

McHale

Fusion

a single operator

bales and wraps in a single pass



award winning
high output design

Fusion *high output integrated unit...*

Built to last and developed and tested on some of the worlds most rugged terrain, the McHale product range is known worldwide for its durability, reliability, innovation and value for money.

McHale recognise that there is constant pressure on businesses to reduce costs. As with all McHale machines the Fusion integrated baler wrapper has been designed with the demands of today's farmers and contractors in mind.

The McHale Fusion combines two traditionally separate jobs and integrates them into a single operation which can be done by one man and one machine. This results in cost savings associated with financing & running a second tractor and sourcing & paying a second person.

This robust machine is simply not a wrapper coupled onto the back of a baler, it has been specifically designed as a high output integrated unit.

Outstanding reliability in an ingenious two-in-one baler/wrapper combination earned McHale the top machinery award at the 2005 Royal Show.

The verdict from the judging panel was...



"The reliability of the machine was outstanding, lubrication time minimal, and the service and attention from McHale of the highest order,"



McHale Patented Bale Transfer

The bale chamber splits horizontally (like a clam shell) and the lower section of the bale chamber doubles as a transfer mechanism to transfer the netted bale into the vertical wrapping ring. This unique McHale patented system has a number of advantages over other combined baler wrappers, namely;

1. Simple transfer & reduced handling

As the bottom half of the bale chamber doubles as a transfer mechanism, it eliminates the need for a moving table or lift arm between the baler and the wrapper.

This results in reduced handling, higher levels of reliability, a faster transfer time and a compact design with a total machine length of just 5.4 metres.

2. Positive bale transfer on steep ground

The bale is transferred directly onto the wrapper by five drive rollers in the lower section of the chamber. On hilly conditions an additional drive roller outside the bale chamber aids the bale transfer and guarantees a positive result.

3. Reliable bale transfer on hillsides

When working with some combined baler wrappers on hillsides, there may be issues with the bale cross travelling as it is being transferred from the baler to the wrapper. With the McHale Fusion these problems are eliminated as the bale is supported in position by the side walls of the bale chamber during the transfer. This results in a reliable transfer even on tougher ground conditions.

4. A fast smooth transfer

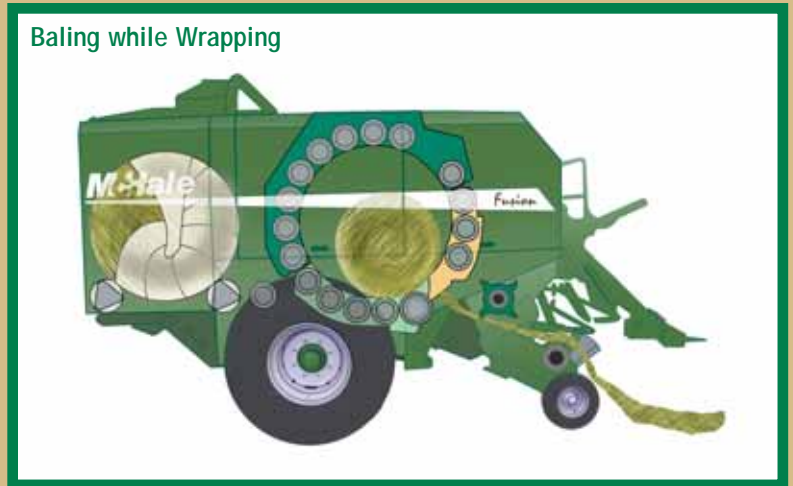
The transfer of the high density bale occurs over the axle of the baler, this reduces the stress on the tractor and the machine.

Due to the simplicity of the unique McHale bale transfer there is a reduced number of moving parts and electronic monitoring systems. Overall this leads to a more reliable machine.

5. High Output

The transfer occurs in one pass as the chamber is opening and closing to release the bale. This means the machine takes a similar amount of time to transfer the bale, as a traditional baler would take to eject a bale from the chamber. In effect the transfer does not slow down the machine output.

