

McHale bale wrappers:

For wrappers, dial 991

McHale's bale wrapper lineage is not difficult to follow. The Irish company uses year of design to provide the model number and, in the case of the evergreen 991, a choice of letters that allude to some basic specification detail. All of this info is outlined in the accompanying table, with a guide to model introduction dates and modifications to respective machines for potential buyer reference.

As for the later HS2000, this model has a high entry-level specification and allows for static and trailed wrapping options. Electronic controls come as standard, while a rear camera package essentially enables the same machine to be towed behind the round baler for efficient in-line operation. To avoid confusion, this McHale machine is dealt with separately.

McHale introduced its trailed 991 round bale wrappers to the UK market in 1992, along with the letter designations B, BC, BJ, BJS and BE letters – which, in turn, indicate the machines' age and basic spec. Joining the 991 in 2001, the HS2000 became the 'high speed' brother to the still popular 991, while the 'flag' 998 square bale models completed the McHale wrapper line in 1998. James de Havilland takes a look at the machine that started it all

The 998 square bale model is mentioned due to its growing popularity for wrapping haylage bales. As with the HS2000, details are listed separately.

Capacity and spec: 991 wrappers

The first McHale 991B wrappers claim a wrapping capacity of 40-50 bales an hour. Increased automation on the BE models

(from 1995) can see performance climb to nearer 60 bales wrapped with four film layers, but it takes spot-on work logistics to manage this maximum stat. The various bale wrapping outputs assist a purchaser in identifying the particular 991 model he should initially seek out. Yet it is not the complete story. Any machines constructed up to 1994 have a chassis that can start to show signs of fatigue after



Later version of cable control. A detent allows the bale rotation lever to lock back to complete the wrapping cycle automatically, but load, tip and cut remain manual. Most 991B wrappers have been converted to 991BC 'cable' spec, conversion kits costing £350.



The 991BJS uses the current servo-hydraulic joystick control, and benefits from increased automation that includes auto tip and load. Electronic control has been available since 1995 on the BE, which is, today, the most popular model.

cable joystick machines benefit from a similar feature, but the control can feel heavy if the cables are not in the best of shape. The 991BJS model, in contrast, is much more user friendly – this has had extra auto features added as time has gone on – and is favoured by operators as



The original film roll holder is a bit of a fiddle to load...

... whereas the design from 1998 has a release cable that makes loading easier.



wrapping about 30,000-40,000 bales. Progressive strengthening now makes chassis cracks rare, with the post-1998 machines perhaps making a rather more prudent buy for those looking to wrap a serious number of bales in a season. The alternative specifications

are listed in the table. To simplify spec matters, though, the main 991 choice can be whittled down to picking one from B basic, BC with in-tractor cable control, BJ machine with a cable joystick, the BJS with solenoid valve joystick and BE full electronic. Most B models will have been retrofitted with cable, bearing this fact in mind when looking over a standard 991B – as a conversion kit costs around £300.

With the cable-operated 991BC machines, those produced after 2004 have a lever detent for the bale rotating cycle. This 'small' detail enables wrapping to progress automatically and is standard on BC models built from 2004. Granted,

MODEL CHANGES IN BRIEF

McHale 991

1992: Six-stud axle. Rolls are spaced to make table wider and deeper. Table mat is fitted with cradle that touches the ground, this preventing wrapper front end lift when the bale is released from the machine

1994: Drawbar longer and stronger

1995: Chassis and load arm duty strength increased. This beefing-up job was repeated in 1998

1996: Dispenser post strengthened

1998: General strengthening and detail changes around the machine

1998-today: McHale has made detail changes to the 991 during most years. Check which features are automated on the BJS models

McHale 991B



Year: 1993. Condition: Good.
Price: £3,250. Comment: One of the first imported. Cable conversion of fully manual controls. Non-standard tyres.

McHale 991BC



Year: 1998. Condition: A1.
Price: £3,500. Comment: Heavy duty chassis and drawbar. Cable control machine with handy detent arrived in 2004.

McHale HS2000



Year: 2005. Condition: A1.
Price: £8,500. Comment: 'New' HS2000 models have storage for eight rolls of film, which helps boost daily productivity.

GUIDE RETAIL PARTS PRICES

Part description	Part no.	Price (£)
Gearbox repair kit	ACH00029	£252.00
Lift arm hinge pin	ALA00007	£19.00
Pivot pin – table/tilt ram	ALA00008	£23.00
Table belt kit – set of four	CBE00010	£79.00
Dispenser roller bearing	CBR00004	£10.00
Table roller bearing	CBR00005	£42.00
Table drive chain	CCH00003	£29.00
Roller drive chain	CCH00006	£29.00
Electronic sensor – wrap number and film break	CEL00036	£70.00
Table drive motor seal kit	CSE00081	£38.00
Dispenser springs (pair)	CSG00003	£17.00
Cable controls – BC only	CVA00014	£47.00

Parts list applies to McHale 991 wrapper

a result. As with 991BE variants, it is the automation that helps boost wrapping capacity. The BE electronic models can also be operated via a remote control, a real plus when working single-handed; a conversion kit for units without the system costs around £350. Over the past five to six years, the 991BE has, perhaps surprisingly, become the most popular model in the line. The electronics are pretty much bomb-proof unless the various sensor units/cables are physically damaged in some way. This control technology is proven, so, in short, it should not act as a deterrent.

