



AUTOSPIRE Standard Equipments


- Rear conveyor (right / left)
- 2m mill, 54 sections
- 3 modes: Silo, Work, Road
- Multi-functional joystick
- Loading rubber conveyor (with moulded V shape)
- Automatic anti-clockwise system
- Rear axle equipped with limited-slip differential
- 2 driving wheels, 2 steering wheels
- Hydrostatically driven mixer
- Fully welded auger 6 knives
- Programmable weighing system X 500
- XPA Display touch control screen


Autospire	120	140	160	180	200	240
Capacity (m ³)	12	14	16	18	20	24
Number of augers	1		2			
Motor	Deutz 156 HP		Deutz 217 HP		Deutz 245 HP	
Number of cylinders	4 cylinders		6 cylinders			
Tank capacity / AdBlue	250 L / 20 L (AdBlue)					
Mill working width (mm)	2000 mm					
Mill diameter (mm)	Ø 625 mm					
Mill power (HP)	129 HP (Classic version) 165 HP (Performance version)					
Silage loading height (m)	5 m					
Distribution height (mm) version 445 / 45 - R 19,5 // 495 / 45 - R 22,5	700 / 800 mm					
Overall height (mm) version 445 / 45 - R 19,5 // 495 / 45 - R 22,5	2780 / 2900	3050 / 3170	2730 / 2850	2930 / 3050	2680 / 2800	2800 / 2920
Overall width (mm)	2550 mm					
Overall length (mm)	8250	8180	9970	9930	10820	10780
Front suspension	Hydropneumatic					
Rear suspension	Parabolic leaves					
Guide wheels	2 or 4					
Wheels drive	2 or 4					
Homologation (Km/h)	25 or 40 km/h					
Unladen weight	11700	12000	13700	14700	15600	15950
Tyres	445 / 45 - R 19,5 - Ø895 mm // 495 / 45 - R 22,5 - Ø 1018 mm					



LUCAS 
focus on performance

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AUTOSPIRE

SELF-PROPELLED VERTICAL AUGER MIXER



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FOCUS ON PERFORMANCE

Reducing feeding and machinery costs is the main way to ensure profitable farming. Joint purchasing of self-propelled silo unloaders with the help of farm machinery cooperatives either as group or individual agricultural holdings is becoming more and more of a strategic approach. On the basis of these observations, Lucas G has created high-performance machinery that is reliable, modern and suited to precision livestock breeding.

From the silo to the feeding alley right through to milk and meat production farmers must be able to measure and have good command of the stages involved to achieve accurate production forecasts.

Lucas G has used the expertise and know-how he has managed to acquire over the last 40 years to make the self-propelled wagon Autospire a machine to meet the required standards.

The stages involved in loading, mixing, distribution and travel have been studied as a whole to find the best possible solution. Speed and efficiency for these different stages are key drivers of farming productivity and reliability. We have carefully chosen the most suitable solutions in order to reduce application time to a maximum, whilst also preserving the nutritional value of the raw materials used for feed.



2 models, 1 ambition : Efficiency



The range of self-propelled wagons Lucas G is composed of six models from 12 to 24 m³. LUCAS G. develops 2 models of self-propelled machine to be close to users expectations and whatever the type of practices.

AUTOSPIRE CLASSIC

Autospire Classic

Reliable and Easy Solutions, these machines are adapted to a daily use. This self-propelled has been developed for individuals.

AUTOSPIRE PERFORMANCE

Autospire Performance

Reliable and Efficient Solutions, these machines are suited to intensive use and long tours.

DIFFERENCE IN DESIGN AND IN FINISH

	CLASSIC	PERFORMANCE
Speed	25 Km/h	40 Km/h
Mill power	129 HP	165 HP
Tank emptying speed (3rd speed)	45 rpm	60 rpm
Front axle / Rear axle (useful load)	12 T / 12 T	12 T / 17 T
Motor / Pump coupling	Direct	Distribution box
Greasing	Point by point	Grouped 3 points
Cut-off plates	Manuals	Hydraulic
Hydraulic offset of the conveyor	Option	Standard
Fan reversing rotation	Option	Standard



High performance and adapted silo unloading

The loading stage is a critical time when preparing mixture, the output rate of the mill must be sufficient and the quality of the raw material preserved.

