lucerne, or even a crop such as hemp, Massey Ferguson big square balers get the job done with no fuss. These balers are equally at home in any crop you need to bale. Moving from one crop to another requires no changes at all. You just drive in and go.



**MF185 Series II produces bales of 0.88 m x 0.80 m section up to 2.50 m long and will bale silage, hay, lucerne and straw.**



**The MF187 produces bales of 0.88 m x 1.20 m section up to 2.50 m long and will bale silage, hay and straw.**



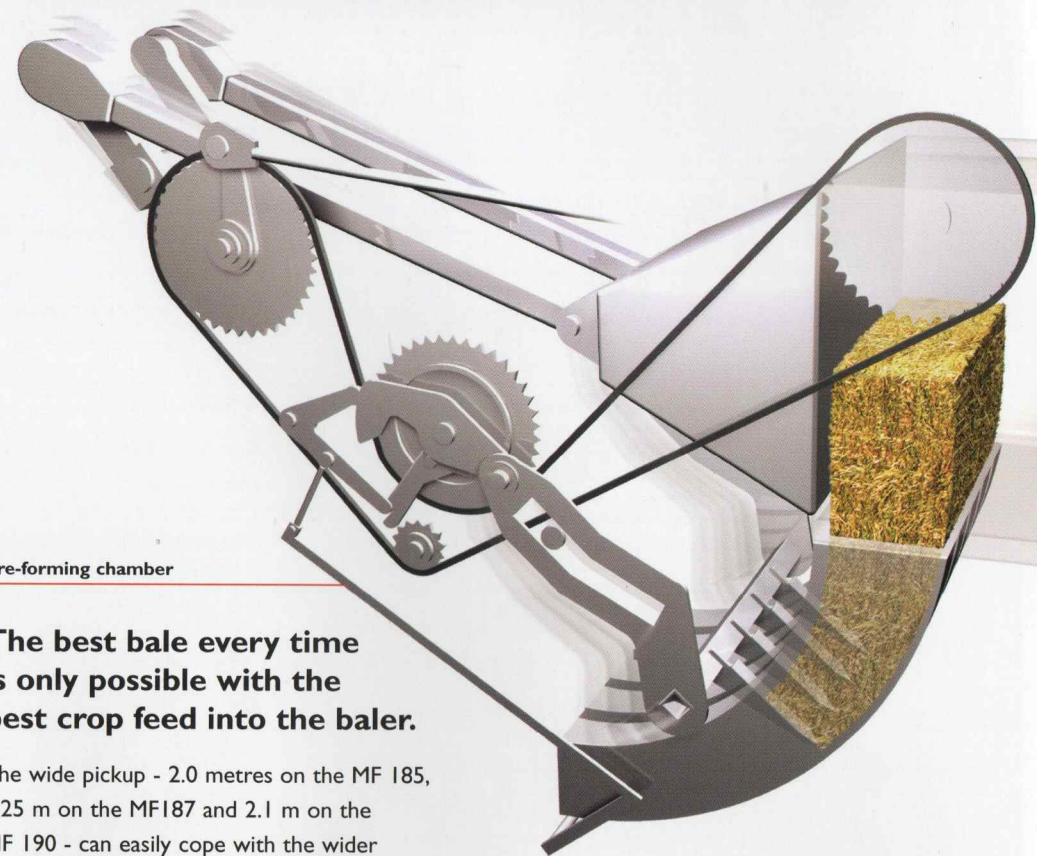
**The MF190 produces bales 1.27 m x 1.20 m section up to 2.74 m long and will bale hay and straw.**



## Up front performance



Height adjustment of the pickup is easy using this set plate and pin.



Pre-forming chamber

### **The best bale every time is only possible with the best crop feed into the baler.**

The wide pickup - 2.0 metres on the MF 185, 2.25 m on the MF187 and 2.1 m on the MF 190 - can easily cope with the wider swaths produced from large modern combines. Its small diameter low profile design, with closely spaced tines, ensures that windrows are picked clean with minimal disturbance and leaf loss.

The gauge wheels protect the pickup tines from damage on uneven ground. All pickups are conveniently raised and lowered hydraulically from the driver's seat.

The two centering augers feed the swath to the packer tines which in turn fill the pre-chamber to form the flake.

On cutter models the cutter rotor feeds crop directly to the packers to ensure a positive feed to the pre-chamber.

The pre-formed flakes are fed into the main bale chamber only when they have reached the preset density



MF 185 SII and MF187 balers with cutter option have a solid high performance windguard for smooth crop flow.

