

Special Reprint

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Driving impression: Moore DP600A Tandem Uni-drill

Moore than just a direct drill

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Moore *System*

33 Kirk Road, Ballymoney, Co. Antrim, Northern Ireland, BT53 6PP
Phone: +44 (0)28276 64444 · Fax: +44 (0)28276 65696 · Mob: 07977 22296
Website at www.minimum-tillage.com · E-mail: info@moore-unidrill.com

profi international: Goblands Farm · Court Lane, Hadlow · TONBRIDGE · Kent, TN11 0EB · UK

0044 (0) 1732 852 383 · 0044 (0) 1732 852 488 · E-Mail: reader@profi.com

profi international · D-48084 Münster · Telefon 00 49/ 25 01/ 8 01-3 60 · Telefax 8 01 - 3 59 · E-Mail: service@profi.com

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Moore than just a direct drill

Well-known as a direct drill specialist, and one of the originators of that technique, Northern Irish firm Moore Uni-drill is now looking to capitalise on the ongoing industry move to min-till, with its latest Uni-drill incarnation, the Tandem. The firm stresses that the new machine is universal, and capable of sowing direct or into a ploughed, cultivated seedbed – and into every tilth type in between. That's the claim.

Our test 6m DP600A was drilling peas for combining on ploughed, chisel-ploughed (10cm) and rolled land. The light, stone-free ground proved little challenge for drill or its 220hp JD 8220 tug, but it did give us a chance to assess the machine's features and performance. A min 170hp tractor is recommended. So why 'Tandem'? The label comes about because of Moore's efforts to improve drilling depth consistency, particularly in uneven/undulating conditions. Its solution to this is the

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dual-sprung 'drag arm' units, which suspend each pair of discs/coulters between the drill's front and rear press wheels.

Moore has long maintained its drills work best in firm, level seedbeds, whether these be consolidated tilth or stubble field. To this end, the first Tandem component is a staggered row of individual 500x210mm Otico zero-pressure rubber tyre packers. These control drill depth via a set of clip-in spacers. Three different sizes are used, with each of the smaller spacers representing 1.2cm/0.5in sowing depth. Moore claims that it is virtually impossible to block the packer, unless working in very wet, cultivated soils.

Next up come those key Tandem drill components, the disc/coulter pairs. The 450mm boron/steel disc coulters, 5mm thick, are all angled in two dimensions, 3° horizontally and 1.5° vertically. Moore in-field experience suggests this provides good soil slice fall-back to ensure seed:soil contact. From June this year, Moore is replacing the discs with serrated units, chiefly because

Front Otico press wheels control drilling depth via a series of clip-in spacer units.



Light, moist soils were not a big test for our Moore DP600A Tandem Uni-drill. Nonetheless the 6m wide machine made an impressive job of accurately placing protein pea seed.



Folded wing displays key Tandem parts. Left to right: Otico press wheels, two rows of angled disc openers and coulters, cast iron press rings.



of supply issues. It clearly remains to be seen how this may affect seed furrow/depth consistency.

Nestled up next to each disc unit is a 30mm tungsten carbide-tipped seedtube coulters. Max disc pressure is 150kg per disc coulters, rising to 195kg with a full 1.5t seed hopper. A drawbar-mounted hydraulic ram, which again uses spacers to alter the chassis weight transfer, allows either front or rear press wheels to take the majority of the weight.

There is 125mm of disc coulters up/down movement to allow them to ride over large seedbed obstacles and follow ground contours. While Moore claims the high inertia discs reduce the risk of coulters bounce, settling seed into the bottom of the furrow at higher drill speeds can be a problem; seeds bounce out of the furrow bottom before the soil falls back into place. Plastic 'rebounder' strip inserts behind each coulters will be fitted to counter this.

The spacing between the staggered disc/coulters pairs is 16.6cm, which Moore says allows flow-through of trash, while the disc coulters angle reduces hairpinning. Again, as our field had been ploughed, we were unable to verify this.

At the rear, 500 x 66mm cast iron press wheels are again sprung to ensure they follow the discs. The wheels feature chamfered edges to close the seed slot laterally. Drills are sold as standard with scrapers, although these are rarely needed



The drill is raised up by the drawbar and rear wheel rams. It remains parallel to the ground.



Tandem Uni-drill folds in two halves to 3m transport width. This means there's no need to crawl underneath for access to discs etc.

Press wheels leave a corrugated finish, firming the soil around the seed furrow, but leaving it loose up on the ridge between the rows to protect seedlings by channelling water and reducing wind damage. The slim, centrally mounted seed hopper and drill metering system come courtesy of French marketing partner Sulky. Hopper capacity is 2,250 litres/1.5t, while a spacious, rear-mount platform provides good operator access. If loading from the rear is the only option, though, this does place the man on the platform in the path of the telehandler boom – considerable care needed.

The hopper feeds Sulky individual peg-feed seed boxes, courtesy of a hydraulic-drive fan unit. A stepless gearbox offers 600-0.5kg/ha possible seed rates, and seed transfer from

hopper to coulters is direct, with no central 'fountain' or upward seed movement, reducing required fan pressure; for wheat seed, a 2,800rpm fan speed is recommended.

The chassis and frame are built of tough-build box section, and Timken tapered sealed roller bearings are used throughout. There is no bottom section to the drill, with the two 3m seeder wing halves folding upwards,

Data Sheet

Moore DP600A Tandem Uni-drill

Working width:	6m
No. of rows:	36
Front packer:	Zero-pressure Otico rubber tyres
Coulters:	450mm diameter, 5mm thick boron steel discs angled 3° vertically, 1.5° horizontally, 125mm coulters up/down movement, serrated units fitted from June 2003, 30mm tungsten carbide-tipped seedtube coulters
Hopper capacity:	2,250 litres/1,500kg
Transport width:	3m
Weight:	5,500kg
Transport wheel kit:	550/45-22.5 flotation tyres
Minimum power req:	170hp
Hydraulic req:	Three da spools, 90 litres/min flow
Price:	£36,700

meaning no need to crawl under the drill for disc/coulters maintenance. Only downside to this is that, in this format, Moore cannot go any further up the model size scale – a folded 8m machine would exceed UK road transport height limits.

Summary: Moore would seem to have broken out of its 'direct drill specialist' pigeon-holing with the Tandem, which puts the firm head-to-head with the bigger UK, German and Swedish seeder players. Well-designed and well-built, it remains to be seen whether the Tandem unit convinces UK buyers of its potential all-round versatility.

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Contact Moore on:
www.minimum-tillage.com

PHONE +44 (0)28276 64444

FAX +44 (0)28276 65696

email info@moore-unidrill.com