



50 mm MixIn shin for Cultus

Cultus now has a 50 mm MixIn shin designed for the point of the same width. The MixIn shin increases mixing of crop trash into soil by several levels of intensity and improves the overall action of Cultus. The draught requirement is also decreased by the new combination of 50 mm point and MixIn shin.

From 2010, it will be possible to equip Cultus with a 50 mm wide MixIn shin. There is now a MixIn shin suited to the 50 mm-point, so point and MixIn shin work together in harmony. The point and 50 mm MixIn shin are primarily designed for deep cultivation and loosening of hard layers.

The draught requirement is decreased by the combination of 50 mm point with 50 mm MixIn shin. Compared with the standard equipment of 80 mm point and MixIn shin, the draught requirement is reduced with 10-20%. During autumn testing, the 50 mm combination could be driven 2 km/h faster at the same depth with the same tractor. The recommended driving speed for best tillage results is 10-12 km/h.

The MixIn shin on Cultus causes the soil to be thrown upwards and forwards in a movement that is a continuation of the MixIn shin's shape. The outcome is that the soil thrown forwards is mixed in once again by the tine and point. This increases the mixing of soil and crop trash by several degrees of intensity and allows Cultus to do an even better job. Thanks to the MixIn shin, Cultus has the ability to carry out complete mixing of soil and crop trash even at low driving speeds (6-7 km/h).

Cultus can be equipped with four different points from 50 to 210 mm width. The narrowest 50 mm point is primarily designed for deep loosening, while the broadest 210 mm point does its best work in shallow cultivation and more complete slicing. The points on Cultus are always divided into two parts – a point and a shin. When the point has served its time it is easy to replace, while the shin has more to give and can be left in place. A shin normally lasts through five changes of point, which decreases the cost of wearing parts.



Shorter Rapid with powerful Crossboard

A new nimble Rapid model will be unveiled in 2010. Thanks to its Crossboard Heavy toolbar, this machine is shorter, easier, lighter and more visible from the tractor cab. It also has a lower draught requirement and lower investment costs.

The new toolbar consists of a strong, stable Crossboard that does phenomenal work directly on ploughed furrows. Crossboard Heavy with its robust axle, flexing tines and broad steel levelling board attacks, levels and crushes plough furrows to a fine tilth.

The new Crossboard Heavy toolbar makes the Rapid machine shorter and more nimble. The turning circle on headlands is impressively small and it is easy to reverse the drill out in corners in the field. This shorter machine allows a good view of soil cultivation and drilling from the tractor cab. Rapid Crossboard Heavy is easy to manoeuvre on small and irregularly shaped fields, while it also takes up less space in the machine house.

The slimmed down Rapid Crossboard Heavy is designed for farms that mainly use the plough, but of course drilling in other tillage systems is also excellent. Rapid with Crossboard Heavy reduces the draught requirement, so Rapid 300 only requires 100-120 hp, while Rapid 400 should have 120-140 hp in order to reach a speed of around 10-12 km/h, where Crossboard operates at its best. The shorter, powerful Rapid drill also has 10-20% lower investment costs despite being an all-round machine that is fully equipped with everything necessary for cost-effective establishment.





Save fertiliser in tramlines with Rapid

On combi models of Rapid 300-400 from 2010, the fertiliser coulters are shut off during tramlining. This means that a Rapid with 12 metres between tramlines saves over 4% of mineral fertiliser, does not fertilise weeds in tramline tracks and decreases losses of plant nutrients.

From 2010, combi models of Rapid 300-400 have automatic shut-off of the fertiliser coulters between seed coulters shut off for establishing tramlines during drilling. The seed and fertiliser coulters are synchronised and the only thing the seed drill operator needs to do is to enter the distance between tramlines into the control box before starting. Rapid then takes care of the rest.

In tramlines, there are no crop plants that need nutrients. The only plants that might be growing there are weeds and these should not be encouraged to grow and set seed. If there is no vegetation, fertilising tramlines eventually results in losses of nitrogen and phosphorus to lakes and streams. It is therefore good for the environment to avoid placing any mineral fertiliser between seed coulters that are shut off to create tramlines.

