



SFOGGIA 
AGRICULTURE DIVISION

SIGMA 
THE PRECISION PNEUMATIC PLANTER





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AGRICULTURE DIVISION



SIGMA⁵
THE PRECISION PNEUMATIC PLANTER

> **Know-how and advanced technologies**

From 1956, year of its foundation, Sfoggia has been leader in the production of planting, transplanting and hoeing technology and nowadays has a big sale network in Italy and all over the world.

The continuous technology research, strong investments in developing and manufacturing processes, the accuracy in the choice of the material and the year-long experience in this field have characterized the new SIGMA 5, the latest expression of Sfoggia's know-how.

Sigma 5 meets and realizes the user's needs and guarantees the best quality in results and life.

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SIGMA⁵ is the result of constant co-operation between Sfoggia and the final user, therefore is the machine that is closest to customer needs.

- > Excellent strength
- > High quality
- > Accuracy on the components used
- > Accuracy of details
- > Very easy settings
- > Excellent sowing precision
- > Working stability
- > Reliable services at work
- > Accuracy on seeds selection, of seeds spacing and depth control.

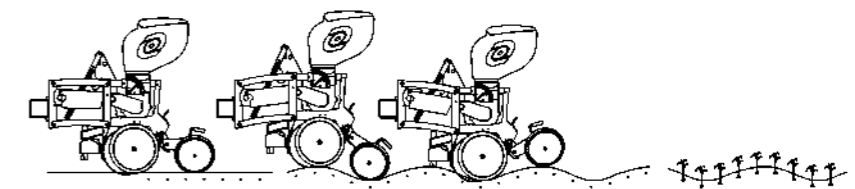
Sfoggia's quality



SIGMA⁵ is the pneumatic planter for minimum tillage and no-till situations even in presence of crop residue. Sigma 5 is the only machine on the market with 2 different transmissions available on the element: Universal Joint or Double Chain.

> The SIGMA⁵ sowing method

The sowing process with the SIGMA 5 method originates in the opening of the sowing furrow made by 2 "V"-shaped discs that create a cleft in the ground where the grains are immediately sown. The 2 big side gauge wheels determine the depth of the furrow and consequently the sowing depth, moreover the internal edge is adherent with the discs thus cleaning them. The position of these wheels, exactly on the axle of the falling point of the seeds, is the key to the precise control of the sowing depth of Sigma 5. An internal falling pipe between the above mentioned discs, with a rounded shape designed especially to follow the trajectory, leads the seed from the sowing disc down to the furrow. A small shoe placed on the inferior base of the two discs perfects the tracing of the furrow where the seeds will eventually be placed. The sowing process terminates with the earthing up operation made by the rear wheels that lightly compress the soil at the sides of the furrow resulting in an excellent contact between soil-seed, and eliminating the air bubbles therefore preventing the creation of superficial crust.



The double discs seeding system with working depth adjustability insured by the lateral gauge wheels insures a constant sowing depth even in extremely difficult conditions. The notable length of the parallelogram arms allows an elevate excursion of the element in order to follow more smoothly the contours of the land.

Applications

- Corn
- Soja beans
- Sugar beet
- Sunflower
- Sorghum
- Sesame
- Bean
- Green bean
- Cotton
- Tomato
- Other by request

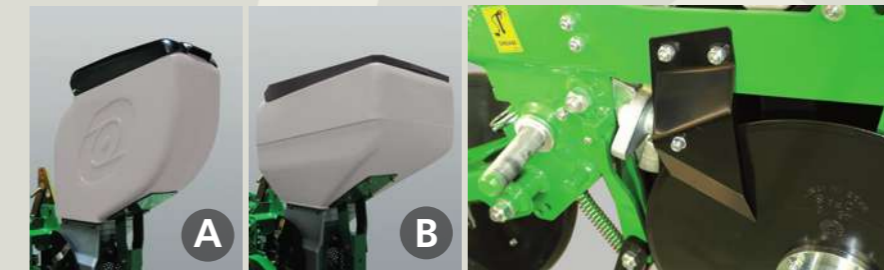


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> **SIGMA 5**
sowing
element