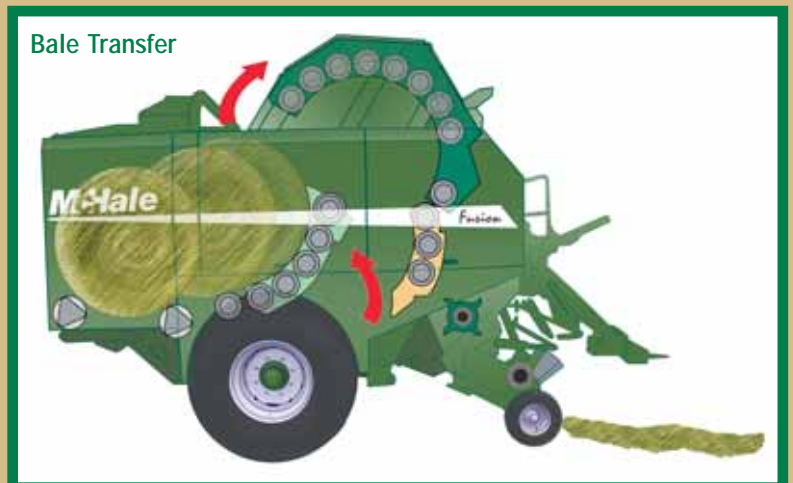
Baling while Wrapping



Bale Netting in Chamber & Wrapped Bale being Tipped



Bale Transfer



High Capacity Intake

Drop Floor as Standard

Because baling conditions are not always ideal, uneven swarths can occur which can lead to blockages. The main drive chain is protected by a slip clutch on the PTO.



Drop the Floor

Should a blockage occur the sound of the slip clutch alerts the operator who can hydraulically lower the drop floor from the tractor cab.



Re-engage the PTO

This widens the feed channel and on re-engaging the PTO the blockage will be fed through.

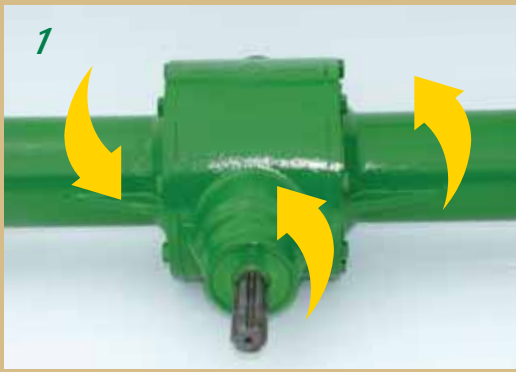


Reset the Floor

The floor can then be reset and baling can resume.



Our Specification



1. Split Drive Gear Box

The left hand side of the gearbox drives the rollers in the bale chamber while the pick up and chopper unit are driven from the right hand side of the machine. This system ensures direct short transfer paths and optimal power distribution.



2. Pick Up

The 2 metre galvanised pick up lifts even the shortest of crop. Accurate height control can be achieved through a spring balanced hydraulic lifting system. The pick up is fitted with lateral feed augers that smoothly guide the crop into the chopping unit.



3. Pick Up Bearings

The pick up cam bearings are double raced to stand up to the most testing conditions.

The cam is fitted with a side inspection port that allows the operator to quickly check the rollers and the cam track.



4. Rotor Design

As crop enters the spiral rotor, pairs of rotating tines feed the crop through the chopping unit. The double tines on the rotor ensure high output while the spiral layout reduces the load peaks as the machine works in heavy swarths. The rotor design encourages a uniform crop flow which reduces the risk of blockages, thus maximising output.



5. Chopper Unit

Knives in the chopping unit are made from hardened tool steel and can be engaged and disengaged from the tractor cab. When engaged, the knives extend into the spine of the rotor which ensures a consistent cut quality.

