

Faster in, faster out

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Kuhn SB1290 ID Omnicut baler:

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With its patented double plunger arrangement, French firm Kuhn has a unique selling point for its 120x90cm big square baler. And in our 2019 comparison test, the design proved how well it can work. However, there was still room to boost output even more, by making some subtle changes.

New intake

The pick-up on the latest generation SB1290 ID still has five rows of tines. Kuhn sticks with cam track control, as it allows the pick-up tines to rotate slower for a gentler handling of the crop. At the same time, the firm's engineers have widened the pick-up by 130mm, so that it now measures 2.05m tine-to-tine. The tines

themselves have also now changed, with five instead of four coils, and they are made from 5.5mm steel rather than 5.2mm. According to Kuhn, this change should improve the tines' durability two-fold.

Power Feed Roller are the magic words when it comes to increasing throughput. The focal point is a 250mm diameter, actively driven feed roller, which is located above the pick-up band and positioned ahead of the Optifeed rotor, or, on the chopper version of the baler, the Omnicut rotor. The roller has six baffles to move the crop. The roller floats so that it can adapt to the shape of the swath.

The torque of the rotor's cam clutch has been increased by 20% – and that of the packer clutch by 10% – to help aid output.



The six double knotters produce short offcuts, but powerful fans keep the area clean.

BALE DENSITY AND THROUGHPUT

Length	Weight	Bale density	Throughput
2.27m	516kg	211kg/m ³	44.4t/hr
2.33m	477kg	189kg/m ³	65.6t/hr

Wheat straw; 12-13% moisture; values averaged from measuring three bales





The pick-up is now 13cm wider and boasts a powered 250mm diameter feed roller ahead of the rotor. The roller 'adapts' to swath shape.

Kuhn has boosted the output of its SB1290 ID, which is capable of packing more than 500kg into a 2.30m long bale at a rate of 44t/hr.



The sides of the bale chamber are now pressurised by three hydraulic rams per side. The chute has a very accurate integrated weighing system. A two-piece bale ejector will be available next season.

Neat details: the storage locker and hand wash tank.



Over 200kg/m³ of straw

We were keen to see what difference these tweaks to the ID's design would make to in-field performance behind a Fendt Vario 933 (239kW/325hp). We were able to measure the dry wheat straw bales – see the table 'Bale density and throughput'.

When the focus was maximum bale density, the Kuhn achieved 211kg/m³ with a material throughput of 44t/hr. We then switched to

THE SHORT VERSION

- ▶ The double plunger set-up is only reckoned to need half the previous power requirement to produce very high density bales.
- ▶ New features include a powered feed roller to boost output.
- ▶ Kuhn first introduced the double plunger design in 2013.
- ▶ A factory-fit bale accumulator and a split bale ejector are not yet available as options.

DATA SHEET

Kuhn SB1290 ID Omnicut

Length/width/height	7.90m/3.00m/3.45m
Bale size	1.20m wide, 0.90m high, 0.6m-3.0m long
Number of blades/cutting length	23/45mm
Pick-up width	2.30m
Rotor width/diameter	120/600mm
Number of piston strokes	46 strokes/min
Twine reserves	Two x 16 rolls
Tandem axle, tyres	680/50 R22.5
Price without VAT	£195,750
Manufacturer information for the test machine	

maximum throughput and managed a very impressive 65.5t/hr ... and the bales were still coming in at almost 190kg/m³. Even though these stats are not directly comparable with the results from our group baler test, the new generation SB1290 easily achieves its claim of 20% more output.

Other details

- The cutting system, bale chute and steered axle etc get their oil supply from a spool or the load-sensing system.
- On-board hydraulics look after the bale chamber and the knotter fan.
- The pick-up now has an easily adjustable depth stop (instead of a chain), and the castor gauge-wheels are puncture-proof.
- Twine boxes for the 32 rolls of string open to the side.
- There is central lubrication for most of the baler's grease points. The massive plunger bearings are maintenance-free.
- New machine features include a hand-wash container and a storage locker with a shelf for a toolbox.

Summary: Benefitting from a powered feed roller sited ahead of the main rotor, the new SB1290 ID was capable of packing away 65t/hr during our time in the field. The double plunger design produced a bale density of almost 190kg/m³ in dry wheat straw. This means Kuhn is now at the forefront, not only in terms of bale density but also output.

Hubert Wilmer