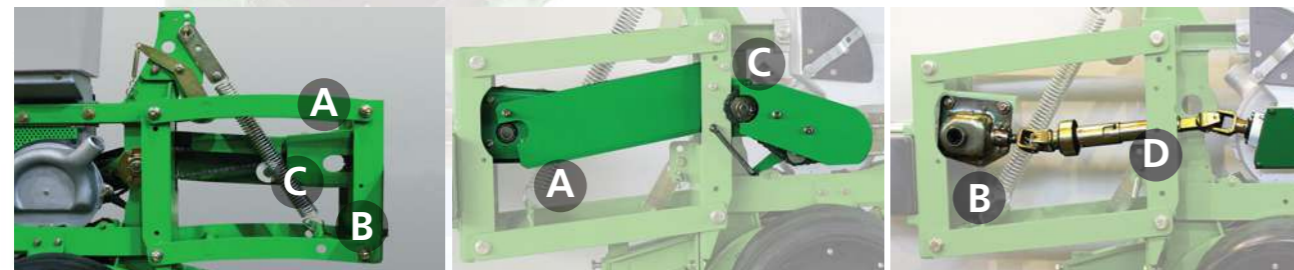
Innovation

The strongest point of SIGMA 5 is the sowing element. The structure of the element is very solid, all components have been over-dimensioned to guarantee maximum strength, excellent stability and long duration. In addition, its 115 kgs weight ensure an optimal adherence on all soil conditions. All the rotating parts are mounted on bearings, while the swinging parts are mounted on self lubricating bushing.



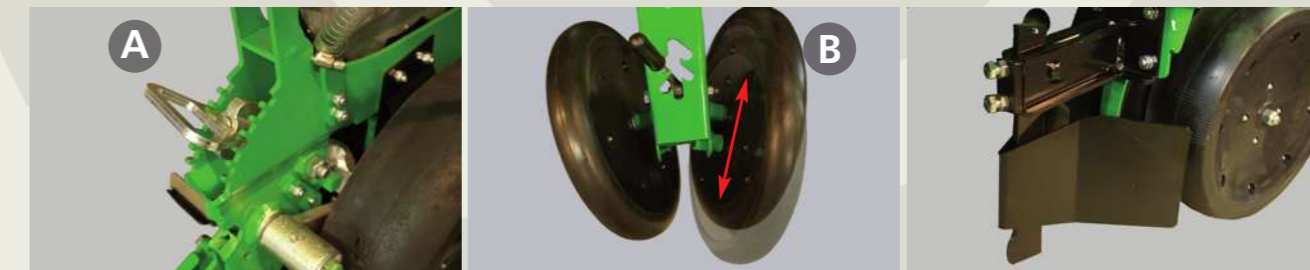
5 30l (A) or 50l (B) seeds hopper.

6 Internal and external mud scraper for furrow discs opener.



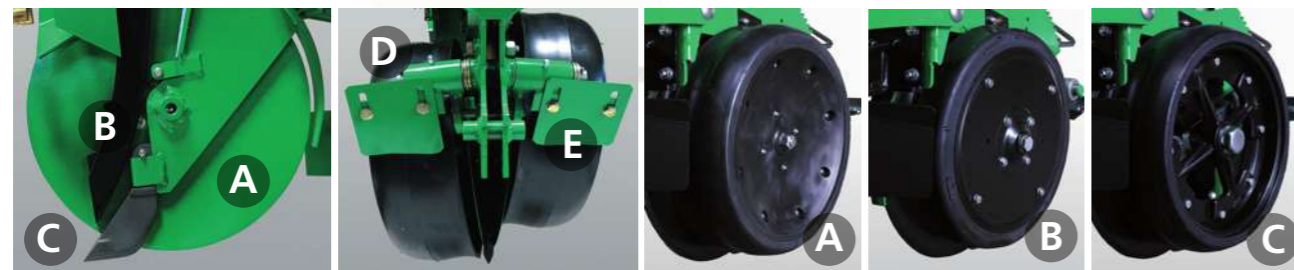
1 The parallelogram arms (A) mounted on self lubricating synthesised bushings (B). Element loading spring (C) to give further pressure in the event the operator should need it.

