Ref.: 2098760086-22-EN

EN

JOSKIN®

SLURRY SPREADING

A CONCENTRATE OF TECHNIQUE!

www.joskin.com

6 KEYS
to Success

1

STRENGTH OF EXPERIENCE

With over **50 years of experience** and over **120,000 machines sold** throughout the world, **JOSKIN** puts its resources at the service of the farmer by offering products adapted to the evolution of the agricultural world. To see through this mission, we are constantly investing in the design and production of your machines. Either in the research and development of new solutions, in production techniques or in the search for better materials, we are working hard to keep improving the production standards in order to offer you the best agricultural machinery.

2

TECHNICAL SKILLS WITHIN

To meet your requirements for agricultural machinery, we opt for **high-quality materials** and our factories are equipped with **state-of-the-art precision tools**. We use, among other things, 3D dynamic simulation, automated cutting lasers, press brakes, high tensile steel, hot-dip galvanising (galvanising unit of the **JOSKIN** Group), automated continuous welding (performed by robots), robotic machining, etc. Mastered technology and knowledge **for an uncompromising quality**.

3

BUY WITH CONFIDENCE

All products manufactured by **JOSKIN** have a **3-year warranty** against manufacturing defects, which includes 1 year on everything, followed by 2 years on parts manufactured by **JOSKIN**. Thanks to the chassis number, **JOSKIN** guarantees a perfect traceability of its machines in order to always find the necessary parts in case of repair. **JOSKIN** is one of the only manufacturers in the agricultural industry to offer such a long warranty period, without limitation of hours or wear, as well as an individualised parts book for each machine.

4

RESEARCH AND DEVELOPMENT

In order to efficiently and quickly face the constant evolution of your needs regarding agricultural machinery, **JOSKIN** has a **multidisciplinary team** made of engineers, draughtsmen and field workers, who focuses daily on the research and **development of innovative solutions**. State-of-the-art dynamic three-dimensional engineering software helps the team to the research and development of ever more efficient machines. The production is standardised to the maximum in order to guarantee a precise and reliable manufacturing over time, while offering hundreds of options!

5

AT THE SERVICE OF OUR CUSTOMERS

Victor Joskin, founder of the **JOSKIN** brand, has always considered the spare parts as the nerve centre of the Group: without spare parts, no repair possible. Given **the permanent stocks of spare parts**, we guarantee their availability even years later, which will secure the value of your machine through time. Either regarding the pre-sales advising or the after-sales service, we are working hard to ensure you an experience that meets your expectations.

6

INDIVIDUALISED PARTS BOOK

Each machine has its own individual parts book. Indeed, at **JOSKIN**, the parts book and the user's manual are supplied with your purchase. They are also available at any time online via the book icon (📖) on the **JOSKIN** website (www.joskin.com). They include the drawings and part numbers of the components fitted to your machine so that, even years later, you can order spare parts efficiently. The parts book therefore guarantees that your equipment will be of **undeniable value over time**.

SLURRY SPREADING

A CONCENTRATE OF TECHNIQUE!

*From the easiest to the most technological one, the **JOSKIN** slurry tankers cover all needs and meet a high level of requirements regarding quality, efficiency and safety. As a result of this quality guarantee, more than 40,000 **JOSKIN** tankers have already been sold to the four corners of the world.*

*The **JOSKIN** range of slurry tankers includes 9 models with 60 versions designed to satisfy any farmer and agricultural contractor looking for a proven, modern and efficient machine. With 1, 2 or 3 axles, their capacity ranges from 2,500 to 28,000 litres. Their components are mass-produced, thus providing a reliable machine and a fast and efficient spare parts supply service.*

***JOSKIN** slurry tankers are sturdy, easy to maintain, modular and can evolve over time thanks to a catalogue of 900 options. In combination with a **JOSKIN** spreading implement, they offer working comfort and spreading accuracy regardless of the size of your field.*

*The choice of the spreading equipment is indeed essential to increase the efficiency of organic fertilisers, and therefore the yield of crops and grasslands. To ensure a high efficiency, it is essential to use the appropriate equipment in order to reduce as much as possible volatile losses during spreading (the percentage of losses can reach a 100 with an inappropriate implement). The programme of **JOSKIN** spreading implements offers a solution for injection in grasslands (with discs, skids or shares), in crops (with rigid or spring tines and discs) or spreading with booms.*

To access a maximum of exclusive content (videos, photos...), this brochure includes "QR codes".

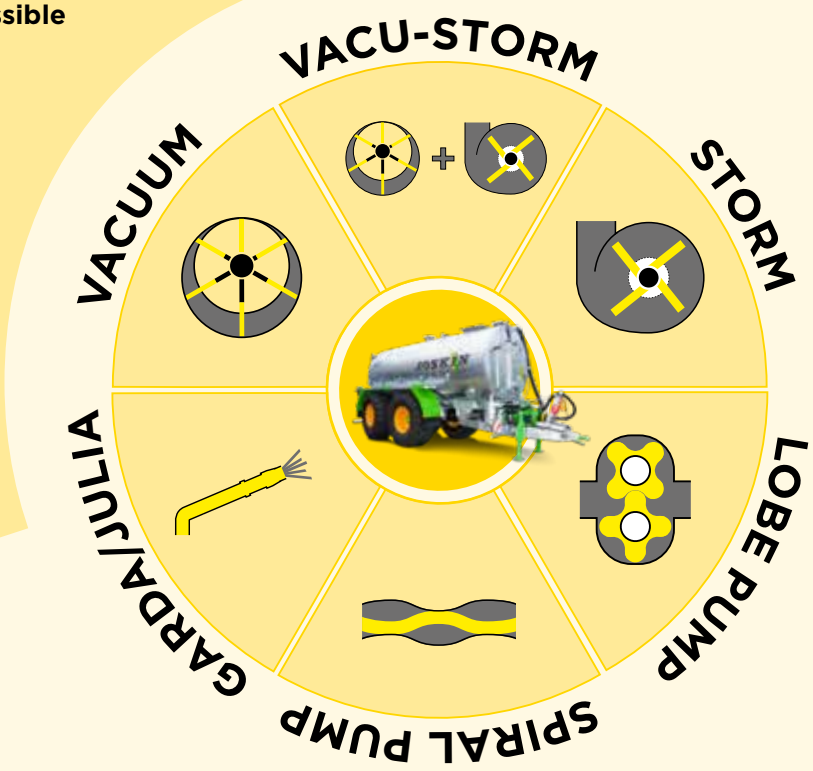
How to use them? Nothing easier...

