

>> **SAMSON AGRO**

ST3 450 HD TINE INCORPORATOR



- growing together



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SAMSON AGRO's new compact and robust – but still light – slurry incorporator, ST3 450 HD, is designed with a brand new telescopic function to expand the width of the incorporator from a transport width of 3.00 m to a working width of 4.5 m.

The new ST3 450 HD incorporator are suitable to 2-axed slurry tankers, smaller tractors with less horsepower, small roads and long fields.

The ST3 450 HD slurry incorporator works as a normal stubble cultivator mounted directly on a tractor. And do two jobs in one operation. It both fertilize and cultivate the soil.

The compact and strong design ensures that it can work in all types of soil. Also, hard soil with clay.

The high tines and the three bar frame design allows a lot of plant residue to pass through the incorporator. The ST3 450 HD can be used in all types of stubble fields where the straw has been removed or efficiently cut by strawcutter on the harvester.

The new incorporator will be released for full sale July 2016.

SAMSON AGRO have specialized in slurry incorporators and injectors

SAMSON AGRO offer a wide range of incorporators and injectors. They are built of different types of tines or discs depending what type of plants and soil they should be used for. They have a working width from 6 to 12 m. But with the ST3 450 HD SAMSON AGRO want to show, that we are also able to build a smaller incorporator, that maybe are not that common in the market today, but that SAMSON AGRO see a demand for in the coming years.



Why incorporate/inject the slurry

By incorporating or injecting the slurry, the farmer achieve a better usage of the nutrients in the slurry, because it reduce the emission of nitrogen from the slurry compared to applying slurry with a splash plate or drip hose boom. Also, when incorporating and injecting the slurry it is placed in strings/slits in the soil with a small surface for the microorganism in the soil to attack, than when it is applied by splash plate or drip hose boom and hereby is placed of a big part of the surface of soil. Both factors should result in a lower loss of nutrients in the slurry and a higher yield of the following crop.

The reduced loss of nutrient when applying the slurry by an incorporator or injector is off course very beneficial for the environment. Less nitrogen overload (pollution) of lakes, streams and so on and less ammonia in the air and the negative effect this have on the live in the water and the natural flora in the nature.

Lastly, because the slurry is placed in the soil in closed or almost closed strings/slits, the odour from the slurry, is remarkable reduced when applying.



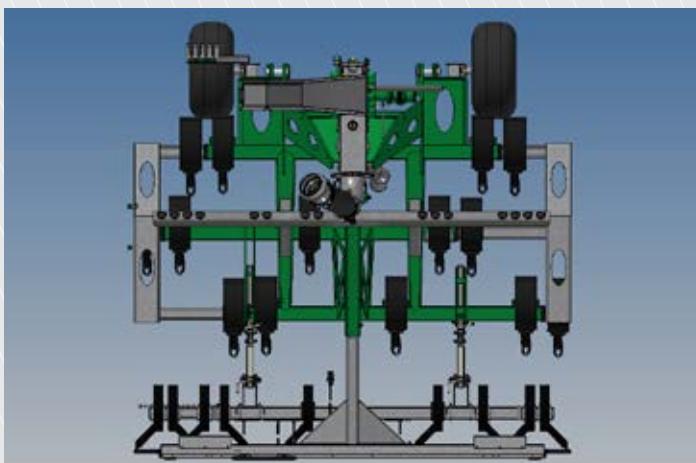
The incorporation of slurry leaves a surface with no slurry. This reduce the emission of slurry and increases the usage of the nutrients in the slurry.

>> COMPLETELY NEW CONSTRUCTION



The ST3 450 HD incorporator is a compact and robust, but still light machine.

The ST3 450 HD incorporator from SAMSON AGRO is built on a completely new compact construction. It is a simple frame without any folding mechanism – but with a new telescopic function to control the width. It has 3 rows of heavy duty tines and "Hockey sticks" as following harrow. The incorporator weight 1.750 kg, which is a relative low weight.