The mill (165 hp) has a working width of 2 m (625 mm diameter) and is fitted with 54 curved and reversible sections (5.5 mm thick) to ensure that all types of feed can be unloaded.

REDUCED RECYCLED EFFECT

The shape of the mill, coil design and position of cutting sections have been studied for better unloading and to reduce the negative effects of recycling (time wasting and shelling).

The shape and angle of the coil means that the feed material is gathered, recentred and placed in the middle of the conveyor for increased output. The sections are placed behind the coil to cut the produce without upsetting the loading flow.

FINISHING MADE FOR FIBRE

Loading fibrous raw material is known for being difficult and time-consuming, the Autospire can be fitted with a special fibre pack to improve performance for all types of feed material.

- Doubling the number of sections of the mill (108)
- Loading conveyor with straight rubber bars (instead of V moulded shape)
- 8 knives for mixing auger
- 1 neodymium magnet on mixing auger

The loading arm is curved at a height of 500 mm to make the flow of dense products easier

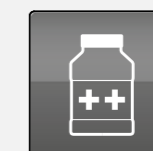
UNLOADING ASISTANCE

PRESERVATING NUTRITIONAL VALUE OF THE DIFFERENT INGREDIENTS.

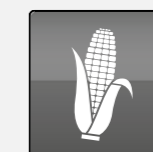
Lucas G has made it possible for the machine operator to predefine the setting for loading according to the type of feed material. Once the mill has been activated, the XPA control screen is automatically put into loading mode.

The mill is also fitted with an unblocking system that is activated before jamming occurs, the captors inform the robot of imminent blocking so that the mill can make half a turn in the opposite direction. This goes unnoticed by the driver who can continue concentrating on loading.

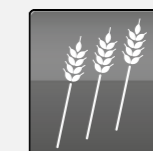
EDITABLE PARAMETERS



Concentrate speed:
50 % maximum.
mill + 40 % max.
conveyor



Silage speed:
80 % maximum.
mill + 80 % max.
conveyor



Fibre speed:
100 % maximum.
mill + 100 % max.
conveyor



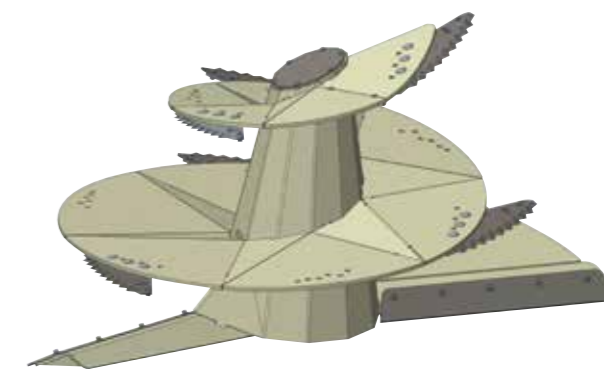
A difference in homogeneity of under 3 per cent for distribution over 60 m.

A STEPPED AUGER TO ENSURE AN AERATED MIX

The Lucas G stepped augers have a unique form which means that the ration can be cut and ventilated by the steps which ensures the rations are blended properly for optimal proportioning.

The augers come is standard issue with 6 knives. It is possible to have 8 or 10 knives for each augers, adjust the angle of attack to increase aggressivity and thus cut the fibre faster. The auger knives have tungsten carbide covering and are reversible so as to last longer.

To speed up the cutting process, the cut-off plates with programmed sequences are inverted to facilitate blocking the fibre at the bottom of the tank.



Homogeneous and quality ration

Material can move easier in a smooth rounded tank because it is not subjected to stress. As a consequence, the ration is mixed naturally and more effectively.

The power required for a mix is reduced to a minimum. The smooth flared shape means that a homogeneous mixture can be obtained faster. The round design of the tank automatically extends the life expectancy of the tank.

3 AUGER SPEEDS TO ADAPT TO EACH PHASE IN THE USING PROCESS

The Autospires are fitted with a series of 3 auger rotation speeds in order to adapt to the different feed material and to ensure distribution speed remains constant. The augers are hydrostatically driven which ensures easy and comfortable use.