## The perfect bale time after time...

The engineers at Massey Ferguson's Hesston factory pioneered designs which have evolved to become industry standards on the modern big square baler.

These designs include features like the pre-forming chamber, which makes each bale flake before it enters the main bale. The chamber has a preset density which ensures that each flake is the same density and size throughout the bale. So you can build the most solid bales of a size that meets your needs and be sure of consistent density, bale after bale.

The double knotter is another original idea from this innovative team, and is now the industry benchmark for big baler knotters. As the MF balers feed twine to both the top and bottom of the bale, the twine retainers have half the twine tension of a single knotter. With the double knotter system, the occurrence of miss-ties due to twine damage, twine pullout or crop debris is virtually eliminated.



A difficult crop to bale, hemp (pictured here), was baled by a standard MF 187.



Automatic density control measures the load on the plunger and uses the hydraulic rams on the bale chamber to maintain an even density throughout the bale.



There is plenty of room for twine storage on each side of the baler.

The first knot tied finishes the bale

The second knot tied starts the next bale

The double knotter cycle

## Knotter blower

Picked up by a gale blowing at over 140 km/h, debris is soon disposed of.

The knotter blower available on the MF big square balers treats debris in the same way. Driven from its own baler-mounted hydraulic pump, the knotter blower keeps a constant blast of air, moving at over 140 km/h, through the knotter stack. Any debris getting into the knotter area it immediately blown out. Available as an option on all MF big balers the knotter blower is fitted as standard when the cutter option is ordered.

## Cutter

For high quality silage or chopped straw, the MF 185 SII and MF187 can be factory fitted with a heavy duty pre-cutter unit.

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

The MF 185 SII has a cutter with 11 knives, whilst the MF 187 cutter has 19 knives, offering average chop lengths of 48 mm, 96 mm and 192 mm. Combined with the superior density control of the MF baler, this allows you to achieve the finest quality feed bales and highest density straw bales.



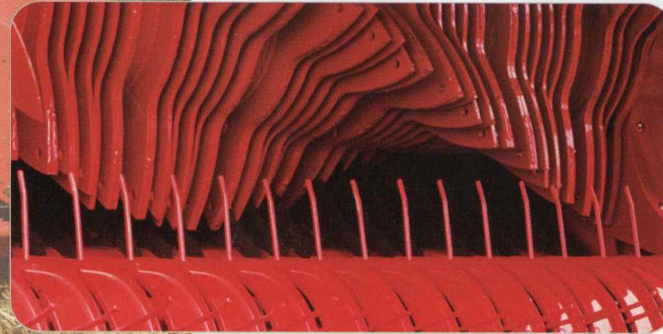
Each cutter knife has its own spring loaded breakaway system to protect against foreign object damage.



Lowering the knife bed gives easy access to knives.



A choice of three preset chop lengths can be easily selected using this selection rod.



## Tandem Axle

**Not just an extra pair of wheels!**

**The MF tandem axle option is a high speed, self-steering unit which delivers exceptional performance on the road or in the field.**

The tandem axle is available on MF 185 SII and MF 187 balers. It is speed-rated to 65 km/h and is fitted with highly efficient hydraulic brakes on all four wheels. Air brakes can be fitted where regulations require.

The rear axle has a passive steering system allowing up to 19° of turn. This all but

eliminates scuffing on the lushest of swards. The self-steering can be locked hydraulically for high speed road use and reversing.

The independent axles give a safe smooth ride over the field or on the highway.



19° of steering angle saves pasture and tyre wear.



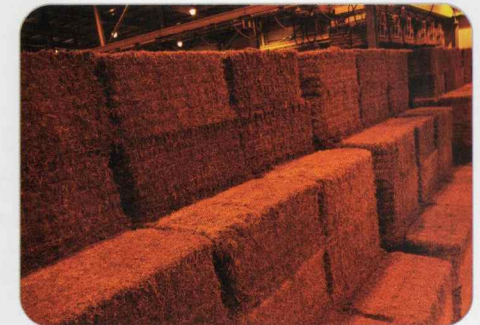
## From the field to...

