

McHale Pro Glide triple mower combination:

Floats like a butterfly

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Though McHale only officially launched its triple mower combination at Agritechnica, we managed to get hold of a pre-production unit ahead of the show.

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Mervyn Bailey

Entering a new machinery segment is no easy feat. After all, there's no point coming along with another 'me too' product if you want to stand out from the established crowd. With this in mind McHale has jumped in at the very top end of the contractor and large-farm grass cutting sector with a triple mower conditioner combination and a major focus on suspension and contour-following ability. Dubbed Pro Glide, McHale's initial line-up will include the R3100, a 3.1m rear-mounted mower, the F3100 front-mounted unit and a B9000 rear butterfly. The reason for going with these working widths is simple: they match the appetite of the company's balers. That said, there are plans to add other mower widths over the coming years.



The mechanical double-ended link between the spring and frame maintains a more consistent tension as the mower works through its 500mm of suspension travel.

Data sheet

McHale Pro Glide

Linkage (F/R)	Cat II/III
Weight (F/R)	1,250kg/1,470kg
Ground pressure (F/R)	300kg/300kg
Transport height	4.00m
Transport width (front)	3.00m
Working width (F/R)	3.20m/3.20m
Overall working width	8.70m
Overlap (F/R)	300mm
Blades per disc	Two
Swath width	1.00m-2.40m
Power requirement	59kW/80hp per mower
Hydraulics (F/R)	One s/a and two d/a
Prices	
F3100	POA
B9000	POA
Manufacturer's information	

The Pro Glide project has been on the go for the past four years, with various beds being tested and the most robust unit being chosen. McHale will not be drawn on where this bed comes from, other than to say it has worked with a specialist cutterbar producer for four years to develop a bed that is designed for its main markets.

The rear butterfly unit comprises two 3.1m beds but, rather than have all of the suspension happening around the supporting frame arms and a simple central pin pivot as most other makes do, McHale has opted to position the suspension mechanism above the middle of the bed.

Each suspension unit has a pair of springs working with a tie rod and hydraulic ram. The ram is simply linked to the raise/lower circuit, so, when lifted out of work, each of the mowers is held firm against the stops rather than flopping about disconcertingly on the headland turn.

The tie rod and springs allow the cutterbars to float both left and right as well as forward and back. Critically, the suspension frame geometry means that the mowers are pulled, so, if an obstacle such as a large stone or rock is encountered, the springs allow the mower to swing up in an arc and work can continue uninterrupted. If the object is more substantial, then there is still a mechanical break-back on the front of the machine's main support arm.

Ground pressure for each side is set from a hydraulic ram at the rear of the headstock. These have an integrated 2-litre accumulator and tend to operate at 100 bar resulting



The amount of overlap is fixed at 150mm per side. Angled rams at the back provide the bed pressure, and each contains a 2-litre accumulator.



Bed pressure is set hydraulically on the dials; 100 bar is the norm. Ropes release the folding rams from field to transport position. Mechanical break-back can be seen at the front of the mower arm.



Coil springs maintain the cutterbar angle and, together with the mechanical link, allow the mower to lift up and back if it encounters an obstacle. The ram within the mechanism is linked to the raise/lower circuit and locks the bed against the stops when raised.



The seven-disc bed has been set to McHale spec and comes with full width stone guards.

in about 300kg of down force, which McHale says has proved to be the optimum during testing for contour following.

There is no side shift on the B9000's headstock so the overlap for each wing is fixed at 150mm. Headland lift height at the inner heel of the rear mowers measures 400mm. The rams responsible for raising and lowering the mowers into their headland and transport modes live inside the headstock frame. Pulling on a rope releases the latches allowing the arms to rise up beyond the headland position for transport, for which overall height is under 4.0m.

The 1,000rpm driveline has Walterscheid shafts running between the gearboxes. The central gearbox is rated to 120kW/160hp and divides the drive to each side. On the R3100 side-mounted mower the gearbox is rated at 67kW/90hp and the same driveline components put in an appearance on the F3100 front mower.

The beds feature an offset gear arrangement, with a larger diameter cog at the rear powering the smaller gear under the hub. A keyway provides protection to each disc – if it goes it is a matter of undoing the four



Conditioner speed is selected on the gearbox – 700 or 1,000rpm.



Blade changes are a simple and convenient, pry-open quick change.



If you're going to make a splash in a machinery sector you may as well make it a big one. McHale certainly seems to have adopted this approach with its entry into the mower market... with a full-sized butterfly combi.



McHale says it tested several designs but decided on this M profile for the sides of the drums.

bolts and replacing, a job that McHale says should take no more than 10mins. Each of the gears is 25mm thick. Drive is transmitted to the conditioner via a gearbox, with a lever used to select 700 or 1,000rpm. The conditioner rotor on the front and rear mowers measures 2.4m and is fitted with steel tines. There are also swath doors and a full width spread kit as standard; row widths can be altered from 1.0m to 2.4m.

The F3100 front mower shares its business end features with the rear units, with the frame and suspension being the key differences. There are 17° of lateral movement thanks to a simple double-pin set-up. McHale points out that most mowers using springs for a front mower's suspension have one fault: as the cutterbar goes up and down over the ground contours the spring's tension can change dramatically hence altering

cutterbar pressure on the ground and cutting performance. To overcome this the firm has added a mechanical link, which McHale likes to call 'active spring compensation', between the mower frame and the spring's sub assembly. As the mower floats over the ground, this link moves a cam-like frame connected to the spring, with the end result being that the ground pressure only changes by around 15kg as it moves through the

500mm of travel. It's a clever and simple system that worked effectively during our time with the mower. In fact the whole combination performed well and produced a neat square-edged row for easier handling by whatever machine follows on behind. The front mower is raised and lowered by its own hydraulic ram. In testing this ram delivers 650mm of ground clearance when the mower is raised at the headland.

Summary: McHale is extending its product range once again with a selection of mounted mower conditioners. There are only so many ways to skin a cat, or produce a mower conditioner for that matter, yet the Irish firm has come up with an effective suspension and ground contour following system with a difference. And if the overall package turns out to be as robust as other machines in the company's line-up, the mowers should

be more than capable of coping with the workload in a silage contractor's fleet. So what's next? Not surprisingly, McHale wants to see how the market reacts to its latest additions before making any commitments. Eventually, however, it would like to have a mower range of about 10 machines, with a 3.5m wide model the most likely next candidate. And then, of course, there's the possibility of rakes, tedders ...



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