

WITH YOU EVERYDAY

LUGASG.COM

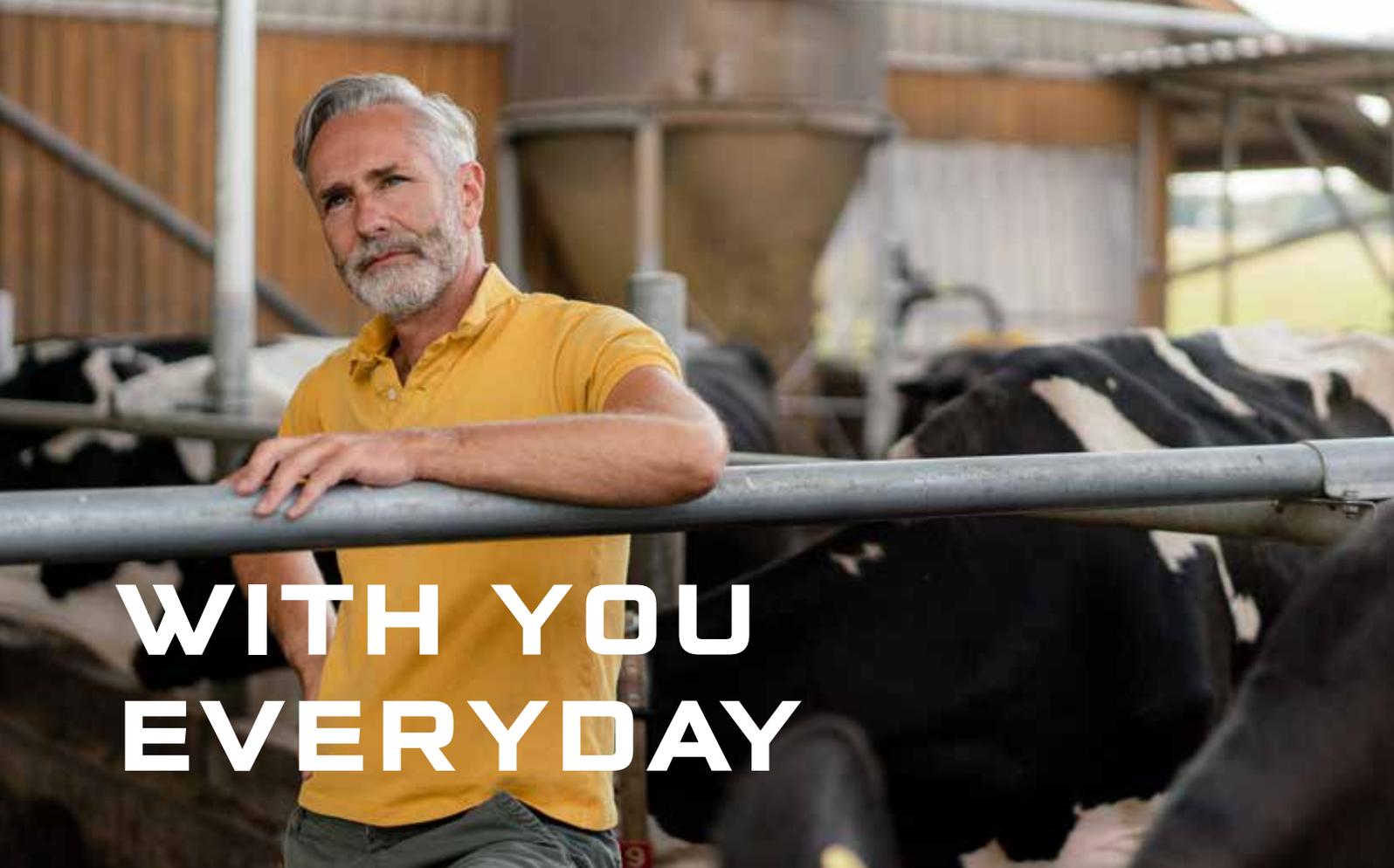
**SPIRMIX S**  
LOWERED VERTICAL AUGER DIET FEEDERS  
**SPIRMIX**  
VERTICAL AUGER DIET FEEDERS



# SPIRMIX SPIRMIX S RANGES



**LUCAS**   
FEEDING SOLUTIONS



# WITH YOU EVERYDAY

**For over 40 years Lucas G have applied feeding and breeding expertise to innovate these machines making them an essential farm asset. Controlling feeding and mechanisation costs are key to farm profitability which is why Lucas G offer a wide range of vertical auger diet feeders to suit particular requirements of precision feeding. 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.**

Going for mixed ration is the first step to meet this requirement and ensures the preparation of an identical ration throughout the year avoiding sorting at troughs. Benefits of mixing are several, an output improvement concerning milking or fattening, a reduction of waste, better control on the operational costs and a return on investment guarantee from the first year of use.