Instead of losses to the environment, the results is gains in the budget. On Rapid 400C with 12 metres between tramlines, over 4% of fertiliser is saved. With a fertiliser rate of 100 kg nitrogen per hectare for spring cereal using ordinary NPK fertiliser, this is equivalent to around € 6,5 – 7,5 per hectare. If the Rapid seed drill establishes 200 hectares of spring cereal, the saving is € 1 300 -1 500 per year. If plant nutrients are row-hoed to oilseed crops or if phosphorus is placed in winter wheat drilling, the savings increase further.

The function can be retrofitted on earlier models of Rapid 300 and 400C.



Interactive Depth Control on Rapid A 600-800S

Depth regulation from the tractor cab on the go will be possible on Rapid A 600-800S from 2010. It allows the seed drill operator to achieve even more accurate crop establishment on variable soils, resulting in perfect emergence.

The system is called **Interactive Depth Control** and gives the seed drill operator the option of adjusting drilling depth on the go to match variations in soil type in the field. It ensures that hard, clayey slopes and soft, loamy hollows can have the same drilling depth and the same emergence as the rest of the field. In other words, Interactive Depth Control provides the scope to vary drilling depth with immediate effect and is a brilliant solution on variable soils.

Seed depth control is activated by the press of a button on the control box in the cab. The depth is then fine-tuned with 1 mm accuracy using the hydraulic lever. Once the depth has been set, the main cylinder is locked in the new position by double hydraulic valves. This makes Interactive Depth Control a very reliable system with no risk of involuntary changes in drilling depth. The drilling depth control system is also very fast, with changes made in the tractor cab having immediate effect in drilling depth. The system makes it possible to alter drilling depth within very large intervals, for maximum yields.

Interactive Depth Control makes Väderstad seed drills unique in their field as regards drilling precision.





I Heavyweight 3.3-metre Rexius Twin

Rexius Twin is coming in 3.3 metre working width to complete the model range. The weight is 1450 kg per metre, which is the foundation for this soil cultivator's much appreciated exceptional ability to consolidate everything from heavy clays to light soils.

Rexius Twin is already available in five different models with working widths from 4.5 to 10.3 metres. The sixth model will be the smallest, 3.3 metres.

Despite its narrower working width, the 3.3-metre Rexius Twin is powerful and consolidation is impressive, with a weight of 1450 kg per metre. Rexius Twin has been on sale for decades, particularly in the UK, where its users appreciate its phenomenal consolidation. Their experience is that Rexius Twin is often the only machine that can cope with plough furrows before autumn drilling on many heavy clay soils. Rexius Twin is equally useful after ploughing on light soils to restore capillarity and upward transport of water in the soil profile and thus promote germination.

Rexius Twin builds up its work in three stages. First, powerful cultivator tines rip up the soil to a maximum of 15 cm, with the driver setting the working depth from the cab. After these tines, set at 200 mm c/c spacing on two axles, comes a levelling Crossboard, which is also controlled from the cab. Finally, two rows of sharp, heavy packer rings cut through soil and clods. The working depth of the rings is limited to 10 cm through their construction. This strong heavyweight requires a tractor size of 130 hp upwards.



Half-machine shut-off on Spirit 400 and 600

Spirit 400 and 600 seed drills will have mechanical half-machine shut-off from 2010. By turning the distributor lid on the seed house, half the machine can be shut off by a plate that prevents the seed from reaching the seed hoses. In addition, Spirit will have softer packer wheels that run clean even in more wet conditions.

On the Spirit seed drill in 4 or 6 metre working width, it will be possible to shut off half of its working width on the 2010 models. The mechanical half-machine shut-off is simple yet ingenious and consists of a turnable distributor lid on the seed house. When the machine should only drill half the working width, all that needs to be done is to turn the distributor lid. A plate on the upper side of the lid is then moved down into the seed house and blocks seed transport to half the machine.

This mechanical half-machine shut-off makes it simple and easy to get tramlining correct for a 24 m sprayer with Spirit 400 or 600. The turnable distributor lid can be retrofitted on previous models of Spirit 400 and 600.