2 Double chain transmission (A) and universal joint (B). Both solutions guarantee a constant rotation of the sowing disc, therefore a regular distance between seeds, even in the presence of different land levels. The drive chain is 1/2", very strong and widely available on the market if needed as spare-part. Manual rapid disconnection of the element: by a split pin on the gear of the chain transmission (C) or by bayonet on the universal joint (D).



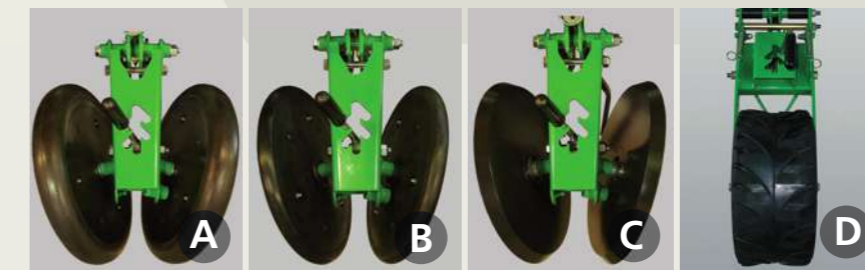
7 The hand levers for the adjustment of the sowing depth (A) and compression pressure (B) allow the user to quickly and intuitively change the machine setting. The same setting can easily be reproduced on all the elements. These devices are not influenced by dust and dirt. The compression wheels group is independent from the sowing element; it can swing to easily follow the profile of the soil.

8 In height adjustable clod pusher, with adjustable independent coulter.

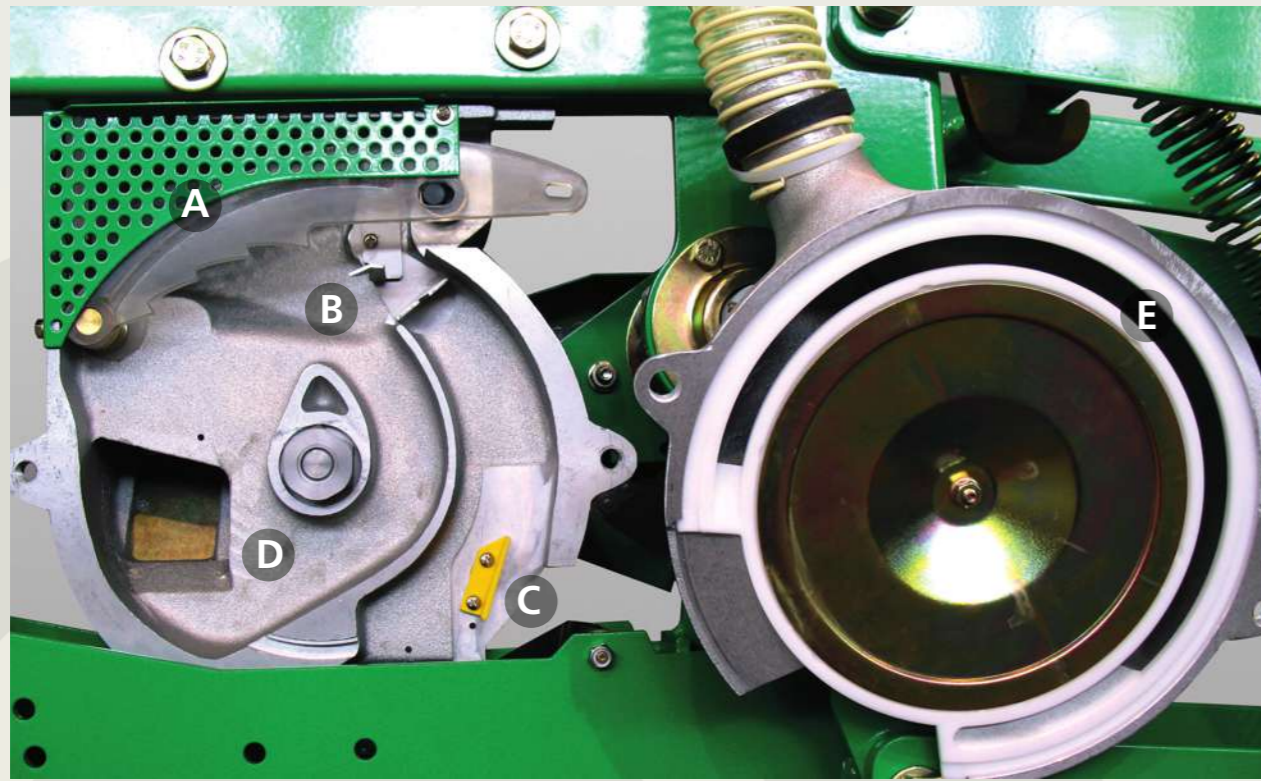


3 Double discs furrow opener (A) mounted on bearings. Pvc seed falling pipe (B) specially shaped in order to lead the seeds until they reach the soil. The seeding shoe (C) has a rounded shape to avoid the clinging of cultivation residue.