- Download a free "QR code" application from the App store or Play store (if your smartphone does not automatically have a "QR code" scan).
- Scan/take a picture of the QR code.
- Surf and enjoy.

PUMP SYSTEMS

HOW DO I CHOOSE THE RIGHT TYPE OF PUMP?

JOSKIN offers several categories of pumps designed for different uses and conditions. The following pages will guide the user in order to make the **best possible choice according to his/her needs**.
Once the pump has been chosen, it is essential to determine the capacity and the number of axles of the tanker as well as the spreading implement adapted to the use that will be made of it. In terms of slurry spreading, **JOSKIN** offers a wide and complete range to meet the demands of all types of farmers: from small farms to agricultural businesses and biogas plants.



VACUUM

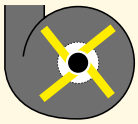
The vacuum system creates an atmospheric pressure difference between the inside of the tank and the surrounding air. By creating a vacuum, the slurry can be sucked up. In the spreading phase, the principle reverses: the tank is pressurised to expel the slurry. This means that the pump does not come into contact with the liquid being sucked in/discharged and therefore **does not encounter foreign materials**.

- ⊕ *Very good price/efficiency ratio*
- ⊕ *Low wear as there is no contact between the slurry and the pump*
- ⊕ *Low maintenance costs*
- ⊕ *User-friendly system*
- ⊕ *World's most widespread system*
- ⊕ *Suitable for many pumping situations*

VACU-STORM

The Vacu-Storm system combines the effects of a vacuum pump on the suction side and a centrifugal pump (Storm) on the discharge side. It is an ideal solution for users looking for **flexibility and high performances**. The vacuum system is suitable for many pumping situations (underground or off-ground pits, funnel, etc.). The centrifugal pump (Storm), designed to feed the rear implement, allows spreading over large widths with a high and constant flow rate. Placed under the tank with the stone trap, it ensures a smooth and even feeding of the slurry, while reducing maintenance to a minimum.

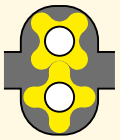
- ⊕ *Flexible: suitable for all pumping situations*
- ⊕ *Stone trap protecting the pump from foreign materials*
- ⊕ *Possibility to mix the slurry in closed circuit*
- ⊕ *Efficient: possibility to spread over large widths*
- ⊕ *High and constant slurry flow*
- ⊕ *Easy and low-cost maintenance*



CENTRIFUGAL PUMP (STORM)

The Storm system propels the slurry out of the pump by the centrifugal force created by the rotation of a screw inside an eccentric pump body. This pumping mode allows **higher flow rates** to be achieved. At 750 rpm, a flow rate of 6,000 l is achieved, while at 1,000 rpm, it rises to 11,000 l. As the Storm pump only works on the discharge side, filling is done by gravity via an upper hydraulic door, for example. As an option, a 3-way valve can be fitted at the front of the tank to mix the contents in a closed circuit.

- *Very high and linear slurry flow*
- *Limited wear and low maintenance costs*
- *Possibility to discharge/spread thicker slurry*
- *Output pressure of over 1 bar for a good distribution on a large working width*
- *Stone trap protecting the pump from foreign materials*
- *Possibility to mix in closed circuit*



LOBE PUMP

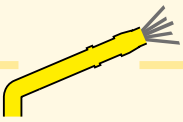
This system uses the mechanical action of 2 lobe rotors whose rotation creates a vacuum on the suction side to draw the slurry into the pump body. The liquid is then carried along the rotor wall by the lobes and discharged on the other side. This pump does **not take much place even if it has a high capacity**. With an output pressure of over 1 bar, a good distribution at a high working width is guaranteed, even under difficult conditions. In addition, it is equipped with an automatic stop system (optional on Tetraliner) and wear rings.

- *High suction/discharge flow*
- *Possibility to suck up thick slurry*
- *Compatibility with long suction hose lengths*
- *High suction depths possible*
- *Compact pump*

SPIRAL PUMP

The spiral pump uses the mechanical action of an eccentric screw to suck in and discharge the slurry. The rotation of the screw inside the stator creates a series of hermetic chambers that move along the suction/discharge axis. When filling, the pump will suck the liquid up to its height and then push it into the tank. This pump can **suck and discharge thick slurry, even through long pipes, as well as carry out transfers from one pit to another**. A 3-way valve allows to mix in a closed circuit.

- *High suction/discharge speed*
- *Possibility to suck up thick slurry*
- *Compatibility with long suction hose lengths*
- *High suction depths possible*
- *Standard equipment for mixing in closed circuit and transfer from one pit to another one*
- *Easy and low-cost maintenance*



GARDA/JULIA

The Garda/Julia system with mechanical drive combines **2 pumps: centrifugal and vacuum**. The first one sends the slurry at a pressure of 6 bar to a spreading gun, the umbilical system of a spreading implement or a return hose to the tank (optional), all depending on the chosen configuration. The second one is used to fill the tank and empty it using a traditional spreading device. A mechanical selector (hydraulic as an option) allows you to choose the desired pump.