Other benefits link to the use of a diet feeder is that you can control the quantities of raw materials used and distributed per batch per day. After a while of using, an overall improvement of the health state of the cattle is observed, giving a drop of diarrhoea and a better health-based performance.

According to the type of herd and the requirements of the farm, Lucas G offer 2 complementary ranges of diet feeders:

**SPIRMIX: VERTICAL AUGER DIET FEEDER**

**SPIRMIX S: LOWERED VERTICAL AUGER DIET FEEDER**

# 2 COMPLEMENTARY RANGES

## SPIRMIX

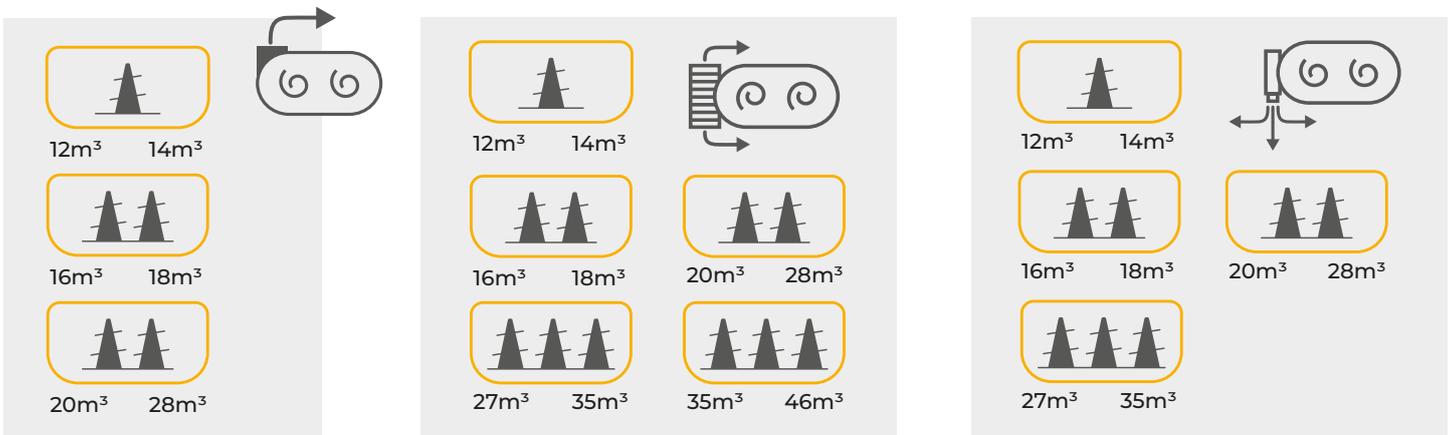


The SPIRMIX feeders are designed for intensive and daily use. These mixers are adaptable depending on the configuration of the farm and the type of livestock. The machines feature a heavy-duty construction and independent axle for better towing characteristics increased longevity.

**Pros:**

- Suitable for all types of farms
- Wide range of options
- Up to 46 m<sup>3</sup> capacity