- **Smoothing speed**
10 turns/min: speed used for filling the machine better and which means that the rations are ventilated.
- **Mixing speed and distribution**
23 turns/min: speed used to mix the different ingredients that make up the rations whilst always complying with the fibrosity and quality of the livestock feed. This speed can be kept steady throughout the entire loading process without any slump.
- **Fibre speed and emptying**
60 turns/min: speed used for cutting the fibre and for emptying the machine once distribution is complete.



The auger speeds, stepped shape and rolled tank all guarantee optimal mixing time and as a result, reduced consumption. The ration is ready for distribution fast whilst always complying with the raw materials.

Distribution in all configurations



A machine made for road and long tours



DISTRIBUTION

The large size of the distribution conveyor (900 mm x 2400 mm) and the unloading trap door (1200 mm x 800 mm), mean that any jamming linked to fibrous rations can be avoided and a regular swath can be given along the feeding table.



The speed of the conveyor is adjustable to perfectly control distribution. Thanks to the conveyor located at the rear of the machine, the distribution (left or right) is made regardless of space configuration even in dead end feeding alley.

The important delivery height (800 mm) means that the feed troughs can be filled and the conveyor can also be hydraulically offset by 375 mm from left to right.

ALL TERRAIN SELF-PROPELLED

To care for all the animal batches whatever the layout of the buildings, climatic conditions or state of the farmyard, the Autospire has high ground clearance and can be fitted with four guide wheels.

The Autospire self-propelling mixer has been made to carry out daily rounds over distances of more than 70 km.

The machines are fitted with heavy wide tyres and have a 4 disk breaking system for good road holding and optimal safety at 40km/h.

The front hydropneumatic suspension and rear parabolic leaf suspension ensures a comfortable and smooth ride for the driver.

EXCELLENT LOAD SHARING

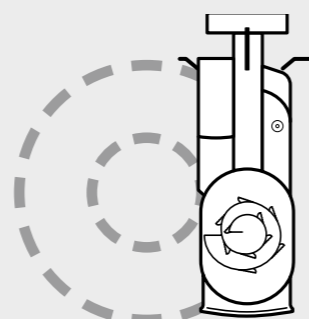
The machine has been designed with an engine that is positioned to avoid losing any of the load carried:

- When empty 55 % at the front and 45 % to the rear
- When loaded 45 % at the front and 55 % to the rear.

The engine is fitted in the middle of the machine on the right side so as to directly power the main parts of the machine. This position limits any loss of the load carried and guarantees responsible and efficient use of the machine.

TECHNICAL CHARACTERISTIC

	120 140	160 180	200 - 240
Turning radius 2 guide wheels	8,7 m	10,1 m	11,5m
Turning radius 4 guide wheels	6,5 m	7,4 m	8,1m
Ground clearance	370 mm	370 mm	370 mm