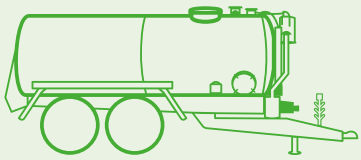
- *Versatile (centrifugal or vacuum pump)*
- *Centrifugal pump: high-flow discharge for spreading gun (slurry and irrigation)*
- *Vacuum pump: traditional spreading*
- *Ideal for irrigation works*
- *Ideal for steep areas with difficult access*
- *Low maintenance costs*

TetraX2 16000S

Tetraliner 28000RL & Euroliner 28000TRS

JOSKIN

SLURRY TANKERS



SCAN ME

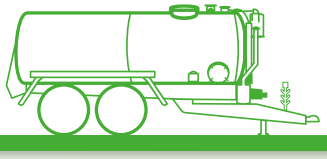
Modulo2 12000MEB

Volumetra 26000T

Cobra2 13100SX

X-Trem2 18000D

GENERAL POINTS



DESIGN

More than 1,500 tanks are manufactured each year within the **JOSKIN** Group. By means of 4 digitally controlled bending rolls, tank sections with a diameter up to 2.3 m are produced. These high tensile steel tanks are then hot-dip galvanised (inside and out) for a **durable protection against corrosion**. Each slurry tanker is individually manufactured on the basis of standardised components according to buyers' expectations and requirements for an improved spreading efficiency. **JOSKIN** tankers are also built according to the EN707 safety standard requiring baffles to prevent uncontrolled movement of the liquid for a **greater safety during transport**.

A

B

CHASSIS

Most **JOSKIN** slurry tankers are based on a **self-supporting structure (A)**. Their tank is welded to an integral cradle. This principle distributes the traction stresses over the entire tanker and reduces the overall weight of the machine. This design is more compact and therefore provides the vehicle with a lower centre of gravity, which improves the manoeuvrability. **JOSKIN** also offers 2 tankers (Quadra and Euroliner) mounted on an **independent universal chassis (B)**. These models concentrate the transport stress and the strains coming from the rear implement directly on the chassis, thus protecting the tank from all stresses. Depending on the weight of the rear implement, this design allows the tank to be moved along the chassis for an optimal load distribution.

STANDARD EQUIPMENT

Standardisation allows to make designs uniform and implement more cost-effective production techniques. High-quality spreading and transport technologies are thus made affordable to the greatest number of people. All **JOSKIN** slurry tankers are equipped with a wide range of features, including a choice of pumps for precise and appropriate spreading, a running gear and braking system for unrivalled comfort and transport safety, and a choice of tyres to reduce ground compaction and facilitate traction. These standard features make **JOSKIN** slurry tankers **easy to use** and provide daily a **high level of working comfort, even in demanding conditions**.

MODULO2

'INFINITELY' ADAPTABLE TANKER!

MACHINE OF THE YEAR 2019

The Modulo2, a self-supporting tanker, is the best-selling **JOSKIN** slurry tanker. Its success lies in its modularity: its design can be **adapted to the needs of each individual thanks to the various industrialised modules**.

SCAN ME

1 **Pre-equipment for spreading implements**

2 **Multi-position running gear** for an optimal load distribution

3 **Short and compact machine**

4 3 pump systems available: **vacuum, Garda/Julia, spiral pump**

5 **Air brakes**

6 **Rigid or cross-spring drawbar**

Axle(s)	Models	Theoretical capacity without wheel recesses (l)	Theoretical capacity with wheel recesses (l)	Brake drums (mm)	Tank diameter (mm)
1	**2500ME**	2,529	/	250 x 60	1,135
	3250ME	3,278	/	250 x 60	1,135
	4000ME	4,262	/	300 x 60	1,300
	5000ME	5,101	/	350 x 90	1,300
	6000ME	6,031	5,823*	350 x 90	1,400
	7000ME	7,096	6,854*	350 x 90	1,500
	8400ME	8,507	8,103*	350 x 90	1,600
	9000ME	/	8,952	406 x 120	1,800
	10000ME	10,054	9,554*	406 x 120	1,700
	11000ME	11,290	10,738*	420 x 180	1,800
2	**8400MEB**	8,507	/	350 x 60	1,600
	10000MEB	10,054	/	350 x 60	1,700
	12000MEB	12,119	11,713*	350 x 60	1,800
	14000MEB	14,499	14,011*	400 x 80	1,900
	16000MEB	16,283	15,721*	406 x 120	1,900
	18000MEB	18,200	17,134*	420 x 180	2,000

**Take option 069 or 675 (wheel recesses).*

DRAWBAR

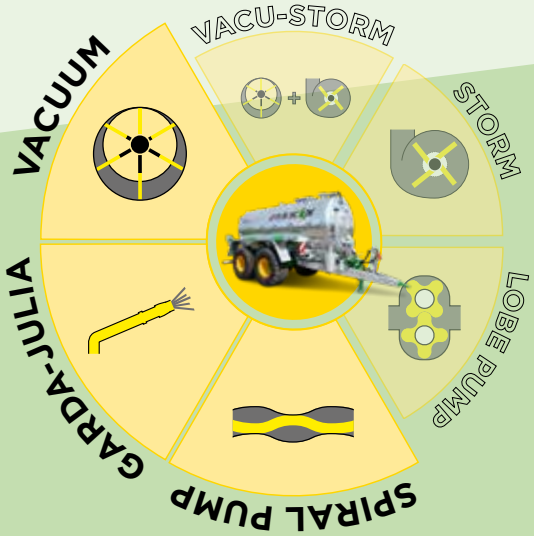
The Modulo2 are fitted with a **"V-shaped" open drawbar** housing the pump system to protect it from any accidental contact with the tractor wheels. In addition, the drawbar of the models with vacuum pump is reversible: at any time, it is possible to switch from "high" (+/- 1 m from the ground) to "low" (+/- 50 cm from the ground) hitch, or vice versa, without having to change it (180° rotation on the horizontal axis). Depending on the model, the Modulo2 is fitted with a bolted rigid drawbar with cross-suspension or silent-blocks. **Comfort is therefore a priority to JOSKIN!**