### CONFIGURATIONS & CAPACITIES



## SPIRMIX S

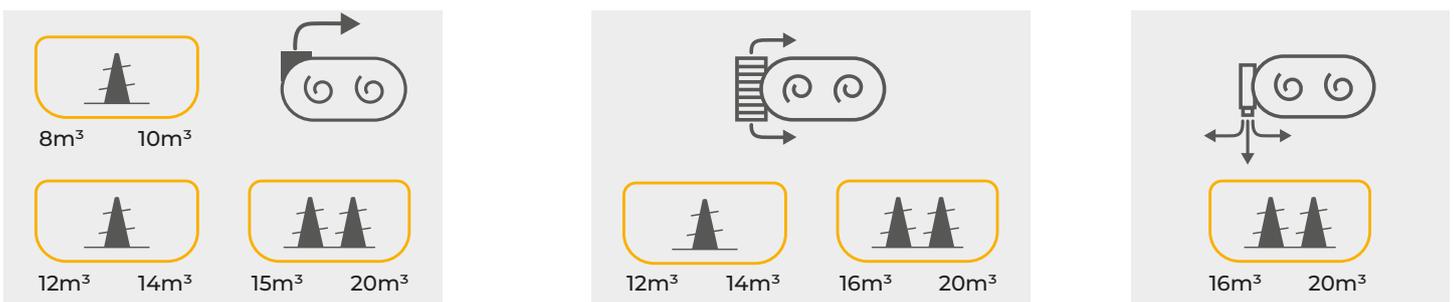


The SPIRMIX S diet feeders have been developed for farms where machine size is an important factor. These machines are compact and manoeuvrable. The rear axle is positioned to provide a very low overall height without compromising manoeuvrability. The lowered machines are ideal for farms where the layout of buildings has height restrictions.

**Pros:**

- Low overall height
- Capacity from 8 m<sup>3</sup>

### CONFIGURATIONS & CAPACITIES SPIRMIX S



# A ROBUST AND RELIABLE DESIGN



## LUCAS G. SKILLS

- 1 A smooth rolled tank.** Lucas G. applies modern manufacturing processes. The tanks are rolled and flared to allow fast and homogenous mixing. This reduces the tractor power requirement to achieve a consistent quality mix.
- 2 Reliable kinematic:** Each auger is driven by a planetary gearbox mounted halfway up the auger for a better stability and to reduce lateral resistance during mixing. These gearboxes are tested for intensive use and are independently protected by shear bolt to prevent damage.
- 3 An anti-overflow ring:** This prevents materials and whole bales from spilling out of the tub during mixing. If there are height issues, the ring can be reverse to keep the initial overall height of the machine.

## BOTTOM TANK REINFORCEMENT

**A long-lasting tank:** All the vertical auger diet feeders are equipped with tank reinforcement which prevents deformation of the feeders. This reinforcement limits pressure on the planetary units and the weigh cells during displacement and loading phases.

### REINFORCEMENT ON SPIRMIX



### REINFORCEMENT ON SPIRMIX S



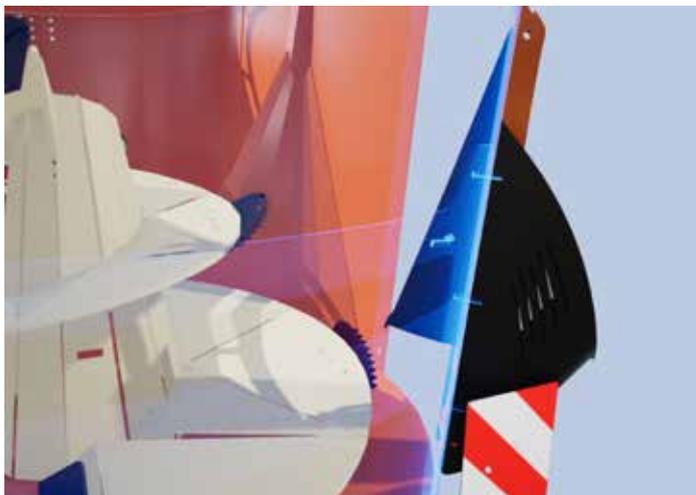
- 4 **Different shapes of extensions:** To change or improve the useful capacity of the machine and its overall height, it's possible to equip straight or conical side-extensions.
- 5 **The SYSTEM X:** The weighing range of solutions and attachments made by Lucas G, (Programmable weighing, repeater on smartphone , remote control...). It guarantees extremely accurate weighing via the weigh cells that are protected and distributed at strategic places under the tank.
- 6 **Tailored distribution modes.** Every farm is unique in its layout and configuration of buildings and feed passages. To meet varying specification Lucas G offer a range of distribution modes. Which includes trap doors, front and rear conveyors with offsets and elevation as well as front mounted blower to distribute rations into troughs.



# A QUALITY MIX WITH HIGH EFFICIENCY

## THE BENEFITS OF A ROLLED TANK

The material moves better in a smooth rolled tank because it is not subjected to various constraints. As a result, 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 of the tank. Aware of the intensive use of diet feeders, the tanks are made from HEL (High Elastic Limit) steel absorbing the stresses related to loading, mixing and to moving the laden machine.