**The size of the bale package required will ultimately decide which baler you select.**

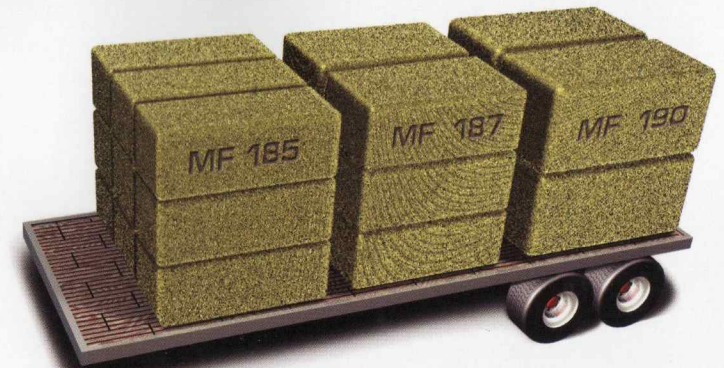
Whatever the size of Massey Ferguson big square baler you choose, you can rest assured that transporting the bales will be easy and efficient. Because of the unique way the baler forms and compresses the flakes, MF big balers deliver uniform shape and density in every bale. These bales stack easily and safely, saving time loading and unloading.

The higher bale weights achievable in straw with MF balers can mean that the truck and trailer unit can reach its maximum weight before it is fully loaded.

Denmark and England are home to some of the world's largest straw burning power stations. All of them use the 1.27 m x 1.20 m x 2.50 m bale size of MF 190 as the standard bale size. These power stations have a voracious appetite, consuming one 500 kg bale every 1.5 minutes!



Powerstation in UK storing MF 190 bales.



MF bales are ideal for transporting by truck.

## Complete control

Owners of Massey Ferguson big square balers can now benefit from having the best monitor in the industry, providing them with all the information they need.

The Fieldstar® terminal, used on many other Massey Ferguson products, is now providing all the information any operator could want. The baling screen (shown right) can be customised to show the operator the information that they want to see.

Some of the information Fieldstar can provide:

- Working data
- Customised instrument display.
- Bale counts.
- Job records including customer or field names.
- Service menus
- Auto lube settings
- Maintenance data
- Trouble shooting
- Working settings
- Baler settings
- Alarm limits and displays
- Slip clutch monitoring
- Vehicle settings

The flexibility and straight-forward operation of the Fieldstar terminal gives the information you want, when you want it.



The bale drop indicator shows when the bale has dropped off the end of the roller bale chute.



On the MF 185 SII and MF 187 the bale ejector lets you remove the last bale or clear the whole chamber. Just select the required number of teeth with this lever.



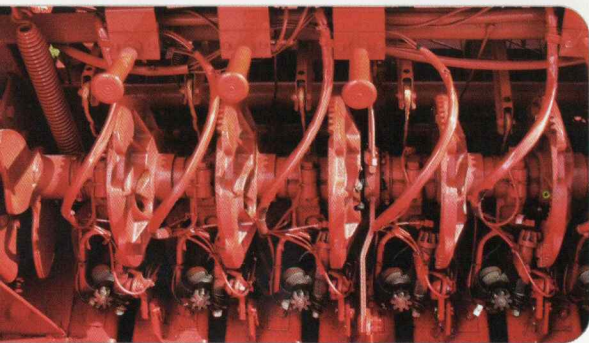
## Years of service

**On farms across the world, MF big balers are making thousands of bales every year, and in some cases are still going strong after fifteen years!**

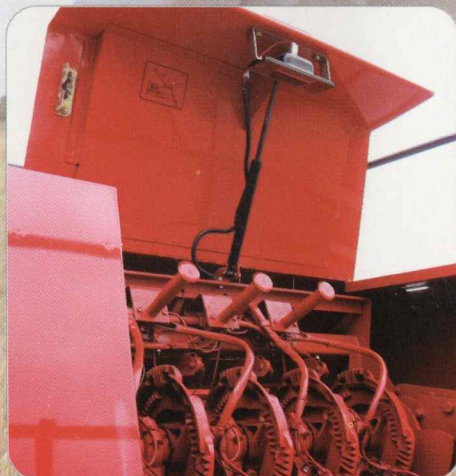
This continuous high performance over many years is due to the combination of rugged design, ease of maintenance and, of course, the care and attention given to the machine.

To minimise time spent on routine maintenance, all MF large rectangular balers are fitted with an automatic lubrication system to cater for the machine's greasing requirements. The setting of this system is done through the Fieldstar terminal. And with a separate oil reservoir providing centralised knotter lubrication, time spent stationary is kept to an absolute minimum.