RUNNING GEAR

The Modulo2 is fitted with a running gear bolted under the monocoque structure. It can be moved, allowing the **machine to be perfectly balanced**. This feature is particularly useful for a good load distribution when adding a spreading implement. On the double-axle version, the tanker is fitted with a **Roll-Over bogie** that is characterised by an upward pull line, an off-centre pivot axis and ergonomic parabolic leaves for unmatched manoeuvrability and comfort.

SELF-SUPPORTING MONOCOQUE TANK

The sturdy monocoque tank of the Modulo2 is made of **high tensile steel** (from 4 mm to 6 mm thick depending on the model). It is welded to an integral cradle (across its width and length) creating a **self-supporting monocoque structure**. The drawbar, running gear and potential pre-equipment for spreading implement (option) are fastened to this cradle, which concentrates all traction strains and protects in this way the tank from any unnecessary stress.



PUMP SYSTEMS

The Modulo2 tanker, as its name suggests, is a modular machine. It can indeed be fitted with various pumps: **vacuum**, **Garda** system (combination of a vacuum pump + an emptying centrifugal pump and a spreading gun) or **spiral** pump. Next to an efficient pump system, the comfort of use and the machine specifications can further be improved thanks to specific modules for a filling or unloading arm ("JUMBO" front arm on the left/right, self-supporting double arm, dorsal boom or unloading arm), mixing systems into the tank (hydraulic or air mixer), etc.

VOLUMETRA

LARGE VOLUME ON INTEGRATED CHASSIS!

MACHINE OF THE YEAR 2017

The Volumetra is a compact vehicle with a self-supporting structure in steel sections. The integrated chassis ensures a **low centre of gravity** and an unmatched manoeuvrability, even with very wide tyres. Available in double and triple-axle versions from 12,500 to 28,000 litres, it is one of the bestsellers.

SCAN ME

1 **Pre-equipment for wide spreading boom and integrated L-linkage**

2 **Movable bolted Hydro-Tandem/ Tridem hydraulic running gear**

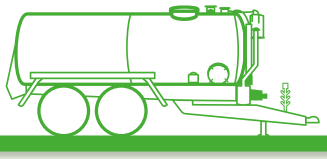
3 **Galvanised steel sections welded along the entire length of the tank** (width of the integrated chassis: 900 mm)

4 **Self-supporting monocoque tank**

5 6 pump systems available: **vacuum, Garda/Julia, spiral, lobe, centrifugal and Vacu-Storm pumps**

6 **Short V-shaped drawbar + silent-block or hydropneumatic suspension** (depending on the model)

Axles	Models	Theoretical capacity without wheel recesses (l)	Theoretical capacity with wheel recesses (l)	Brake drums (mm)	Tank diameter (mm)
2	**12500D**	13,053	12,763	406 x 120	1,700
	14500D	14,654	14,340	406 x 120	1,800
	16500D	16,512	16,175	406 x 120	1,900
	18000D	18,259	17,901	420 x 180	2,000
	20000D	20,154	19,775	420 x 180	2,100
3	**20000T**	20,711	19,687	420 x 180	1,900
	22500T	22,822	21,763	420 x 180	2,000
	24000T	24,281	23,187	420 x 180	2,000
	26000T	26,797	25,638	420 x 180	2,100
	28000T	28,331	27,131	420 x 180	2,100

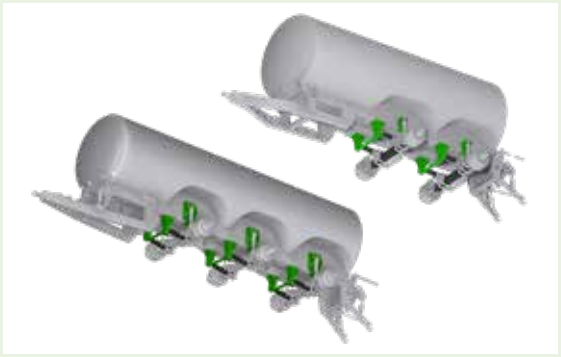


DRAWBAR

The Volumetra has a **"V-shaped" drawbar** on which the pump system is fitted in order to protect it from any accidental contact with the tractor wheels. If it is a lobe pump, the drawbar is of the **beam type** and the pump is fitted laterally to allow a quick and easy access for the maintenance of the lobes. The drawbar of the Volumetra is particularly short in order to make the vehicle as compact as possible. Depending on the model, the drawbar has a silent-block of hydropneumatic suspension. **Comfort is therefore a priority to JOSKIN!**

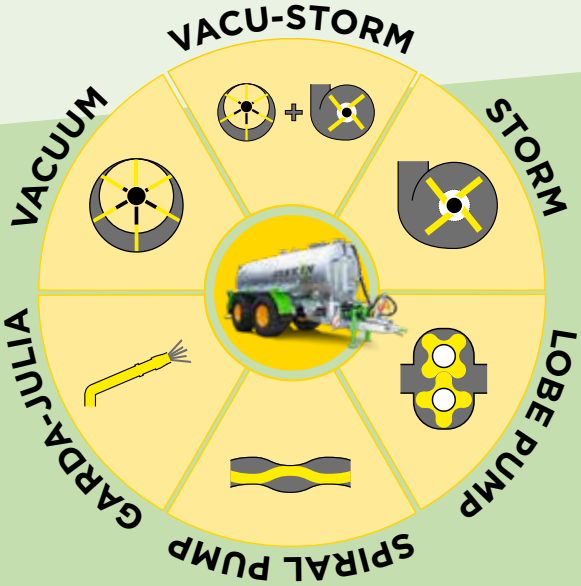
RUNNING GEAR

The Volumetra is equipped with a **Hydro-Tandem/Tridem running gear** (up to 25 cm clearance) ensuring an excellent stability on slopes, an even load distribution on each wheel and an optimal road holding. Since the running gear is bolted, it can be moved forwards or backwards to adapt the load distribution, e.g. when adding a spreading implement at the back of the machine. In short: the **"trouble-free" driving solution**!