## CUT-OFF PLATES

Mixers are equipped with 2 oversized and manual cut-off plates of 85 cm as standard, they are reversed and located on rear right and front left of the tank side. These cut-off plates are adjustable in 5 positions to speed up the cutting process and to block the fibre at the bottom of the tank.

As an option, it's possible to equip the machine with hydraulic cut-off plates. On straw blower models, these cut-off plates are programmable to achieve the desired material length for feeding or bedding

# A STEPPED AUGER

As standard the 110 cm height augers are fitted with 6 tungsten carbide reversible knives to guarantee an improved lifetime To strengthen knives on the auger, a reinforcement in Creusabro absorbs shocks during bale loading phases. To improve the efficiency of knives on ingredients, it's possible to adjust the angle of knives to reduce the cutting time on fibrous material.

## OPTION FOR AUGERS:

- 8 or 10 knives per auger to increase cutting efficiency
- 30 cm auger height raiser to reduce the height difference between the top of the tank and the top of the auger to ensure an homogeneous mix with diet feeders fitted with height raisers. (Standard on Spirmix 200 S / 260 / 280)
- Neodymium magnet on the auger scrapper to catch ferrous metals.

## AUGER SPEED

- Slow speed used for mixing the ingredients of the ration while respecting the quality and fibrousness of raw materials.
- High Speed used to cut the fibre and to empty the machine at the end of the distribution..



SPIRMIX	Low speed at 540 rpm	High speed at 540 rpm
Spirmix 1 auger	17 rpm	32 rpm
Spirmix 2 augers	19 rpm	36 rpm
Spirmix 3 augers	19 rpm	36 rpm



## OPTIMIZED MIX FOR AN OPTIMUM NUTRITIONAL QUALITY

LUCAS G. knows that it is with quality raw materials that we achieve high nutritional value. The mixture speed should be right, to avoid any risk of overheating and grinding that could spoil the mix. Each Spirmix is equipped with a two-speed gearbox allowing the mixing machine to adapt to tractor powers, even with less available HP. The 2-speed gearbox, rolled tank, and auger design compliment each other to provide the optimum mix more efficiently. The ration is ready to be distributed with maintaining the quality of feed ingredients.

# DISTRIBUTION OPTIONS



## DISTRIBUTION BY TRAP DOORS

Distribution by trapdoor is the most simple solution to use. It is perfectly suited to rations consisting mostly of silage. To offset the ration during the distribution, it's possible to add as an option an automatically folding mechanical flap acting with the opening or closing of the trap door. The mix slides off of the flap on the trap door onto the floor offset by 20cm from the wheel. This system limits the contact between the distributed ration and the wheels. Once the trap door is closed the flap is automatically folded.

As standard, the distribution trap door is on the right side, adaptable to different configurations, it is possible to personalize the feeder with other distribution options:

- Front right trap door 70 x 100 cm
- Rear left trap door 70 x 100 cm
- Central rear distribution trap door for dead end corridors.
- 90 cm elevating conveyor to distribute into troughs.

## DISTRIBUTION BY CONVEYORS

Distribution by conveyor is ideal for fibrous rations. The cross conveyor ensures regular and quick distribution to right or left regardless of the prepared ration. The large width of the conveyor (90 cm x 240 cm) and the discharge trap door (120 cm x 80 cm) prevents jamming problems and gives an even spread along the feed passage. Conveyor speed is adjustable for a perfect control of the distribution. The conveyor can be offset manually by 30 cm or hydraulically by 37,5 cm to the right or left. They are fitted to the front or the rear of the machine to be able to distribute, even in dead-end corridors.

Cross-conveyor options:

- 2<sup>nd</sup> hydraulic motor for left and right side distribution of heavy rations.
- chain and slat conveyor

Spirmix	Height of distribution (mm)	Tank / conveyor offset (mm)
Elevating conveyor 0.9 m	1 180	730
Elevating conveyor 1.2 m	1 340	920
Elevating conveyor 1.5 m	1 600	1 230
Spirmix S		
Elevating conveyor 1 m	1 070	920