Used 991 check points

First job is to check out the bale counter – to see how many bales the machine has wrapped. McHale 991 wrappers follow the same basic design, so the inspection points are broadly similar for them all. Start with a visual inspection, focusing particularly on the drawbar of pre-1994 units and the chassis generally. Fatigue cracks are not unheard of, but rank as less common the later the machine. The build has been strengthened over the years.

Main items to inspect:

- Table belts should be in good physical shape with some tensioning room left to take up inevitable wear. Replacing them is a 10min job, so not onerous.
- Table shear bolt, from the drive gearbox to the carrier, should be checked, to ensure it's securely in residence.
- Rock the table to spot play in the table bearing. Excess play can lead to gearbox damage, so needs to be avoided.
- Wear in the gearbox can be assessed by rotating the table back and forth; any play will show up.



Original 991 belt roller brackets mount some way from the edge of the table frame...



... with models from 1992 having their brackets moved out to 'deepen' the well retaining the bale. Note subtle change to chassis design.

- Table drive motor should put up stiff resistance if the table is turned by hand before locking solid. If the table turns, the motor seals have probably failed.
- The bale lift arm pivots work hard, so check for wear.
- Glance over all the hydraulic hoses and rams, looking for leaks. Check all of the obvious chafe points.
- Both film dispenser rollers should run smoothly and not make a noise. See if there is any play between the rollers.
- Carry out a physical inspection of the wrapper controls. Electronic controls link up to sensors; how many and where will depend on what is fitted. *See note.
- Check the running gear and lights. And don't overlook the state of the rubber.

McHale 991 Bale Wrapper Models In Brief

Year*	Model	Description
1992	991B	Box section drawbar and chassis. 300/55-12 tyres on five-stud rim. Four-lever high pressure hydraulic control with valves in the tractor cab – a spec that had to be changed the following year.
1993	991BC	As above, but cables link control levers to hydraulic valves on wrapper. Six-stud wheels with larger 350/50-16 tyres – better for working in wet pasture conditions. Some chassis and drawbar modifications made to the machine.
1995	991BE	Electronic controls. Offers automated load, tip, rotate to wrap and film cut functions. BE is the most popular current spec.
1998	991BJ	Single cable joystick model launched as alternative to the still available four-lever control BC. New drawbar/stronger chassis.
2000	991BJS	Servo joystick with low pressure hydraulics in cab. General upgrade to chassis strength and detail modifications.

* Year introduced to the UK

- The final item is to run through a few wrapping cycles with the machine.
- * A broad outline of the sensors fitted is listed in the model table.

How much to pay

As a guide, the starting price for a sound, dealer-prepared McHale 991B/991BC of any vintage will be £3,000 to £3,500; the higher price is currently more typical due to a scarcity of second-hand examples. For reference, a new 991BC machine is listed at around £6,500. A joystick 991BJ unit is likely to command very similar money, although later 991BJS

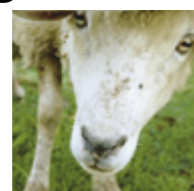
machines will almost certainly carry a premium with starting prices averaging £4,500. This amount should also secure an early 991BE with electronic control. Beyond this, pricing is more difficult. The increasingly popular 991BE has progressively higher levels of automation, so the used price should be carefully weighed up against a new example costing around £8,300. The latter price can be linked to attractive finance deals, something that may not apply to a second-hand unit. A common operator query relates to the cost of converting a mechanical/hydraulic



Film break sensor comes as part of the BE electronic control package, the 991BE wrapper now outselling all other variants. Film dispenser post and roll release design changed to still current design in 1998. All electronic models can be operated via remote control, a kit costing around £350. BE remains a rare used find.

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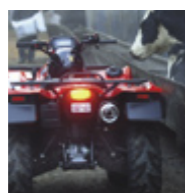
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The 998 in brief

First seen in the UK in 1999, the 998 square bale wrapper is gaining in popularity. Supplied with fully self-contained hydraulics, the wrapper has undergone detail design changes that include plastic rollers, and alloy wrapping arms with gearbox as opposed to chain and sprocket drive. Introduced in 1998, the 998 square bale wrapper is a potentially high throughput machine, with up to 80 plus bales an hour capacity when applying a six-layer 'haylage' wrap. Featuring its own hydraulic system, the 998 requires only a 12V power supply from the tractor. As with the HS2000, it has a 'twin satellite' rotor, the alloy arms of the 998 replacing its original steel items in 2001. Also in 2001, the steel rotating rollers

were changed to a plastic design – to improve grip, reduce damage to the wrapping film and decrease the wrapper's overall weight. Other detail mods were made to the duty strength.