INTEGRATED LINKAGE

The Volumetra can be equipped with an optional sturdy integrated linkage. Thanks to it, the **entire range of JOSKIN spreading and injection implements**, even the largest and heaviest ones, can be coupled on the 3- or 4-point linkage of the tanker. The integration of the linkage on the tank makes the Volumetra compact and allows to keep an ideal weight on the eyelet. Another advantage of this structure is that the spreading implement is brought as close as possible to the back of the tank for a reduced overhang. To optimise the weight distribution, the distance between the tank and the linkage hooks is kept as short as possible.



PUMP SYSTEMS

The Volumetra **can be equipped with all available pump systems**: vacuum, centrifugal discharge pump (Storm), spiral, lobe pump, a combination of a vacuum and a centrifugal pump (Vacu-Storm), or of a vacuum and a centrifugal pump with a spreading gun (Garda/Julia system). This makes it totally versatile, offering effective solutions for all types of needs.

EQUIPMENT

WEIGHT TRANSFER PARTITION

When filling the tank, the volumes on both sides of the partition are filled completely and simultaneously. When emptying, the one at the back of the partition is first put under pressure in order to keep the front part filled. When the slurry level reaches the lower edge of the partition, an air in-draft is created towards the front part in order to empty it progressively. This system allows to compensate for the load transfer from the tractor eye to the rear when the spreading boom is unfolded, or to keep the weight on the eye as long as possible when spreading uphill (vacuum system). **This improves grip and traction.**

BRAKES

Slurry tankers can be fitted with **hydraulic (A)**, **air (B)** (EU certification) or **dual (C) brakes**. For the first ones, the pressure exerted on the brake pedal is transmitted to the final drum via hydraulic oil. For the second ones, the intensity is adjusted manually (or automatically with an optional regulator). Finally, the dual brakes (single-line hydraulic brakes and dual-line air brakes) allow the tanker to be hitched to tractors equipped with one of these two systems. This option is ideal for farms or agricultural co-operatives with a fleet of different tractors. The braking system that is not in use simply remains disconnected from the tractor.

STEERING AXLES

For **more comfort and a higher manoeuvrability**, the rear axle of the tankers can be mounted as a free-steering axle (with hydraulic locking above 15 km/h) or as a self-steering axle in both driving directions. The advantage of the self-steering axle is not only its self-correcting device which automatically pulls the vehicle out of the rut (ideal on slippery ground), but above all its steering when driving forward and reversing. This type of axle **significantly reduces the tyre wear and the torsion on the whole vehicle in tight bends**.

SCAN ME

Configure your slurry tanker in a few clicks!

HITCH ACCESSORIES

JOSKIN offers various hitch accessories to improve the driving comfort. **Three types of bolted and interchangeable eyelets are available: fixed, swivel or knee-joint eye** from 2 to 4 t (at 40 km/h) depending on the models. For more comfort, it is also possible to equip your vehicle with a **hydraulic parking stand**. To limit the number of hoses connected to the tractor, this device can be controlled via an independent hand pump. For an optimal driving comfort, **JOSKIN** also offers **3 types of suspension: hydropneumatic suspension (A), silent-blocks (B) and cross leaves (C)**.

DRAWBAR suspension types FOR EACH MODEL

	Alpina2	Volumetra	Cobra2	Tetrax2	Modulo2	Quadra	X-Trem2	Euroliner	Tetraliner
Rigid	S								S
Cross leaves				S	S/•	S			
Silent-blocks		S	S	S	S/•				
Hydropneumatic		S/•	S/•	•	•	•	S	S	

S = Standard (included in the standard equipment)
• = Option (available, but not included in the standard equipment)

RUNNING GEAR

JOSKIN running gears are designed to meet the criteria of reliability, stability, comfort and safety on the road and in the field in every situation, whatever the vehicle. There are several types or running gears: the **traditional tandem/tridem with rods (A)** (standard on Tetraliner T), the **Roll-Over bogie (B)** (standard on Modulo2), the **Hydro-Tandem (C)** (standard on Volumetra and Quadra), the **Hydro-Tridem (D)** (standard on Volumetra and Euroliner) and the **Hydro-Pendul (E)** (standard on X-Trem2).

EQUIPMENT

PUMPING ACCESSORIES

Accessories are available to improve the pumping efficiency. For example, the **diameter of the standard flange can be increased** to provide an additional access to the tank. A choice can also be made between the 4 types of manual valves with quick coupling (with York valve). These can be distinguished by their diameter (6", 8" or 10"), the type of jaw ("Perrot" or "Italy/Baroni") or the type of coupling for the suction hose ("rocking" or "sliding"). The angled opening of the rocking jaw allows to easily place the hose in the coupling. The sliding version pushes the pipe flat against the neck for a better alignment of the coupling.