All Spirit machines will also have a new packer wheel that sits behind the V-shaped double disc in the drilling aggregates. The existing rubber wheel has been replaced by a softer one, giving the same weight in consolidation but higher elasticity and flexibility. The new packer wheel therefore has a better ability to run clean in more wet conditions.

Spirit is a seed drill in 4, 6, 8 and 9 metre working widths that has its main area of use on soils that require double consolidation. A feature of Spirit is that the soil is consolidated both before and after the seed coulters. The work is done in four zones. Behind the cultivating toolbar are carrying wheels in the OffSet position, which consolidate and level the soil surface. Then come the drilling aggregates, which are followed by a heavy packer wheel. This construction gives reliable and uniform emergence without compromising capacity during drilling.





New Spirit model: Spirit 600S XL - with larger hopper and half-machine shut-off

The Spirit seed drill in 6 metre working width will be available in an upgraded version from 2010. The new Spirit 600S XL model has a hopper with an additional 160 litres, increasing the total volume to 3900 litres. The new version also has two seed houses, allowing for easy and economical half-machine shut-off from the cab.

The number of Spirit seed drill models is growing. To begin with there was only 6 metres working width, but this was soon followed by 8- and 9-metre models and then a 4-metre Spirit last year. The latest addition to the Spirit range is Spirit 600S XL.

The new model has a larger hopper. The increase in volume is 160 litres, making the total volume of the hopper a massive 3900 litres and thus increasing the drilling capacity further.

The other major change is that Spirit 600S XL has two seed houses. This allows for half-machine shut-off from the tractor cab on Spirit 600S XL. With a simple press of a button, the seed drill operator can shut off either the right or left side of the machine with immediate effect. This function makes it easy and convenient to adjust tramlining for a 24-metre sprayer on a 6-metre Spirit. It also saves valuable seed, since half the machine can be shut off in irregular fields or to avoid double-drilling on headland turns.

Spirit is a seed drill developed for soils that require double consolidation. On Spirit 600S XL the row distance is 12,5 cm. On all other Spirit models it is possible to choose between two row spacings – the normal 12.5 cm or 16.7 cm. This increase in row spacing of around one-third is an advantage on soils with limited water capacity and also gives better throughflow of soil and plant trash. Spirit is responsive and manoeuvrable in the field and on headlands and provides impressive precision of seed placement even at high speeds. The V-shaped double discs in the drilling aggregate are placed in an offset position, which decreases wear and maintenance costs.



LowDisturbance expands the possibilities of TopDown even further

Väderstad's newly developed and completely unique LowDisturbance point is designed for deep cultivation of heavy, wet soils with TopDown. The point cuts a vertical aeration channel from the surface right down through the topsoil. LowDisturbance loosens at depth without pulling up moist soil onto the surface, and also decreases the draught requirement.

A new point that loosens at depth but does not throw the soil up to the surface is available from 2010 for all models of the TopDown cultivator. This point is called LowDisturbance. It is 50 mm wide and works optimally at around 10 km/h, which gives a high work rate, and is designed for cultivation at working depths of around 20 cm and more.

The curved vertical blade of the point slices through the soil and presses it to the sides, so that a continuous channel is created with contact up to the soil surface. The tines are placed sufficiently close to break up the deep soil profile into coarse aggregates. This means that wet soils can be aerated mechanically and their drainage capacity is increased. The soil flow is interrupted before it reaches the tines and no power goes to mixing. For the same working depth, the draught requirement is lower than for a standard point.

The new LowDisturbance point has been subjected to wide-scale testing during autumn 2009 on the British market. It allows soil cultivation to be carried out in wet conditions, where it is an advantage to be able to deep loosen without pulling wet soil up to the soil surface. Other situations where the LowDisturbance point acts to good advantage include compacted headlands or tramlines, where the point performs an important function in loosening without mixing the soil.