# HIGH PERFORMANCE STRAW BEDDING



## STRAW BEDDING & DISTRIBUTION SYSTEM WITH SHREDDER

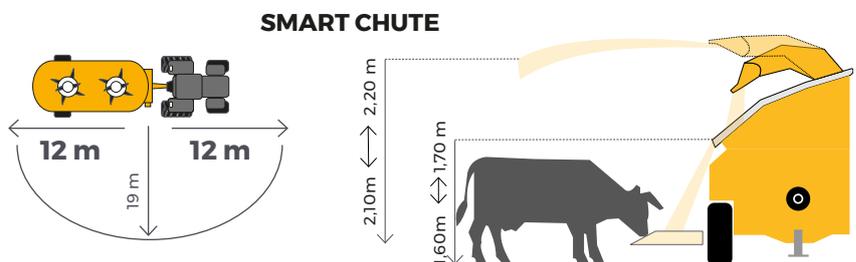
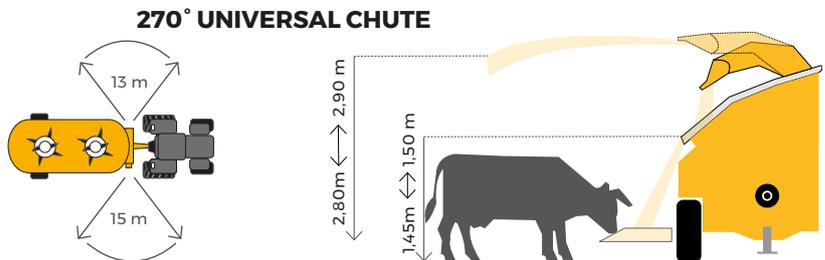
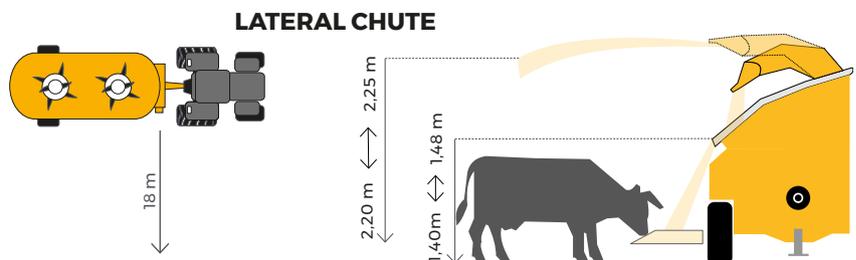
The Spirmix Jet range has a shredder located just before the flywheel, this ensures a smooth distribution of the ration from the fan.

### Performance

Block from the CASTOR range of straw feeders recognized for its reliability and performance, for straw bedding over more than 18 meters. Mechanical shredder with teeth combined with a fixed barrier which feed the material with regularity into the  $\varnothing 1.6$  m welded flywheel fitted with 6 blowing paddles. Chute cut-off plates, ensuring regular distribution, avoiding jamming problems. This system is enabling an accurate distribution directly on the ground or into troughs.

The Spirmix S range of diet feeders do not have a shredder, the chute is used only for straw bedding.

## 3 TYPES OF CHUTES FOR STRAW BEDDING AND DISTRIBUTING



# ELECTRIC CONTROL & WEIGHING



## Spirmix JET Electrical control

For easy control of the fan, the swivelling of the chute and the activation of the cut-off plates.



## Electric control for Spirmix conveyor

Controls the offset and regulates the speed of the conveyor. Control of the trapdoor opening and the activation of the cut-off plates.

# system<sup>x</sup>

## THE PRECISION TO SERVE THE RATION

To measure the costs of the distributed rations, the feeders Spirmix are standard equipped with a non-programmable weighing system X400. Each machine is equipped with protected 3, 4 or 6 weigh cells ensuring maximum stability and accuracy of the preparation of the ration. Depending on the model, functions available include weighing ingredients, managing feed recipes and adapting to number of animals and managing feed data. Tare weight system and skipping ingredient can be remote controlled. The X Management software will give you the possibility to manage your stock of raw material, calculate your feed costs per batch of animals.



## WIDE RANGE OF OPTIONS

Each farm is unique and has its own way of working. In order to meet your needs, Lucas G diet feeders can be customized in many ways to be as close as possible to your expectations.



### Electro-hydraulic speed change

Control the speed of the auger and the fan from the cab..



### Neodymium magnet on the auger

Mounted on the scraper to catch ferrous metals.



### Rear central trap door

Suitable for the distribution in dead end corridors and for the preparation of pre-mix..