4 The working depth gauge wheels are independent and assembled on a swing-wheel, to guarantee a constant adherence to the soil and a perfect sowing depth control especially in presence of stones or other stubbles that could raise the element. Large (A) and narrow (B) depth gauge wheels; spoke wheels (C). The support arms of the depth adjustment gauge wheels are mounted on interchangeable bushings (D) and are equipped with mud scraper (E).



9 Choice among "V" shaped self cleaning compression wheels 2"(A), 1"(B), steel (C) and rubber farmflex (D).



> SIGMA 5 sowing body **Reliability**

The SIGMA 5's heart is the sowing body. It has been built up on an aluminium base that makes it non-deformable, insensible to temperature variations, strong and light always guaranteeing the same sowing precision even after many years. Very important characteristics are also the low levels of internal attrite and the very low maintenance required. The Sfoggia sowing body translates fully any requests of the final user.

With this sowing body and with the unique and innovative selector the user can sow any type of seed, from the largest to the smallest, even vegetables, from perfect rounded shape seeds or to the most irregular that can be found in nature. Users can do all these things with sustained working speed.

The rounded shape 4 teeth selector (A) makes an easier and more precise selection of the seed to avoid missing or double seeds. The seeds rotating pin (B) turns the seeds which are going to be positioned in the point inside the hole of the disc to avoid breakage and permit a regular spacing. The seeds detachment pin (C) helps the seed to leave the sowing disc and fall down exactly in the time when the vacuum ends, and it guarantees perfect precision between seed distance. The axel of the disc (D) with an hexagonal section is mounted on ball bearings. The Teflon gasket of the sowing disc (E) keeps the sowing body airtight and it is easy to change.



> SIGMA 5 complements



2nd and 3rd category 3 point hitch with quick connection device. 3rd category point hitch for big machines.



Gearbox with 42 speeds with steel gears and rotation axel on double bearings.



Really silent vacuum fan with an elevate power, can feed up to 18 rows, with a 540 RPM P.T.O. shaft (750 RPM or 1000 RPM if requested). On the fixed frame version from 12-row corn up to 18-row for sugar beet and for all telescopic versions Sfoggia uses a metallic collector.



Normal tractor wheel 5.00-15 (A) and oversized 6.5/80-15 (B) all with series mounted drumming device.



> **Patented Volumetric distributor for fertilizer and microgranulator**



> **SIGMA 5 options**

Volumetric distributor with 220l pvc hoppers, Stainless steel fertilizer hopper of 800l or 1000l with level inspection windows and centralized adjustment handle. All parts with permanent contact with fertilizer are made in anti-corrosion material.



Fertiliser coulters opener (A), curled shape (B) and "V"-shaped double disc opener (C).

Patented volumetric distributor for fertilizer with helicoidal roller, with the possibility to have a quick opening for inspecting and cleaning.

The patented volumetric distributor for microgranulator and fertilizer is right now the most trustable and reliable system to distribute the chosen product. The helicoidal roller of a special plastic material makes a continuous flux and a very precise dosage independently of the product that will be used. The distributors are easy to clean and check.



Microgranulator hoppers of pvc of 20l and 2 exits, of 10l and 1 exit.

> **Configurations of the sowing element for tough working conditions**



Floating front clod pusher for stony soils.

Rotary residue spreader for soil with agricultural residua.

Micro-plough opener disc.

Toothed opener disc for hard soil with long residual.