The discs on TopDown always mix straw in to shallow depth, while the tines loosen the soil profile to greater depth. However, when equipped with the new points TopDown becomes both an efficient cultivator and a completely new category of deep loosener in one and the same machine. Its areas of application are expanded and multiplied, while its range in the soil is extended from shallow cultivation of the topsoil to really deep loosening and aeration of the subsoil. All of TopDown is expanded with the LowDisturbance point.

The LowDisturbance-point can be retrofitted on earlier models of TopDown.





TopDown with rubber roller

From 2010, a rubber packer roller will be available as an option for TopDown. The rubber roller gives the same degree of consolidation as the steel roller, but is particularly designed for loose and puffy soils since it decreases the risk of soil drag.

From 2010 on, the Väderstad cultivator TopDown 300-700 will be available with a packer roller of rubber. Its diameter is 550 mm and it gives the same degree of consolidation as a steel roller.

The rubber roller is designed for loose and puffy soils and has its greatest effect on such soils. With rubber instead of steel as the packer material, the soil is not walled up ahead of the roller. The reason is that rubber has higher friction, meaning that the roller does not drag the soil. This makes the rubber roller less likely to create a wall of soil ahead of itself. Instead, it consolidates loose soil evenly and steadily. Väderstad's Carrier and Cultus both already have rubber rollers as option.

Consolidation is critical for the final outcome when the soil has been lifted and aerated by the cultivator tines of TopDown. In dry conditions, consolidation is particularly important. It restores contact between soil, crop trash and dropped seed, which speeds up decomposition and gives faster germination of volunteer plants, which can then be controlled efficiently at a later stage. Consolidation is also important for seed germination when TopDown is fitted with BioDrill, e.g. for drilling rapeseed.

TopDown is a versatile cultivator in working widths from 3 to 9 metres. It works in several stages. First come two rows of notched, conical discs that thoroughly mix soil and crop trash. Then come three axles of cultivator tines, which loosen the soil to a maximum depth of 25 cm. The tines are followed by one row of levelling discs, which have the task of levelling out soil walls after the last row of tines. The work is completed by the packer roller, which restores an optimal degree of consolidation.



VÄDERSTAD Concept study Rapid-Xerion hopper

The Rapid-Xerion seed hopper is a concept study performed during 2009 with sales start 2010. It will be available world wide. Väderstad markets the Xerion seed hopper complete with filling augers and seed drill connection.

Väderstad, Claas and Lomma has developed a seed hopper for Claas Xerion Tractors. The hopper and filling auger is adopted for a Rapid A 800S. The hopper is constructed to even further improve the impressive capacity of the Rapid seed drills. With it's 10.500 litres capacity it reduces the number of filling stops dramatically and leaves the driver to concentrate on the drilling. The hopper is easily attached on the Xerion saddle track with 4 points of attachment and can easily be dismantled.



Function	Customers benefit
1. Capacity	With the combination of Väderstad Rapid 800S and Claas Xerion 380 with a Lomma hopper with 10.500 litres, we achieve both capacity and speed, up to 299 ha/day. This way the seed drill spends more time drilling which lowers capital need since one drill can manage more hectares.
2. Speed	The Rapid drill efficiency is maximized up to 20 km/h with the powerfull Xerion which offers full traction on all wheels.
3. Easy filling	The big opening on the Xerion tank enables quick and effecient filling minimizing downtime.
4. Easy transport	The fitting of the hopper on the Xerion keeps the good transport ability of the machine combination.

Concept study Rapid-Xerion hopper

Technical data concept hopper:

Model	RDAS Xerion seed hopper
Extended hopper volume (l)	10.500
Extended hopper weight (kg)	1.300
Filling opening (cm)	196 x 260
Auger diameter (cm)	12,5
Rapid Working width (m)	6,0 or 8,0
Transport width combination (m)	3,0

Time saving calculation example:

Xerion + Rapid 800S	
Seed rate (winter wheat 0,8 kg/l)	200 kg/ha
Maximum drilling speed	20 km/h
Maximum capacity / 24 h (20 km/h, 85% efficiency, no filling counted)	326 ha (20 km/h x 24 x 0.85)
Optimal filling time Xerion hopper + RDAS (4.000 l + 10.500 l, 1 person bulk filling)	20 min
Time filling RDAS + Xerion 24h (6 x 20 min)	120 min (2 hr)
Drilling capacity per day	299 ha



Powerful combination.