### X-Control

Tare weight system and skipping ingredient can be remote controlled

- Scope 25 m.



### Farm chef

Launching program, managing the fluctuation of the numbers of heads from your smartphone.



### Anti-overflow ring

Contains the material, avoid losses and reinforces the tank..



### 270° universal chute -U-

Swivelling bedding / distribution system to straw bed both sides in a single pass.



### Distribution conveyor with hydraulic offset

37,5 cm left or right offset to avoid contact between the ration and wheels.



### Hydraulic cut-off plates

For an even faster cutting process.



## SPIRMIX TRAP DOOR

### Standard Equipments

- Front right trap door
- Mixing stepped auger with 6 knives
- 2 manual cut-off plates

- Not programmable weighing system X 400
- Two-speed gearbox
- Coupling with bolted ring Ø50
- Hydraulic stand (except 120 / 140)
- Manual control

Spirmix Trap door	120	130	140	160	170	180	200	220	240	260	280	
Capacity (m <sup>3</sup> )	12	13	14	16	17	18	20	22	24	26	28	
Equivalent dairy cows	60 - 75	65 - 80	70 - 90	85 - 105	90 - 110	95 - 120	105 - 135	110 - 140	120 - 150	135 - 160	150 - 170	
Number of augers	1			2			2					
Auger height (mm) / knives						1100 / 6					1400 / 8	
Height of distribution (mm)	530			600			650					
Overall height (m)	2,76	2,92	3,03	2,80	2,92	3,10	2,80	2,96	3,13	3,27	3,60	
Overall length (m)	2,61			2,50			2,61					
Width at wheels (m)	2,21			2,05			2,28					
Overall length (m)	4,95		6,32		7,44							
Useful length (m)	3,47	3,52	4,47	4,31	5,90	5,68	5,90					
Tractor Power (HP)	75			90			100			110		
Hydraulic distributor	1			1			1					
Unladen weight (kg)	3710	3830	3890	6110	6210	6310	6860	7050	7140	7500	7780	
Tyres	12,5 / 80 - 15,3 16 PR - Ø 875 mm			445/45 R19.5 Ø895 mm			385 / 55 - R 22,5 - Ø 996 mm					



## SPIRMIX CONVEYOR

### Standard Equipments

- Left / right distribution conveyor
- Mixing stepped auger with 6 knives
- 2 manual cut-off plates
- Two-speed gearbox

- Not programmable weighing system X 400
- Manual offset 300 mm
- Coupling with bolted ring Ø50
- Hydraulic stand
- Manual control

Spirmix Conveyor	120	130	140	160	170	180	200	220	240	260	280	
Capacity (m <sup>3</sup> )	12	13	14	16	17	18	20	22	24	26	28	
Equivalent dairy cows	60 - 75	65 - 80	70 - 90	85 - 105	90 - 110	95 - 120	105 - 135	110 - 140	120 - 150	135 - 160	150 - 170	
Number of augers	1			2			2			2		
Auger height (mm) / knives						1100 / 6					1400 / 8	
Height of distribution (mm)	770			775			830					
Overall height (m)	2,83	2,99	3,16	2,80	2,95	3,10	2,80	2,96	3,13	3,27	3,60	
Overall length (m)	2,50			2,46			2,50					
Width at wheels (m)	2,21			2,05			2,28					
Overall length (m)	5,53		6,86		8,00							
Useful length (m)	3,47	3,52	4,47	4,31	5,90	5,68	5,90					
Tractor Power (HP)	75			90			100			110		
Hydraulic distributor	2			2			2			2		
Unladen weight (kg)	4400	4560	4650	6350	6450	6550	7710	7880	7980	8480	8750	
Tyres	12,5 / 80 - 15,3 16 PR - Ø 875 mm			445 / 45 - R 19,5 - Ø 895 mm			385 / 55 - R 22,5 - Ø 996 mm					





## SPIRMIX CONVEYOR

### Standard Equipments

- Left / right distribution conveyor
- Mixing stepped auger with 6 knives
- 2 manual cut-off plates
- Tandem axle Spirmix 270 / 390

- Not programmable weighing system X 400
- Manual offset 300 mm
- Coupling with bolted ring Ø50
- Hydraulic stand
- Manual control
- Tridem axle Spirmix 420 / 460