**Hand pumps make knotter lubrication quick and easy.**



**Automatic lubrication is standard on all balers.**



**Conveniently placed work lights and service lights make routine inspection and maintenance quick and easy.**



## Specifications:

		MF 185 Series II	MF 187	MF 190
<b>Bale Size</b>				
Cross section (width x height)	mm	800 x 875	1200 x 875	1280 x 1200
Length	mm	Up to 2500	Up to 2500	Up to 2740
<b>Dimensions and weights</b>				
Overall width - single / tandem axle	mm	2540 / -	2970 / -	3190 / -
<b>Overall length</b>				
- without bale chute	mm	7230	7230	7230
- with bale chute	mm	9010	9010	8900
<b>Overall height</b>				
- to top of knotter shielding	mm	2730	2740	3150
- to top of hand rail	mm	3160	3550	3680
<b>Weight (w/o tandem &amp; cutter)</b>	kg	5851	8020	8440
<b>Main drive</b>				
Protection		Slip and overrun clutches, shearbolt	Slip and overrun clutches, shearbolt	Slip and overrun clutches, shearbolt
Gearbox type		Enclosed, double reduction	Enclosed, double reduction	Enclosed, double reduction
<b>Plunger</b>				
Speed	strokes/min	41.0	42.7	25.4
Length of stroke	mm	710	710	780
Rollers - number / Bearing type		6 / Sealed tapered roller & ball	6 / Sealed tapered roller & ball	6 / Sealed tapered roller & ball
<b>Pickup</b>				
Width - panel to panel/ - tine to tine	mm	2232/1970	2660/2230	2470/2120
Number of tine bars / tines		4 / 112	4 / 120	5 / 120
Tine spacing	mm	66	66	86
Protection		Slip and overrun clutches	Slip and overrun clutches	Slip and overrun clutches
Pickup lift		Hydraulic cylinder	Hydraulic cylinder	Hydraulic cylinder
<b>Feeding System</b>				
Packers		Fork type, 4 tine	Fork type, 6 tine	Fork type, 6 tine
Protection		Splined slip clutch	Splined slip clutch	Splined slip clutch
Charge chamber volume	m <sup>3</sup>	0.188	0.282	0.354
<b>Tying Mechanism</b>				
Number / type of knotters		4 / Double knot, twine tie	6 / Double knot, twine tie	6 / Double knot, twine tie
Twine type / capacity		Polypropylene or sisal / 20 balls	Polypropylene or sisal / 30 balls	Polypropylene or sisal / 24 balls
<b>Tyres</b>				
Single axle / Tandem axle		600/50-22.5 12 ply / 500/50-17	600/50-22.5 12 ply / 500/50-17	28L x 26
Pickup		4 x 16	4 x 16	4 x 16
<b>Lights</b>				
			Three work lights, hazard/turn indicator lights, tail lights	
<b>Control and Monitoring System</b>				
		Fieldstar Monitoring	Fieldstar Monitoring	Fieldstar Monitoring
<b>Tractor Requirements</b>				
PTO horsepower - min / with Cutter	kW	67 / 98	90 / 140	90 / -
PTO rev/min		1000	1000	
Hydraulics	minimum/ recommended	2/3 double acting auxiliary valves	2/3 double acting auxiliary valves	2/3 double acting auxiliary valves
<b>Standard equipment</b>				
		Two-rail bale ejector, Autolube	Two-rail bale ejector, Autolube	Autolube
<b>Optional Equipment</b>				
		Cutter (MF 185S II and MF 187 only), Tandem Axle (MF 185S II and MF 187 only), Heavy duty roller bale chute with drop indicator (MF 185S II and MF 187 only), Bale Chute, Knotter Blower (Standard with cutter)		



### **Design, testing and manufacturing**

Massey Ferguson has a long tradition of innovation and engineering excellence. Based on continual questioning and analysis of farmers' needs, our products are designed, tested and built, using the latest manufacturing techniques, to enhance your productivity, efficiency and convenience.



### **World's largest distribution network**

With a network of more than 5000 dealers in over 140 countries, Massey Ferguson can claim to have the world's most comprehensive farm machinery distribution network, dedicated to providing local service of the highest calibre.



### **Financial support**

Massey Ferguson retail finance schemes are widely available to help fund machinery purchase. With the emphasis on flexibility, these schemes are tailored to customer's specific business needs and to take account of cash flow and seasonal business cycles. Depending on the market, financial options include leasing, hire purchase, contract hire and loan facilities.



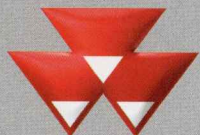
### **Industry leading parts support**

Through leading edge technology, Massey Ferguson is proud to boast a full range of genuine AGCO Parts, supporting all Massey Ferguson machine ranges, from enhancements to new products to repairs for older 'heritage' machines and all complying with strict engineering quality standards. Backed by a comprehensive warehouse ordering system, you can be sure that when you insist on the AGCO hologram you will receive commitment from the best in the industry.

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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