Bale Chamber Doubles as a Transfer Mechanism



When the netting process is complete the bale chamber splits horizontally. As the top section of the bale chamber moves up, simultaneously the lower section of the bale chamber moves up and out to cradle the bale, as it is positively transferred to the wrapping platform.



As the chamber closes, the bale is gently moved into the wrapping position.

Once the chamber is closed, wrapping will automatically start and baling can resume, this delivers maximum output.





6. Roller Design & Sealing

Rollers have heavy duty 50mm forged shafts made from high grade steel. The roller ends are fitted with high performance self cleaning seals. The seals protect the grease around the bearing from becoming contaminated by crop.

7. Chamber Bearings

The machine is fitted with high quality bearings. The rollers are fitted with 50mm bearings on the drive and non-drive side. Drive side bearings are double raced.

8. Chains

The machine is fitted with heavy-duty drive chains and sprockets, which ensure long life and minimum down time.

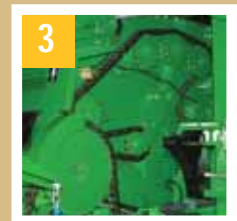
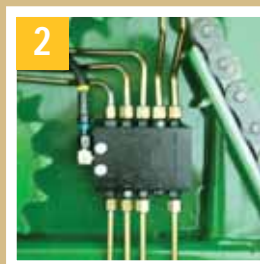
- Drive side chains are 1-1/4" (20B)
- Rotor chain is 1" (16B-2)
- Pick up chains are 3/4" (60H)

Progressive Greasing & Oiling

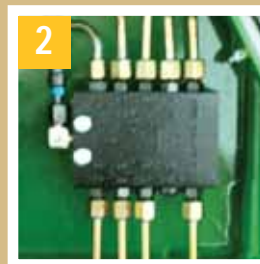
1. The bearings and chains are supported by a progressive greasing and oiling system.
2. Each time a bale is ejected from the machine, oil and grease pass through the respective progressive blocks. The blocks measure and regulate the amount of grease and oil going to the bearings and chains. This ensures that the machine consistently delivers the correct amount of oil or grease.



Oil line
→



Grease line
→



3. The drive, rotor and pick up chains receive a measured amount of oil.
4. At the same time the chamber rollers, rotor bearings and pick up gears automatically receive a measured amount of pressurised grease.
5. After a pre-set number of bales a lube alarm will sound reminding the operator to top up the lubrication system.

Intelligent Monitoring

Film Break Sensors



The machine is fitted with two film break sensors which monitor the film as it goes onto the bale.

Should one of the rolls of film break or run out the machine will alert the operator via the control box and automatically switch to single dispenser mode.

In single dispenser mode the bale rotation is slowed and the ring does additional rotations to ensure that the bale is wrapped with the remaining roll of film.

Should the film on both dispensers break or run out the machine will notify the operator that it's out of film and the dispensers will stop in the film loading position.



User Friendly Design



1. Vertical Wrapping Ring

The vertical wrapping ring is fitted with two 750mm dispensers, which take approximately 20 seconds to apply four layers and 30 seconds to apply six layers of film. This means that the wrapping platform is always waiting for the next bale.



2. Cut and Holds

On the last rotation of the wrapping cycle the cut and holds extend out and the film is gently supported in the rail, once supported the cut and holds gather the film to one point where it is cut and held. This system makes the machine's performance much more reliable particularly in hot or wet conditions.



3. Film Storage

Four rolls of film can be stored inside the centre panels on either side of the machine. Two additional rolls can be transported on the dispensers.

The film holders swivel down to allow the operator to easily unload the plastic from the storage compartment.



4. User-Friendly Film Loading

Film can be loaded from the left hand side of the machine.

After loading film on the first dispenser, the operator can push the index button and the dispensers will then rotate around and automatically stop at the loading position for the second dispenser. This allows the operator to easily load the second roll of film.