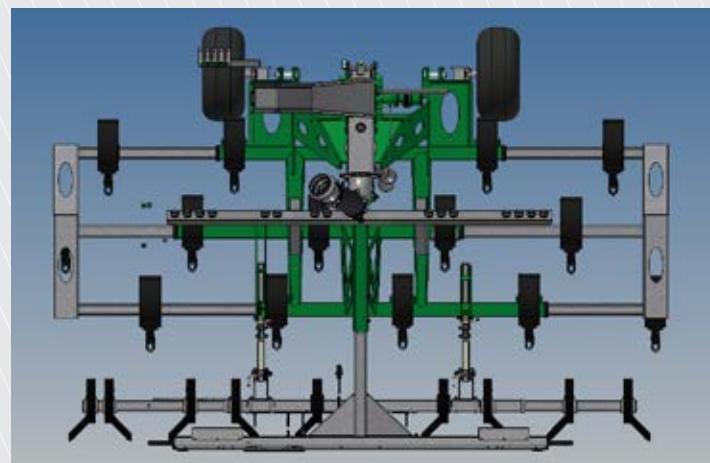


Transport position.

New developed telescopic system

With this new telescopic system, the frame and tines can be unfolded from transport to working width and ready to work in less than 15 seconds.

There are several advantages with the telescopic function. The incorporator has a lower weight with the telescopic function than with an



Working position.

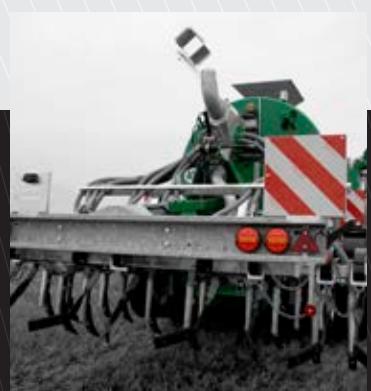
unfolded mechanism. There are no bearings and bushings that need lubrication. And the cylinders are completely protected in the frame. The telescopic function is very easy and safe to use. And it of course compresses or expands the 3 rows in the frame and also the following harrow.



Udvigelse fra transport- til arbejdsbrede set siden.



The telescopic function compresses the incorporator in a very traffic safe way, since it still gives a very good overview of the traffic behind the slurry tanker and implement.



>> CLEANING HOLES AND SCRAPER SYSTEM

The outer profile in the telescopic system is equipped with cleaning holes in the bottom. This ensures self cleaning, when the telescopic system operates. The soil and dirt will automatically be scraped out to prevent downtime and ensure minimum maintenance.

The 3 rows in the frame are equipped with scrapers that also prevents the soil and dirt to get into the profile. This reduces the wear of the profile and insures a long lifetime. But they also have a guiding function in compressing and expanding the frame.



There are cleaning holes in the bottom of the outer profile in the telescopic system.

It is 2 part scrapers that are easy to change.



The HD tine gives a good ground clearance (73 cm) under the frame.



The wear tip is made by 28Mn Cr B5 steel and have a hardness on 48/52 HRc.



The narrow bottom of the nozzle reduces the wear.

>> HIGH TINES

The incorporator is equipped with a strong and large heavy duty (HD) tine. It can work in hard soils and gives a good ground clearance under the frame. It makes it easy for a lot of straw to pass through the frame and to work deep in the soil.

The wear tip on the tine is 20 mm thick and 60 mm wide and made of hardened steel. This gives a high strength and a long wear. It can

easily be turned upsidedown to double the lifetime of the weartip and thereby save cost.

The slurry nozzle on the tine is specially designed to place the slurry directly behind the tine and to secure that the slurry is placed in the right depth. The narrow bottom of the nozzle reduces the wear. The slurry hose is put inside the nozzle to reduce blockages of the slurry.

Optimal tine spacing

There is 29.5 cm between the tines – in the 3 rows. But there is 88.5 cm between neighbor tines. This result in a good spacing in the incorporator that also allows a lot of plantmaterial or straw to pass through the frame. Saving working time and increasing work quality. The distance is also optimal for the yield of the crop according to certain studies.



There is a good spacing under the frame in the ST3 450 HD from SAMSON AGRO.



Quick and precise height adjustment

The working depth of the ST3 450 HD is controlled by 2 big and wide wheels. The working depth of the incorporator can be variated from 5-22 cm. Two handles adjust the height of the 2 big wheels very precisely. There is easy access to the 2 handles and they are quickly adjusted. So this is time saving.