Spirmix Conveyor	270	300	320	350	350	390	420	460
Capacity (m <sup>3</sup> )	27	30	32	35	35	39	42	46
Equivalent dairy cows	140 - 170	155 - 180	170 - 200	180 - 210	180 - 210	200 - 240	220 - 260	240 - 285
Number of augers	3			3				
Auger height (mm) / knives	1100 / 6							
Height of distribution (mm)	750			750			900	
Overall height (m)	2,87	3,07	3,17	3,38	2,87	3,08	3,22	3,52
Overall length (m)	2,54			2,85				
Width at wheels (m)	2,43			2,43				
Overall length (m)	9,60			10,70				
Tractor Power (HP)	125	130	135	140	160	170	180	190
Hydraulic distributor	2			2				
Unladen weight (kg)	12500	13000	13250	13500	14000	14500	16000	16500
Tyres	445 / 45 - R 19,5 - Ø 895 mm					445 / 45 - R 19,5 - Ø 900 mm		



## SPIRMIX JET

### Standard Equipments

- Right lateral chute for straw bedding and distribution
- Mixing stepped auger with 6 knives
- 2 manual cut-off plates

- Two-speed gearbox
- Not programmable weighing system X 400
- 2-speed fan with shredder
- Coupling with bolted ring Ø50
- Hydraulic stand
- Electric control

Spirmix JET	120	130	140	160	170	180	200	220	240	260
Capacity (m <sup>3</sup> )	12	13	14	16	17	18	20	22	24	26
Equivalent dairy cows	60 - 75	65 - 80	70 - 90	85 - 105	90 - 110	95 - 120	105 - 135	110 - 140	120 - 150	135 - 160
Number of augers	1			2			2			
Auger height (mm) / knives				1100 / 6			1400 / 8			
Distribution height lateral chute / U (m)	1,44 / 1,48			1,48 / 1,50			1,46 / 1,55			
Straw bedding height lateral chute / U (m)	2,22 / 2,85			2,22 / 2,80			2,25 / 2,93			
Overall height (m)	2,83	2,99	3,16	2,80	2,95	3,10	2,80	2,96	3,13	3,27
Overall length (m)	2,55			2,50			2,55			
Width at wheels (m)	2,21			2,05			2,22			
Overall length (m)	5,74			7,08			8,20			
Tractor Power (HP)	80			90			110			
Hydraulic distributor	2			2			2			
Unladen weight (kg)	4950	5105	5150	7300	7400	7500	8580	8820	8980	9350
Tyres	12,5/80 15,3 / 16 PR Ø 875 mm			445 / 45 - R 19,5 - Ø 895 mm			385 / 55 - R 22,5 - Ø 996 mm			





## SPIRMIX JET

### Standard Equipments

- Right lateral chute for straw bedding and distribution
- Mixing stepped auger with 6 knives
- Two-speed gearbox
- Hydraulic stand
- Electric control
- Not programmable weighing system X 400
- 2 manual cut-off plates
- 2-speed fan with shredder
- Coupling with bolted ring Ø50

Spirmix Jet	270	300	320	350
Capacity (m <sup>3</sup> )	27	30	32	35
Equivalent dairy cows	140 - 170	155 - 180	170 - 200	180 - 210
Number of augers	3			
Auger height (mm) / knives	1100 / 6			
Distribution height with lateral / U chute (mm)	1,44 / 1,46			
Straw bedding height lateral chute / U (m)	2,18 / 2,76			
Overall height (m)	2,87	3,07	3,17	3,38
Overall length (m)	2,58			
Width at wheels (m)	2,43			
Overall length (m)	9,80			
Tractor Power (HP)	140	145	150	155
Hydraulic distributor	1			
Unladen weight (kg)	13450	13950	14200	14450
Tyres	445 / 45 - R 19,5 - Ø 900 mm			



## SPIRMIX S TRAP DOOR

### Standard Equipments

- Front right trap door
- Mixing stepped auger with 6 knives
- 2 manual cut-off plates
- Not programmable weighing system X 400 (except 80 S - 100 S)
- Single-speed box
- Coupling with bolted ring Ø50
- Manual stand