5. Bale Tip / Side Tip

When the machine tips off the wrapped bale, the outer wrapper roller moves down to ground level and ejects the bale. This eliminates problems associated with bales being tipped from a height and getting damaged as they roll away.

In stalky crops or on rougher ground conditions a side tip option is available which allows the machine to tip the bales on their ends where there is additional film.

User Friendly Operation



The control box also monitors the lube usage and reminds the operator to check the grease and oil every 300 bales.

Fusion Control Box

The single cab-mounted control box is the operator's link to this efficient machine, which monitors and controls baler and wrapper operations. Bale to bale operations, such as adjusting the pick up, drop floor operation and bale tip selection can be done from the comfort control hand piece.

While the machine is fully automatic in operation, the operator can select various options depending on the crop and ground conditions. The operator can select, if they want;

- the knives in the chopper unit on or off.
- the machine to tip or hold the wrapped bale.
- a 'bale only' programme for hay or straw.
- various bale transfer options depending on ground conditions.
- to record multiple bale totals.



Technical Specifications

Dimensions & Weight		Fusion	
Length	5.4m		 <p><i>Machine Dimensions</i></p>
Width	2.8/2.98m**		
Height	3.02m		
Weight	5300Kgs		
Pick Up			
Working width	2000mm		 <p><i>Pick Up</i></p>
Tine Bars	4		
Tine Spacing	70mm		
Pick Up Lift	Hydraulic		
Pick Up Guide Wheels (pneumatic)	Standard		
Chopper Unit			
Max No. of Knives	23		 <p><i>Drop Floor</i></p>
Theoretical Chop Length	50 mm		
Knife Protection	Hydraulic		
Knife Control	Hydraulic from Tractor Cab		
Unblocking System	Drop Floor		
Bale Chamber			
Diameter (m)	1.25		 <p><i>Bale Transfer</i></p>
Width (m)	1.23		
Number of Rollers	17		
Bearings	50mm*		
Greasing	Progressive (Standard)		
Net Wrap			
Control	Manual or Automatic		 <p><i>Net Storage</i></p>
Net System	Pivot Stretch		
Net Roll Capacity	1+1 Storage		
Net Adjustment	Manual on Baler		
Wrapping			
System	Vertical Wrapping Ring		 <p><i>Vertical Wrapping Ring</i></p>
Film Stretch	70% standard (55% optional)		
Dispensers	2 x 750mm		
Film Layers	2+2+2 System		
Film Storage	8 Rolls & 2 on the Wrapper		
Drives			
Gearbox	Split Drive		 <p><i>Split Drive Gear Box</i></p>
Main Drive Protection	Cam Clutch		
Pick Up Protection	Slip Clutch		
Chain Lubrication	Progressive (Standard)		
Control			
Control System	Expert		 <p><i>User Friendly Controls</i></p>
Operation	Fully Automatic Electronic		
Density Adjustment	On Baler Valve		
Other			
Minimum PTO Power Requirements	80kW (107hp)		 <p><i>Tractor Requirements</i></p>
Hydraulic System	Open, Closed or Load Sensing		
Min. Hydraulic Flow	45 litres / min at 180 bar		
Electronics	12 Volt DC, 7 amp approx.		
Tyre Sizes	560/60R 22.5 (standard) 650/50R 22.5 (optional)		

*Bearings are 50mm double raced on the drive side.

**Width will depend on tyre selection.



McHale has evolved from a farm machinery retail outlet, which is still in existence today. This background has provided an excellent foundation for the design and manufacture of farm machinery, due to direct contact with the end user.

Manufacturing takes place in a purpose built facility which utilises the latest in laser and robotics manufacturing technology and operates to ISO 9001/2000 accreditation.

All research and development is conducted in-house using leading edge technologies. Machines go through rigorous testing during the product development process and machine performance is constantly monitored.

As a result, this ensures that product of the highest quality, specification and design are delivered to you, which explains why a McHale product is truly "an investment in the future".

Fusion



991L



991B



HS2000



998



F550



Fusion

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