PUMPING ASSISTANCE

A turbo-filler and a "Rotation-Cut" chopper support the vacuum and volumetric pumps during pumping. The first one sucks in a larger volume more quickly, without forcing the pump. Since the turbine pumps with less vacuum, **the slurry is less likely to expand and produce foam**. As a result, the intake volume is closer to that at rest, with a better filling rate. The second one protects the lobe pump from foreign materials and prevents blockages caused by heavy slurry. Since the chopper is fitted with a drain valve, it can be opened from the driver's seat to remove any foreign materials it could contain.

UPPER FILLING

A gravity filling allows the **highest flows**. **JOSKIN** offers various systems that can be placed on top or at the back of the tank: 6" (150 mm squares), 8" (200 mm squares) or 10" (250 mm squares) flat flanges or funnels, upper manholes (Ø 520 or 600 mm) with hook or hinge closure, 500 x 600 mm bolted hydraulic doors, etc. In case of frequent use, for more speed and comfort, **JOSKIN** also offers systems with a hydraulic opening: a Ø 520 mm hinged manhole, a 500x600 mm slide door and a 500x500 mm, 8" or 10" funnel.

SCAN ME

Configure your slurry tanker in a few clicks!

GALVANISED DORSAL BOOM

The advantage of the front dorsal booms is that they provide a **better visibility** to the driver when handling them. They can reach a maximal lifting angle when pumping into an off-ground container or pit, and a maximal diving angle when pumping into an underground pit. They can be used with different types of pumps (vacuum, Vacu-Storm, lobe pumps) and can be adapted to different suction conditions (lagoons, off-ground tank, on funnel, etc.). Different configurations are available, including with telescopic devices, a turbo filler, etc. to adapt to all working conditions.

JUMBO FILLING ARM

The JUMBO is a non-articulated, side-rotating front filling arm that sucks up the slurry via a funnel to be connected to the storage tank or the ground. It is suitable for both in-ground and off-ground tanks. This is a reasonable investment to **avoid coupling pipes**, especially a Ø 200 mm heavy pipe. The JUMBO is fitted at the front of the tank and can also suck on the left or right side of the tanker thanks to a simple and quick handling without any tools. The funnel and arm heads are movable to ensure a permanent tightness of the coupling when pumping.

ARTICULATED FILLING ARM

JOSKIN currently offers **3 types of articulated filling arms in self-supporting or built-in versions**, with a diameter of 200 mm (8”) or 250 mm (10”). Straight, angled, with or without turbo or equipped with a hydraulic extension, there is a solution to reach all slurry tanks. The arm can also be combined with an immersion pipe in the tank to discharge the slurry. The watertightness between the arm and the tanker is guaranteed by a double-acting industrial valve. The hydraulic lines are made of rigid pipes for a longer life span.

EQUIPMENT

UNLOADING ARM (4", 6" OR 8")

The 4'' (Ø 100 mm) unloading arm easily transfers water to sprayers at the field edge. The supply end is connected to the rear of the tanker (on a quick coupling). The arm pivots vertically by means of a hydraulic joint and laterally by hand. The 6'' (Ø 150 mm) and 8'' (Ø 200 mm) models allow the tanker to easily feed a container or a tank **without the driver having to leave the tractor cab**. This assembly (on the right in the driving direction) includes a built-in bracket, an industrial slide valve, an immersion pipe and an automatic stop system (max. rotation: 270°).

MANAGEMENT AND CONTROL - ISOBUS

At **JOSKIN**, the interface of the control box with switches, like the automaton interface, can be replaced by the ISOBUS terminal. Thanks to this system, **one single control box in the cabin replaces several ones**: a direct way to high-tech agriculture! This system allows, for instance, to centralise the electrohydraulic controls, the pressure sensors, the management of the injection implements, the flow rate proportional to the driving speed (DPA), or the dynamic weighing system. The terminal is also compatible with a GPS system for a precise guidance when spreading on different plots. Most tractor manufacturers are using this technology.

AUTOMATIC LUBRICATION

Depending on the model and equipment, some vehicles may have many grease nipples. It is usually necessary to grease them after each working day, so this option can be a very useful tool to **ensure a long service life to the machine**. The system consists of a grease tank, an electric pump and a timer, all of which send the grease to where it is needed via cleverly placed pipes. You save time, you don't forget any grease nipples and the machine is always well maintained: this is a **significant safety and time saving**.

SCAN ME

Configure your slurry tanker in a few clicks!

MANHOLES

As the tank of a slurry tanker needs to be cleaned regularly, **JOSKIN** offers various access solutions, including via the top of the machine, **which is particularly useful when the rear of the tanker is not accessible** because there is a spreading implement. Examples are the Ø 600 mm side or rear manhole with hook closure, a Ø 850 mm rear manhole on hinge, a full opening rear door, an upper manhole with hook closure or on hinge (Ø 520 mm or Ø 600 mm), etc.

SCATTERERS

JOSKIN slurry tankers can be fitted with Perrot exact scatterers. To increase the working width or the slurry flow, other models are available: the **double exact scatterer (A)** doubles the dose per hectare; the **Möscha (B)** spreads by means of a continuous left/right pendulum movement and ensures a "large drop" distribution at low pressure; the **double version of the Möscha (C)** spreads over a larger working width; and finally the **"gooseneck" (D)**, which is height-adjustable, directs the flow of fertiliser vertically towards the ground and adapts the working width.

LEVEL INDICATORS

The use of a spreading implement such as an injector makes it impossible to see the slurry coming out of the tank. This is why **JOSKIN** was the first manufacturer to offer a **level indicator on all its slurry tankers from the 1980s**. Today, there are several possibilities: a 2" half-circular sight glass (**A**), an 8 x 30 cm oblong sight glass to a choice of location (**B**), a float gauge (**C**) or a Ø 150 mm transparent communicating gauge (**D**).

Many pieces of pre-equipment are available to take advantage of some options (filling arm, hydraulic door...) and make your JOSKIN tanker even more versatile immediately or even years after the purchase.