The wheels secures that the machine runs steady in the field and carries the load on a big surface to avoid harmfull soil compaction. The big wheels also give a low rolling resistance which reduce the use of energy. The tire dimension is 26"x12" and reduce soil compaction, gives a low rolling resistance and saves fuel.

There is easy access to the 2 handles and they are quickly adjusted. So this is time saving.

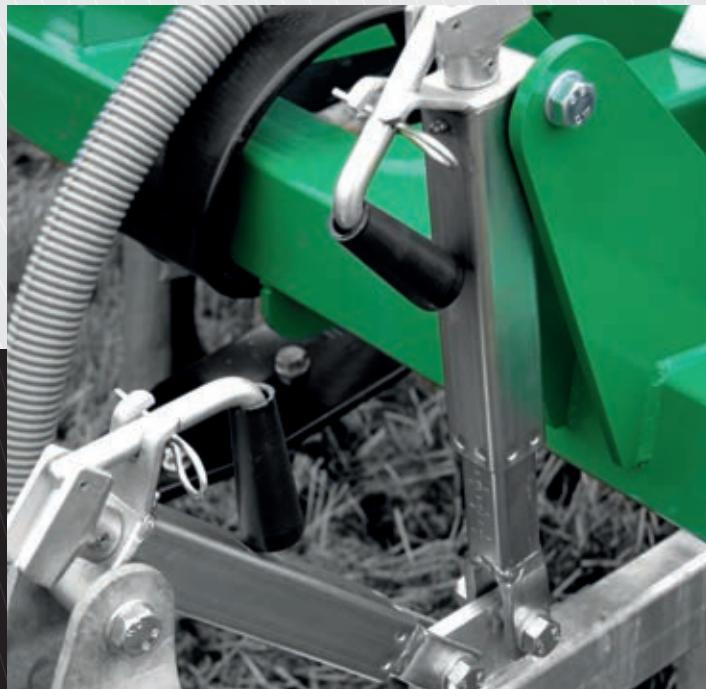
>> REDUCE WEAR AND FUEL CONSUMPTION

adjust the following harrow

To even the surface of the soil the ST3 450 HD incorporator is built with "Hockey sticks" as a following harrow. They effectively move the soil and covers the slurry strings/slits very efficiently, without having to work deep in the soil. This means low wearing costs.

The hockey-sticks can be adjusted in both height and angle. This gives the user the possibility to optimize the levelling function to every

situation. The amount of plant residue on the field and the humidity in the soil and type of soil. When the hockey-sticks can be adjusted in angle, it is possible to optimize the wear of the hockey-sticks and the wear of the wearing parts on the tines.



The following harrow can be adjusted optimal under all conditions with a reduced wear and fuel consumption as a result.



Settings indicator makes setting easy. And ensures the right setting on the 2 handles.

The well known slurry distributor

The ST3 450 HD incorporator is equipped with SAMSON AGRO's vertical distributor. It is known for its very even slurry distribution.

The distributor has a high capacity. It has 15 hoses and the diameter of the hose is 45 mm.

The distributor is built with a cup cutter that is very efficient in cutting the straw.

Also, there is an efficient stone trap in the bottom of the distributor which prevents stones from blocking and damaging the distributor. This extends lifetime on wearing parts.

Altogether, the SAMSON AGRO distributor is characterized by a low wear and maintenance.



Hydraulic slide valve on the bottom of the stone trap with auto close function is optional.