What to look for

- Conveyor chains: Tension, wear and damage
- Pick-up chains, as above
- Drive chains
- Dispenser unit – as for 991
- All bearings for play
- Cracks in rolls
- Oil leaks
- Cut and tie slides: Must slide freely
- Change oil and filters as a matter of routine
- Cycle through all functions to check correct machine operation

NOTE: The hydraulic system needs a pto input speed of around 700rpm.

Used 998 prices

Pricing up a 998 is arguably more difficult than with any other wrapper, because these models will typically have clocked a serious amount of work before replacement is even considered. As a guide, expect to pay £12,500 for a four-year-old example. The 998 new price is from £21,500.

Summary: At the time of writing, McHale suggested that its dealers had access to perhaps ten used wrappers throughout the UK. By the time this article is in your hands....? Availability is impossible to predict - and particularly so as the grass season approaches.

Those chancing their luck at a farm sale should be well briefed on what all of the various machines have to offer, with our usual caveat that a used buy only stacks up if the price is right. Scarcity should not elevate the bidding hand too high.

A decent 991 wrapper, in need of a bit of TLC, typically requires a day of workshop time to put everything right and around £200 in parts. Hold back at least £400, in other words, to fettle an auction buy.

Early 991B wrappers were shod with smaller diameter tyres on five-stud rims. No brakes, but road lighting is an option. These early machines are now seen as a 'lighter duty' option, but remain highly sought after.



Bale table should not turn easily when pushed by hand, and the table itself should have no play. The central gearbox design has changed over the years, becoming more robust. It's worth taking a peek inside, checking gear teeth and looking for plenty of grease.



Detail improvements have seen the 991 chassis beefed up, including the use of 350/50-16 tyres on six-stud rims. Inspect second-hand buys for chassis and drawbar cracks, although the latter will be rare on models made from around 1995.

991B/991BJ to electronic BE spec. This, in reality, is not possible, so if electronic control is required, a 991BE machine is the only option.

With thanks to Mike Pryce Agricultural Machinery (Oswestry), and Mike Walsh and Gerry O'Shea of McHale Engineering.

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High Speed HS2000 wrapper

The HS2000 uses a different design to the 991 models, and is the McHale round bale wrapper to go for wherever max output is the priority. Capacity is 90-100 bales/hr at four layers, dropping to 70+ with six layers for haylage.

In terms of operation, the HS2000 table does not spin, twin dispensers rotating around the bale instead. The dispensers can spin faster than a bale on the table and it is this, plus the fact that there are two of them, that accounts for the rise in capacity over the 991. Because it does not rotate, the table is also easier to tip back to drop off the wrapped bale, thus removing the need for the 'trademark' tail mat of the 991.

At the other end of the sequence, the HS2000 picks up the bale from the front, as opposed to the side in 991 fashion. This means the big 500kg counterweight fitted to the nearside of the 991 can be eliminated, making the wrapper much lighter. All HS machines have electronic

controls with full automation of the key four functions of load, rotate to wrap, film cut and tip.

Designed to enable towing in-line with the baler, some HS2000s have steerable wheels for working on slopes etc. And, with some in-line users now migrating over to the McHale Fusion combi system, there has also been an increase in the supply of second-hand HS2000s.

The HS2000 requires a 35-litre/min oil flow - up ten litres over the 991 - and a 12V supply is still required. The control box is the same as fitted to the current 991BE, listing voltage, wrap speed and ten different bale counts as standard.

HS2000 developments and used checks

Since first seen within the UK in 2001, the HS2000 has been subjected to only detailed changes. Drive to the dispenser rotor has always been via a gearbox, so

the one main upgrade, in 2004, was the addition of an eight-roll capacity carrier installed at the front of the machine.

As for used checks to the wrapper, these pretty much follow the list for the 991, the one critical difference being the need to check the dispenser rotor for damage and play at the gearbox.

HS2000 pricing

As with the 991 machines, second-hand prices reflect the scarcity of pre-owned HS examples; in most cases a dealer will have forward-sold a part-ex unit whilst it is still with the existing customer.

As a typical guide, though, expect to pay about £7,800 for an early HS2000 unit, the still current specification post-2004 models carrying a price premium of up to £1,500. Models equipped for in-line operation, with factory-fit camera etc, are likely to cost a further £1,000 more. A new trailed/static HS2000 model lists at £11,500.



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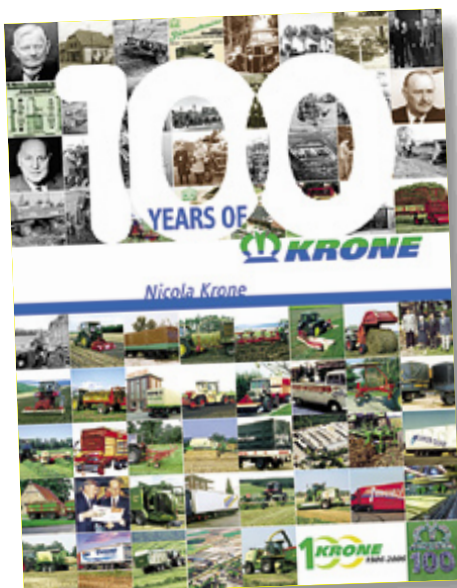


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