Terraflex2 XXL

Pendislide START

JOSKIN

SPREADING IMPLEMENTS

Multi-Action

Terradisc2

Penditwist

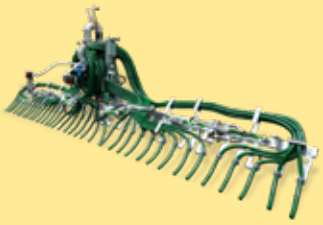
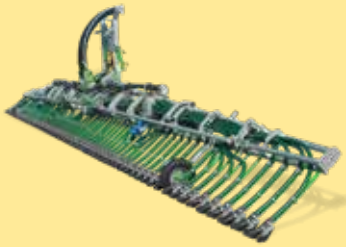
SCAN ME

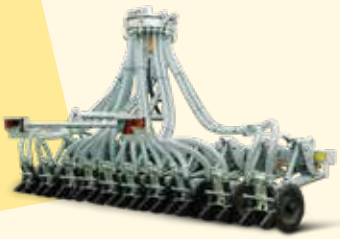
Pendislide PRO

Solodisc XXL

INTRODUCTION

JOSKIN spreading implements cover many fields of application, whether for spreading with booms (with line hoses or skids), injecting in meadows (with cutting shares or discs) or in arable lands (with rigid or spring tines and discs). The **JOSKIN** range of spreading implements can therefore be **adapted to all spreading works and all environmental requirements**.



SPREADING BOOMS

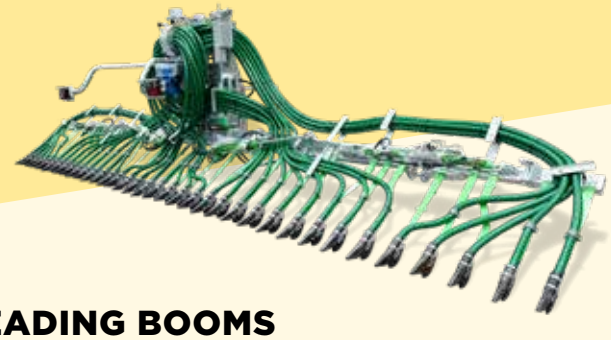
JOSKIN spreading booms offer the possibility of **spreading over large widths** and applying the slurry at the foot of the plants **without soiling the leaves**, which allows to greatly reduce nutrient losses, maintain the plant growth rate and avoid slurry residue in the forage. Models with line hoses or skids give the choice between simply laying the slurry on the ground or laying it in the furrow created by the Ertalon skids. These booms however have a very similar design. The Penditwist or Pendislide indeed have a triangular structure articulated around a central frame and supporting line spreading hoses fixed at 25 or 30 cm intervals.

INJECTORS

Meadow injectors are used to **inject the slurry into the ground**, while minimising the damages to its cover. They are assembled around single-beam galvanised frames offering the best compromise between sturdiness and lightness. Arable injectors allow the slurry to be injected deep into the soil. They also loosen the ground. They are assembled on the basis of a double-beam frame reinforced by radiant crosspieces. The main advantage of this assembly is that it focuses the strains of the implement on the tanker, which then transfers them to the tractor. This reduces the stress and the tank is not distorted.

OPTIMAL USE OF FARM MANURE

Previously considered a common waste, slurry has gradually acquired the status of brown gold among farmers. It is indeed a rich and abundant natural resource, with an incredible fertilising potential **allowing to increase the yield of meadows and crops at a limited cost**. Its spreading requires the use of a suitable equipment that can preserve the natural properties of slurry (organic matter, nitrogen, phosphorus, lye, magnesium, etc.) to the maximum while distributing them evenly. As a well-known and experienced actor, **JOSKIN** offers a complete range of spreading implements for a **profitable, sustainable and responsible farming**. Within this range of products, two main families can be distinguished: **spreading booms and injection implements**.



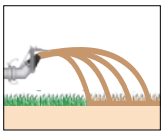
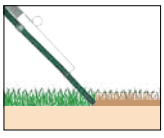
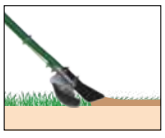
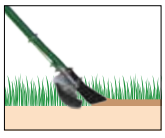
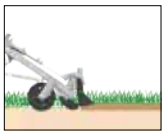
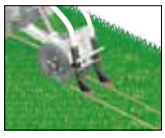
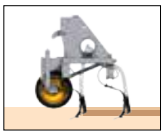
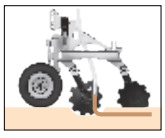
SPREADING BOOMS

Thanks to its large width, **a boom spreads slurry more quickly over large areas**. By applying it as close as possible to its target, the boom avoids splitting and also reduce the contact of slurry with the air. A reduction in ammonia losses through volatilisation can therefore be guaranteed. The efficiency of the nitrogen is then increased and the odour nuisance is reduced. With a boom, the spreading lines are precise and regular, regardless of the wind conditions. The slurry is distributed from hoses with a regular line spacing (25-30 cm) over the entire width of the implement. 2 types of booms can be distinguished. **Line spreading booms** have flexible hoses that run at ground level and apply the fertiliser at the foot of the plant for it to keep growing. **Line spreading booms with skids** are fitted with skids exerting a continuous pressure on the ground.

INJECTORS

Injectors **deliver the fertiliser directly into the soil**, where the plants get the nutrients they need to grow, i.e. at their roots. Ammonia losses and odour emissions are therefore reduced to a minimum and sometimes even become non-existent. 2 categories of injectors can be distinguished. **Meadow injectors** fertilise the first layer of soil while preserving the present plant cover. **Arable injectors** fulfill a double function: they carry out a stubble ploughing and bury the slurry in the soil. Most often used before sowing, these injectors apply the fertiliser as close as possible to the plant. The slurry is mixed with the soil and spread over the first few centimetres below the soil surface. Nutrients are therefore applied directly to the sowing area.