Full control from cab.



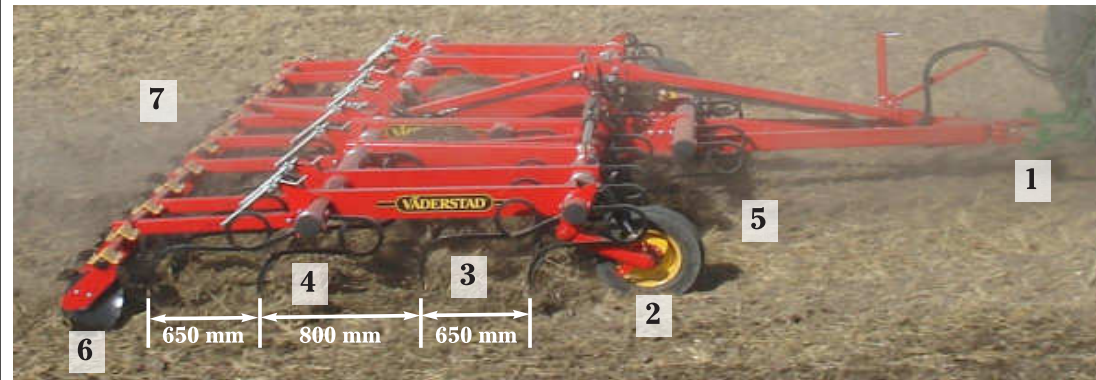
Enormous capacity.



VÄDERSTAD Concept machine Swift 3 - 12 metres

Swift is a concept machine with sales planned to start in 2011. During 2010, field tests and demonstrations will be carried out around Europe.

Swift is an efficient stubble cultivator with a high work rate and low fuel consumption. Swift works shallow to mid deep, down to 15 cm. The machine carries out intensive mixing of crop trash and soil and leaves a level soil surface. Its soil contouring and manoeuvrability are impressive. The draught requirement is from 30 hp/m working width.



Feature	Customer benefit
1. Responsive drawbar	The cultivator is trailed by the towing arms of the tractor, which gives impressive manoeuvrability and high clearance height during transport. A hitch drawbar is also available as an option.
2. Support wheels	A support wheel on each wing allows for excellent soil contouring and ensures level cultivation depth.
3. Spacious construction	Swift is a ground-breaking example of new ideas in machine design. Each frame axle carries two rows of tines with 650 mm spacing. This creates a 4-row machine with a shorter and denser frame, making the machine spacious and allowing large amounts of plant trash to flow through. It also makes it responsive and easy to manoeuvre.
4. Vibrating tines	The tines vibrate intensively in horizontal direction, which creates a fine tilth and lowers the draught requirement. The tines are fitted with the same points that have been successfully used on Cultus for many years, in 50 or 80 mm width. The MixIn shin creates a maximal flow of soil around the tine.
5. Tine distribution	The tines are placed at 19.3 cm tine spacing, which gives full soil slicing even at shallow working depth.
6. Levelling discs	The work is finished off by large, greaseless levelling discs with rubber mountings for increased lifetime. Tine levellers are available as an option on light soils.
7. Link-on drawbar	Swift has no integrated packer rollers so the operator can decide in any situation whether or not to link a roller onto the heavy link-on drawbar at the rear of the machine.

Concept machine Swift 3 - 12 metres

Technical data concept machines, examples:

Model	SW 560	SW 720	SW 870
Draught requirement (hp)	from 160	from 210	from 260
Working width (m)	5,6	7,2	8,7
Transport width (m)	3,0	3,0	3,0
Transport height (m)	max 4,0	max 4,0	max 4,0
Weight (kg)	2500	3300	4000
No. of tines	29	37	45
Tine spacing (cm)	19,3	19,3	19,3



Four rows of vibrating tines with the MixIn shin do an impressive job on stubble.



Through an ingenious telescopic solution, the largest models can be adjusted so that their transport height is less than 4 m.



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