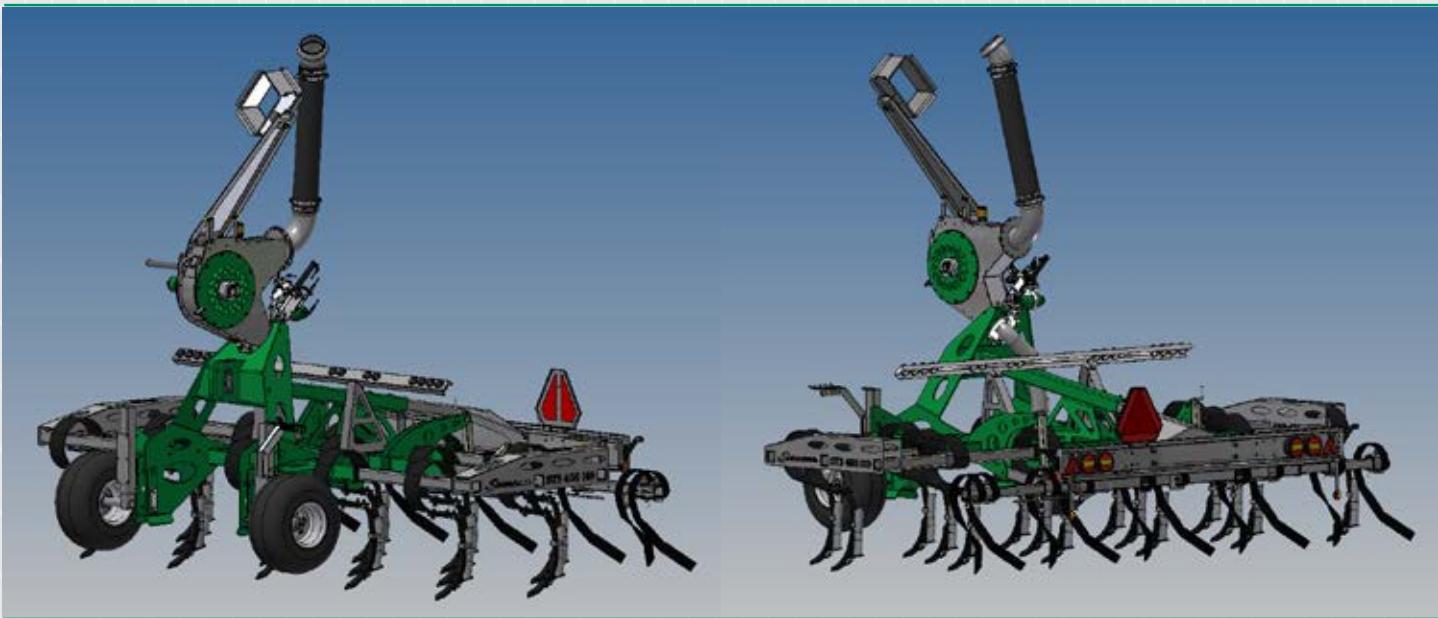
ST3 450 HD is equipped with the well known SAMSON AGRO distributor.



» This is why you should buy
SAMSON AGROs ST3 450 HD incorporator

- Light, robust construction
- No folding mechanism, but a telescopic function
- HD (Heavy Duty) tines and frame
- High clearance and space in the frame
- LED lights
- Suitable for small tractors
- Never results in negative drawbar load on a SAMSON AGRO slurry tanker
- Low cost
- Low wear and long lifetime on wearing parts

>> TECHNICAL SPECIFICATIONS



>> ST3

Technical specifications		
Model		ST3 450 HD
Working width	[CM]	442
No. of tines/discs	[PCS.]	15
Distance	[CM]	29,9
No. of rows	[PCS.]	3
Row distance	[CM]	55
Ground clearance - frame	[CM]	73
Working depth	[CM]	5-20
Hydraulic horizontal links	[PCS.]	Yes 2 pcs.
Following tool		Harrow
Support wheels	[PCS.]	2 pcs.
Transport width	[CM]	299
Transport height (0,5 m clearance)	[CM]	--
Weight - preliminary	[Kg]	1750
Center of gravity - preliminary	[CM]	83
Power requirement - preliminary	[Hk]	85
Requirements for the slurry tanker:		

- Cat. 3 single acting hitch capable of lifting min. 2.000 kg. Hitch should be able to float when working in the field
- One double acting hydraulic distributor for the telescopic function: 20 L/min at 180 bars. Open to tank in neutral
- One double acting hydraulic distributor for the slurry distributor: 40 L/min at 180 bars. Open to tank in neutral
- One double acting hydraulic distributor for the hydraulic slide valve on the stone trap: 10 L/min at 180 bars
- 6" female Perrot coupling for the slurry connection
- Can be mounted on all SAMSON slurry tankers, both new and old
- 12-24V light connection

Brochure 00000-000