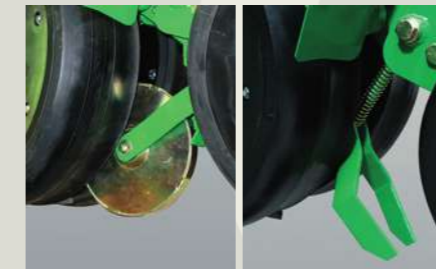
"Turbo" opener disc and rotary residue spreader.

Small compression double discs

Flexibility

SIGMA 5 can be equipped with different option to better fit to any soil condition

> **Germination supporting devices**



Small seed pressing wheel, available in farmflex rubber or inox, mounted on dust-tight bearing with antidust protection. The advanced placing, very close to the position where the seed is sown in the soil allows the seed to be fixed immediately in the soil. The small wheel support is equipped with a device for its disconnection.

The earth-up hoes make the job of the compression wheels easier as they convey a regular quantity of soil regulated by spring over the planted row. The support is equipped with a device for its disconnection.

> **Tractor wheels**



Front tractor wheel "Bobcat"

Floating tractor wheel equipped with spring (normal or oversized wheel) for uneven soils



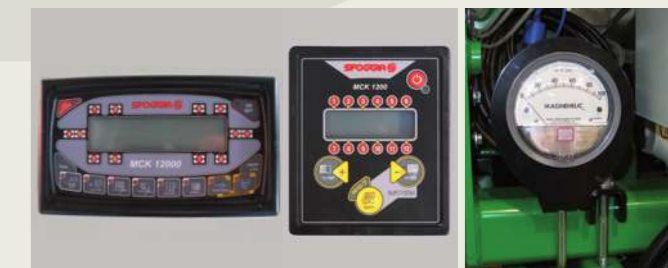
Floating tractor wheel adjustable in height through handle (normal or oversized wheel).

> **Sowing disconnection device**



Sowing disconnection device (option) with control panel and alert leds (A) and cylinder(B). The disconnection automatic device used on the SIGMA 5 is extremely simple and functional, it can work in all conditions, dry, wet, with dust and in case of breakdown it allows the machine to continue sowing.

> **Electronic seeding control devices**



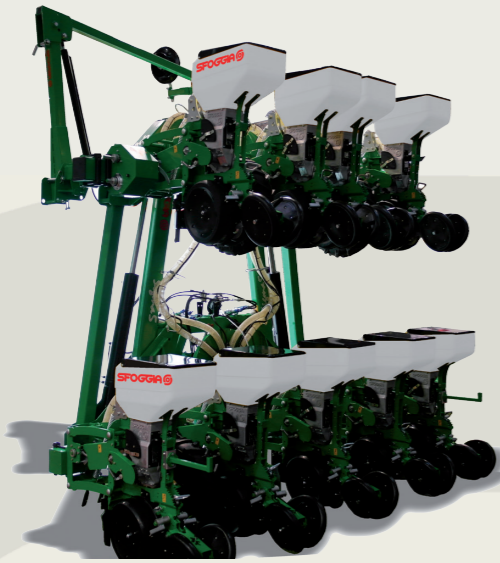
Electronic seeding control device (option) with seeding control, partial and total hectare counter, seed counter, speed indicator, seeds/ha investment indicator, and other options.

Vacuum gauge (option).