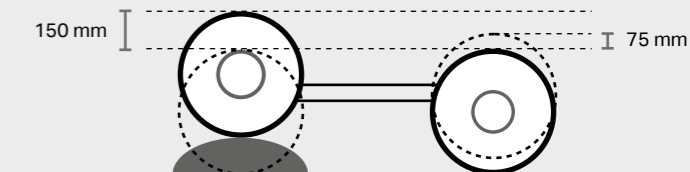
Front steering



Concentric steering

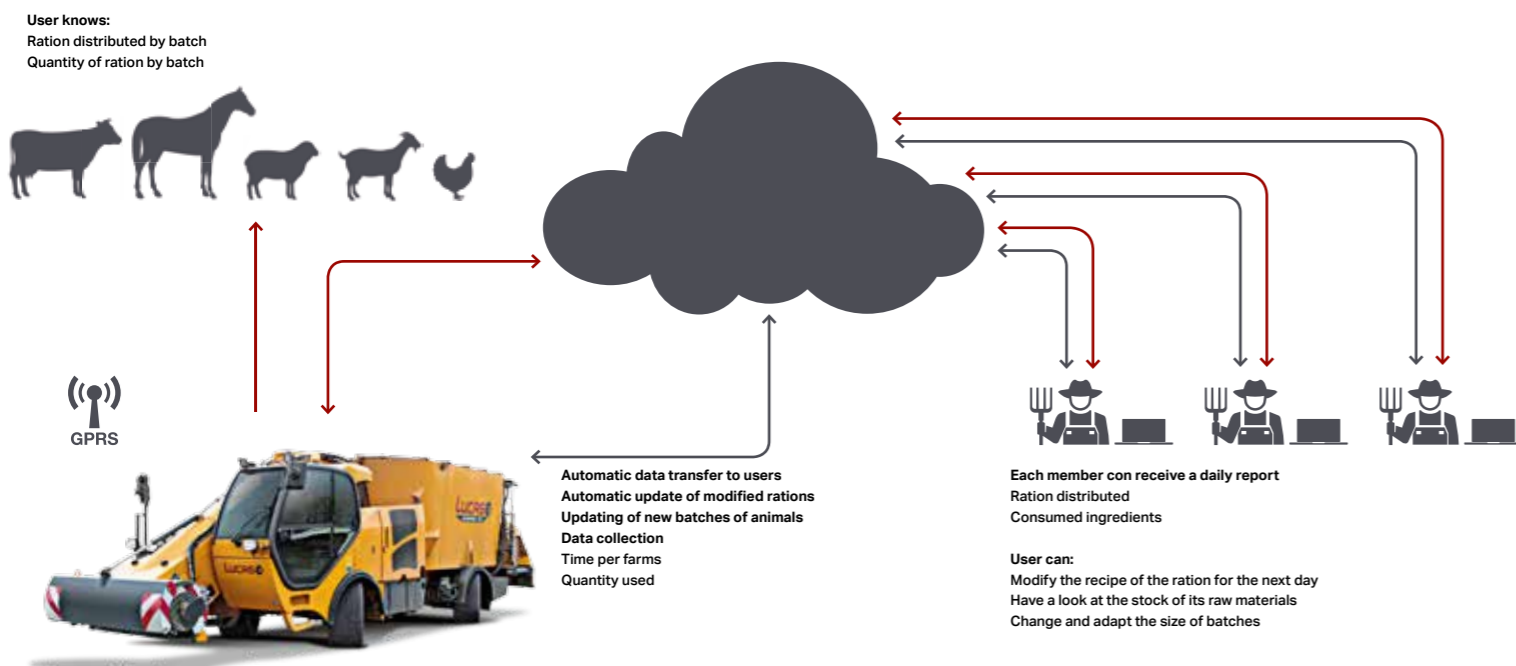


Crab steering



The amplitude of the suspension has been oversized to absorb maximum stress linked to travelling (150 mm at the front / 75 mm tot he rear).

Precision livestock breeding at your fingertips



Maintenance and Comfort



EASY AND FAST MAINTENANCE

The different parts of the machine which require regular maintenance have been positioned to ensure easy access. The engine has been positioned for easy access to oil levels, filters and fans.

To reduce maintenance time, the Autospire has gathered its lubrication points in 3 points to ensure that the machine works correctly. It is also possible to opt for the automatic lubricating terminal for saving time.

XPA DISPLAY - DIAGNOSTIC TOOL

The screen gives in real-time a complete diagnostic of the machine. The periodicity of maintenance may be consulted directly on the screen (engine drain, filter change) to simplify needs of maintenance.



Piloting the machine is carried out by using a single lever with multifunctions to ensure the phases for unloading, mixing and distributing.



With this unique control screen, you can have all necessary information to pilot the Autospire. Most parts of the machine can be programmed to help you during the different work stages:

- Mill speed and loading arm conveyor
- Preparing the ration (repeater function)
- Mixing speed
- Distribution speed
- 4 Cameras for working and driving



AUTOSPIRE CONNECT

CONNECTED AUTOSPIRE

This option fitted into the XPA display screen allows you to collect data in real time via cloud. The Autospire connect identifies, amongst other things, data regarding distribution for each batch of animals, consumption of feed material, times need for each operation, any change in the ration... This system enable the driver to be focus on feeding animals and no longer on calculations and changes of rations.