Spirmix S Trap door	80 S	90 S	100 S	120 S	130 S	140 S	150 S	160 S	170 S	180 S	200 S
Capacity (m <sup>3</sup> )	8	9	10	12	13	14	15	16	17	18	20
Equivalent dairy cows	40 - 55	45 - 60	50 - 65	60 - 75	65 - 80	70 - 90	80 - 100	85 - 105	90 - 110	95 - 120	105 - 135
Number of augers	1				2						
Auger height (mm) / knives	1100 / 6						1400 / 8				
Height of distribution (mm)	380			385			440				
Overall height (m)	2,48	2,64	2,80	2,56	2,72	2,89	2,49	2,60	2,75	2,85	3,10
Overall length (m)	2,29		2,52				2,55		3,10		
Width at wheels (m)	1,95		1,90				2,49				
Overall length (m)	4,46		4,81			6,22		4,31			
Useful length (m)	3,10	2,88	3,47	3,25	4,48	4,31					
Tractor Power (HP)	60		75			90					
Hydraulic distributor	1		1			1		1			
Unladen weight (kg)	2900	3060	3090	3600	3700	3790	5600	5700	5800	5900	6180
Tyres	11,5 / 80 - 15,3 14 PR - Ø 844 mm			30 x 11,5 - 14,5 26 PR Ø 710 mm			315 / 80 - R 22,5 - Ø 1074 mm				





## SPIRMIX S CONVEYOR

### Standard Equipments

- Rear distribution conveyor left / right 120 S / 140 S
- Front distribution conveyor left / right 160 S / 200 S
- 2 manual cut-off plates
- 2-speed (except 120 S / 140 S)
- Not programmable weighing system X 400
- Manual offset 300 mm
- Mixing stepped auger with 6 knives
- Manual stand
- Manual control
- Coupling with bolted ring Ø50

Spirmix S Conveyor	120 S	130 S	140 S	160 S	170 S	180 S	200 S
Capacity (m <sup>3</sup> )	12	13	14	16	17	18	20
Equivalent dairy cows	55 - 70	60 - 75	65 - 80	80 - 105	85 - 110	90 - 115	105 - 135
Auger height (mm) / knives				1100 / 6		1400 / 8	
Number of augers	1			2			
Height of distribution (mm)	500			600			
Overall height (m)	2,56	2,72	2,89	2,60	2,75	2,89	3,10
Overall length (m)	2,47			2,55			
Width at wheels (m)	1,90			2,49			
Overall length (m)	5,18			6,88			
Useful length (m)	3,47	3,52	4,47	4,47	4,31	4,31	4,31
Tractor Power (HP)	75			90			
Hydraulic distributor	2			2			
Unladen weight (kg)	4050	4175	4300	6160	6260	6360	6640
Tyres	30 x 11,5 - 14,5 26 PR Ø 710 mm			315 / 80 - R 22,5 - Ø 1074 mm			



## SPIRMIX S JET

### Standard Equipments

- Right lateral chute for straw bedding
- Mixing stepped auger with 6 knives
- 2 manual cut-off plates
- Two-speed gearbox
- Not programmable weighing system X 400
- Front right trap door
- 2-speed fan
- Manual stand
- Electric control
- Coupling with bolted ring Ø50

Spirmix S Jet	160 S	170 S	180 S	200 S
Capacity (m <sup>3</sup> )	16	17	18	20
Equivalent dairy cows	80 - 105	85 - 110	90 - 115	105 - 135
Number of augers	2			
Auger height (mm) / knives	1100 / 6			1400 / 8
Distribution height trap door (mm)	440			
Straw bedding height lateral chute / U (m)	2,19 / 2,80			
Overall height (m)	2,62 / 2,95	2,75 / 2,95	2,85 / 2,95	3,10
Overall length (m)	2,59			
Width at wheels (m)	2,49			
Overall length (m)	7,10			
Useful length (m)	4,47	4,31	4,31	4,31
Tractor Power (HP)	90			
Hydraulic distributor	2			1
Unladen weight (kg)	7030	7130	7230	7510
Tyres	315 / 80 - R 22,5 - Ø 1074 mm			

## OUR TIPS FOR OPTIMUM MIXING

- Check that auger knives are sharp
- Load ingredients in order of density with lighter less dense materials first.
- Load silage from the full width of the clamp
- Load materials in the centre of the mixer
- When required add liquids gradually
- Do not overload the mixer
- See the ration during the preparation
- Do pre-mix



# R&D, AFTER SALES SERVICE & SPARE PARTS : THE SPIRIT OF SERVICE EVERYDAY



Your Lucas G dealer

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FEEDING SOLUTIONS

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