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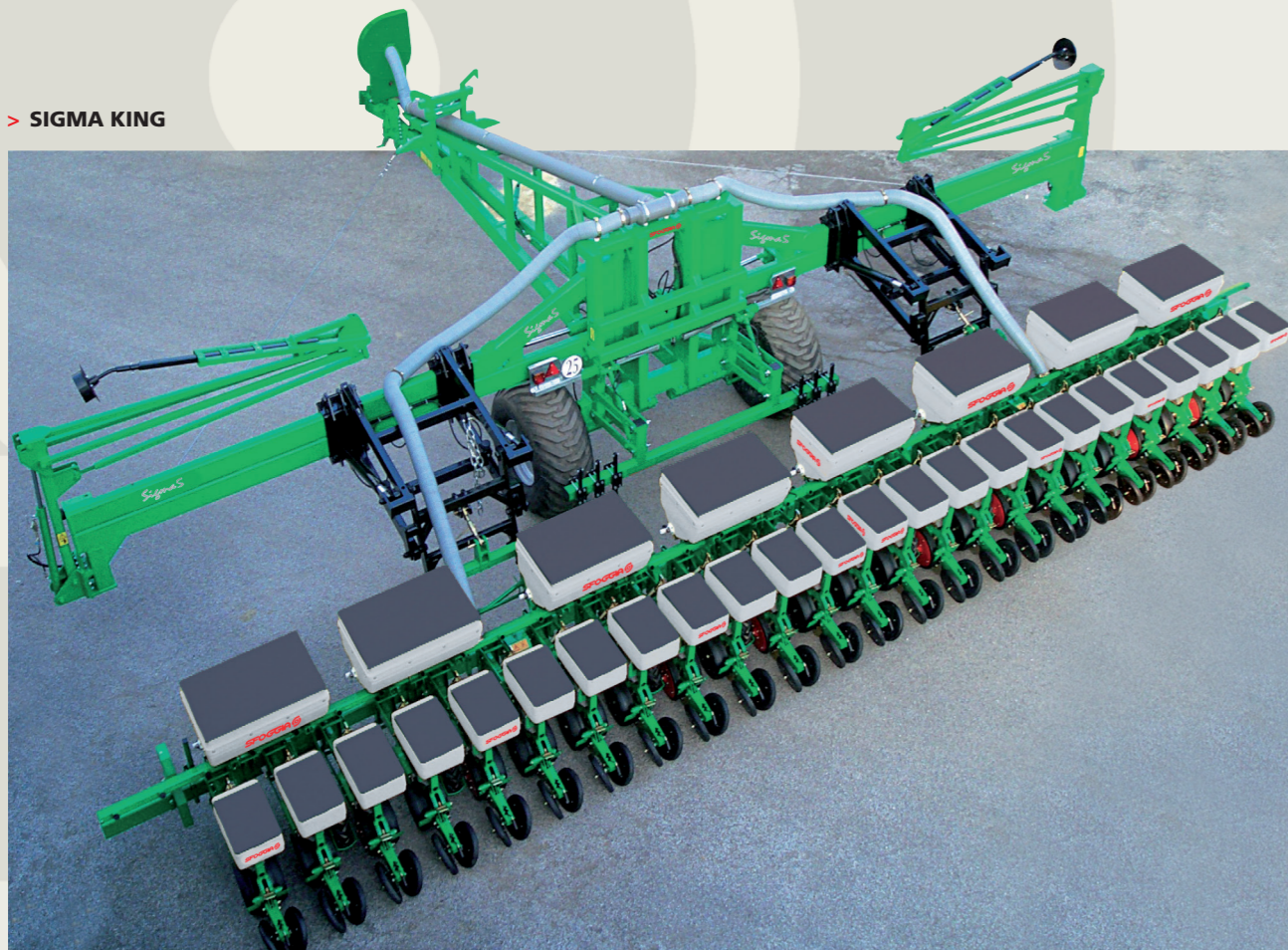


SIGMA 5 is available with different type of frames: fixed, telescopic, hydraulic foldable frame, trailed tool carrier with foldable arms.

> SIGMA 5 frames

Universal Spirit

> SIGMA KING



> SIGMA 5 fixed frame



> SIGMA QUEEN



> SIGMA 5 telescopic frame



> SIGMA 5 with hydraulic foldable frame



> SIGMA 5 fixed frame with trailer.





> Technical features

Standard equipment

- > Hydraulic row-marker
- > Prop shaft with free wheel
- > Lights kit and road tables (for frame up to 3,2 m)
- > PTO shaft 540 RPM
- > Front clod pusher
- > 30l or 50l seeds hopper
- > Large 400x115 depth adjustment gauge wheels
- > Choice of rear compression wheels: Rubber "V" shaped compression wheels 2", Rubber "V"-shaped 1", Steel "V"-shaped, flat of rubber farmflex.
- > Set of sowing discs
- > Mud scraper on the furrow opener discs
- > Mud scraper on depth gauge wheel
- > Transmission to the element by Double Chain or Universal Joint

Options available ¹

- > Volumetric fertilizer
- > Pneumatic fertiliser
- > Volumetric microgranulator
- > Double volumetric micro-granulator
- > Small compression wheel of rubber farmflex or inox
- > Covering scrapers
- > Mechanical or electronic Hectare counter
- > Vacuum gauge
- > Sowing efficiency Monitor
- > Disconnection row device
- > PTO shaft 1000 RPM
- > PTO for the spraying unit
- > Track remover with double plough
- > Sowing Furrow opener disc: straight / turbo / toothed
- > Floating clod pusher or rotary residue spreader
- > Depth adjustment narrow gauge wheels
- > Curled furrow opener or "V"- shaped double disc opener for fertiliser
- > Small double compression discs
- > Front "Bobcat" transmission wheel
- > "tractor" shaped transmission wheel
- > Auger for fertilizer loading
- > Sowing discs
- > Transport trailer

¹ depending on the compatibility with the model.

TECHNICAL DATA	TYPE OF FRAME	CORN - SUNFLOWER - COTTON										SUGAR-BEET - SOYA								
		FIXED					TELESCOPIC	HYDRAULIC FOLDABLE		QUEEN	KING	FIXED			TELESCOPIC	HYDRAULIC FOLDABLE		QUEEN	KING	
		U.M.																		
NUMBER OF ROWS		2	4	6	8	12	16	6	8	12	16	16	6	12	18	7	8	12	24	24
FRAME WIDTH	m	2,0	2,55 / 2,7	4,2	5,8	9,0	12,0	4,2	5,5	8,5	12,0	12,0	2,55/2,8	5,5	9,0	3,2	3,6	5,1 / 5,85	12	12,0
WIDTH OF THE MACHINE WHEN COMPLETELY CLOSED-UP	m	2,0	2,55 / 2,7	4,2'	5,8'	9,0'	12,0'	2,7 / 3,2	2,55 / 3,00	4,2	3,0	5,7	2,55 / 2,8	5,5'	9,0'	3,0	3,2	2,55 / 2,8	3,0	5,7
INTER-ROW	cm	70/90					70/75	70/80		70/75		45/50								
SEED CAPACITY	litres	60 / 100	120 / 200	180 / 300	240 / 400	360 / 600	480 / 800	180 / 300	240 / 400	360 / 600	480 / 800	480 / 800	180 / 300	360 / 600	540 / 900	180 / 300	240 / 400	360 / 600	720 / 1200	720 / 1200
FERTILIZER CAPACITY	litres	220	440/800/1000	880/1600 / 2000	1760	440/800/1000	880	1760	1760	440/800 / 1000	880/1600 / 2000	1320/2400 / 3000	-	880	1760	1760				
WEIGHT ²	Kg	400	800	1200	1600	2100	2700	1200	2100	2800	6200	1200	2100	3200	1400	1600	2700	7200	7200	
MINIMUM POWER	Hp	40	60	80	100	150	180	90	110	150	280	230	60	140	220	90	110	140	300	240
	Kw	29	44	59	74	110	132	66	81	110	206	169	44	103	162	66	81	103	220	176
WORKING SPEED	Km/h	8/10																		
	RPM	540/1000 ³																		

¹: 3,2 M WITH INTEGRATED HYDRAULIC TRAILER / 2,5 M WITH SEPARABLE TRAILER KIT - ²: WITHOUT FERTILIZER - ³: AS PER CUSTOMER REQUEST

	NUMBER OF HOLES	DIAMETER HOLES	DISTANCE BETWEEN SEEDS			NUMBER OF HOLES	DIAMETER HOLES	DISTANCE BETWEEN SEEDS	
			MINIMUM	MAXIMAL				MINIMUM	MAXIMAL
			cm					cm	
CORN	26	4,5+5,5	7,9	37				mm	
SUGAR-BEET	52	2,1	3,9	18,4	RAPE	70	1,1	2,6	13,3
SOYA	70	4,25	2,6	13,3	TOMATO				
SUNFLOWER	26	2,5	7,9	37	FENNEL				
COTTON	70	3,5	2,6	13,3	BEAN	36	5,0+5,5	3,9	26,6
CABBAGE	36	1,1	3,9	26,6	GREEN BEAN	36	3,5	3,9	26,6
SORGO	102	2,1	2,2	10	PEANUT	36	6,5	3,9	26,6
					PEA	52	4,5	3,9	18,4

Technical datas and models shown in this leaflets are not binding. Sfoggia Agriculture Division Srl reserves the right to revise the content without notice.





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