THEORETICAL AMMONIA LOSSES BY SPREADING IMPLEMENT

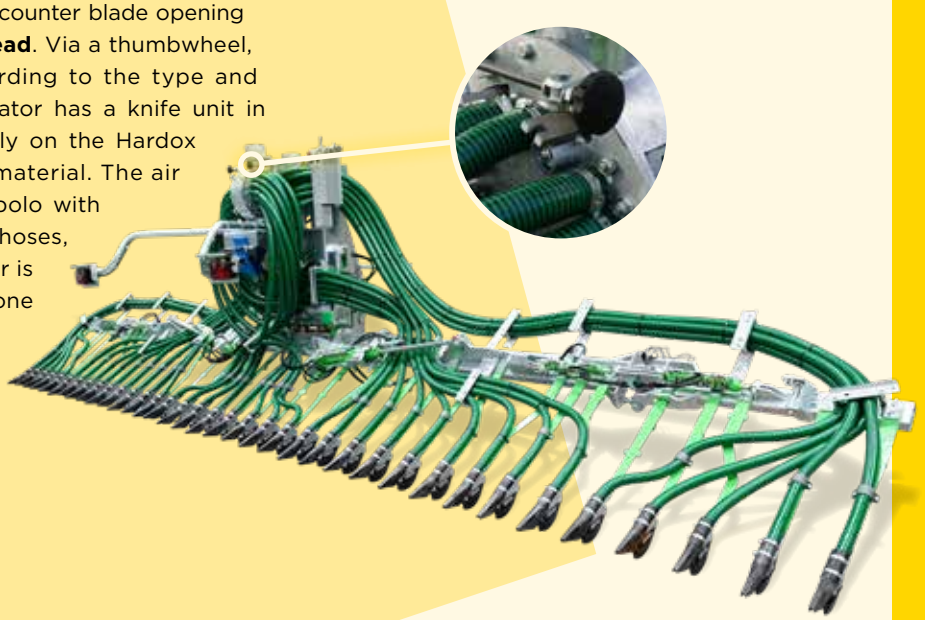
Standard spreading	Line spreading boom	Line spreading boom with skids (on low grass)	Line spreading boom with skids (on high grass)	Injector with cutting discs	Injector with conical discs	Arable injector with shares	Arable injector with discs
							
Ammonia losses: 100%	**Ammonia losses: 65%**	**Ammonia losses: 50%**	**Ammonia losses: 20%**	**Ammonia losses: 15%**	**Ammonia losses: 5%**	**Ammonia losses: 0%**	**Ammonia losses: 0%**

SPREADING IMPLEMENTS: SPREADING BOOMS

SCAN ME

ECCENTRIC SCALPER© MACERATOR

The eccentric Scalper© macerator has a variable counter blade opening for a **precise dosing of the quantity to be spread**. Via a thumbwheel, the operator can change the flow rate according to the type and quantity of material to be spread. The macerator has a knife unit in the form of a diabolo that rotates eccentrically on the Hardox counter blade for an even distribution of the material. The air intake system through the middle of the diabolo with 2 inlets ensures a smooth flow in the various hoses, without suction effect. This compact macerator is equipped with quick-opening side lids and a stone trap for a **quick and easy maintenance**.



ANTI-DRIP DEVICE AND FOLDING SYSTEM

The (double-acting) anti-drip lifting device with Twist system **ensures a clean transport** thanks to a complete rotation of the line hose ends, which prevents any loss of slurry on the road or in the field during manoeuvres. All **JOSKIN** spreading booms are also fitted with a **hydraulic folding system** that does not affect the driving of the tractor-trailer combination. During transport, the boom is secured by a clamping system with a height adjustment device and a cradle with a shock absorbing rubber. The hydraulic folding system includes the following elements: hydraulic safety device, locking of the boom wings during transport by means of interlocking brackets and cylinders positioned diagonally to better hold the boom in position (reduction of the swinging movement).

SAFETY (ANTI-CRASH + LOCK-MATIC©)

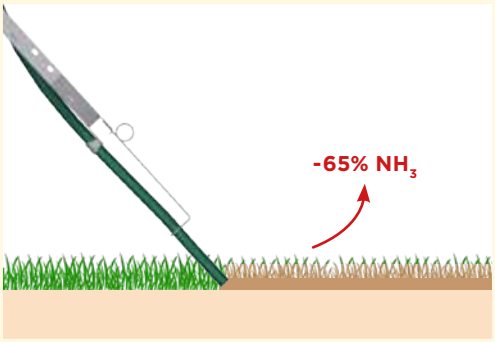
JOSKIN spreading booms (except the BASIC range) are fitted with an anti-crash safety device that provides **extra safety when working on uneven ground**. Each boom wing is equipped with springs and joints which, when spreading on bumpy ground, retract the ends of the boom (up to 80 cm) if they come into contact with the ground. Since the wings are fitted on oblong holes on each cylinder, they can slide up and down and be levelled. All spreading booms are equipped with a double-acting folding system in order to meet the required transport width. It should also be noted that this system is equipped with the Lock-Matic© automatic locking device to **make your road travel as safe as possible**.

PENDITWIST BASIC

SMALL-WIDTH LINE SPREADING BOOM

The Penditwist BASIC, a line spreading boom with a 6 or 7.5 m working width, is **suitable for low-capacity tankers**. It offers a quality spreading at an attractive price. It is made of galvanised high tensile steel profile tubes for an optimal protection and a long lifespan. Finally, it fits directly onto the rear manhole of the tanker and can therefore be fitted to a machine that does not necessarily have a pre-equipment.

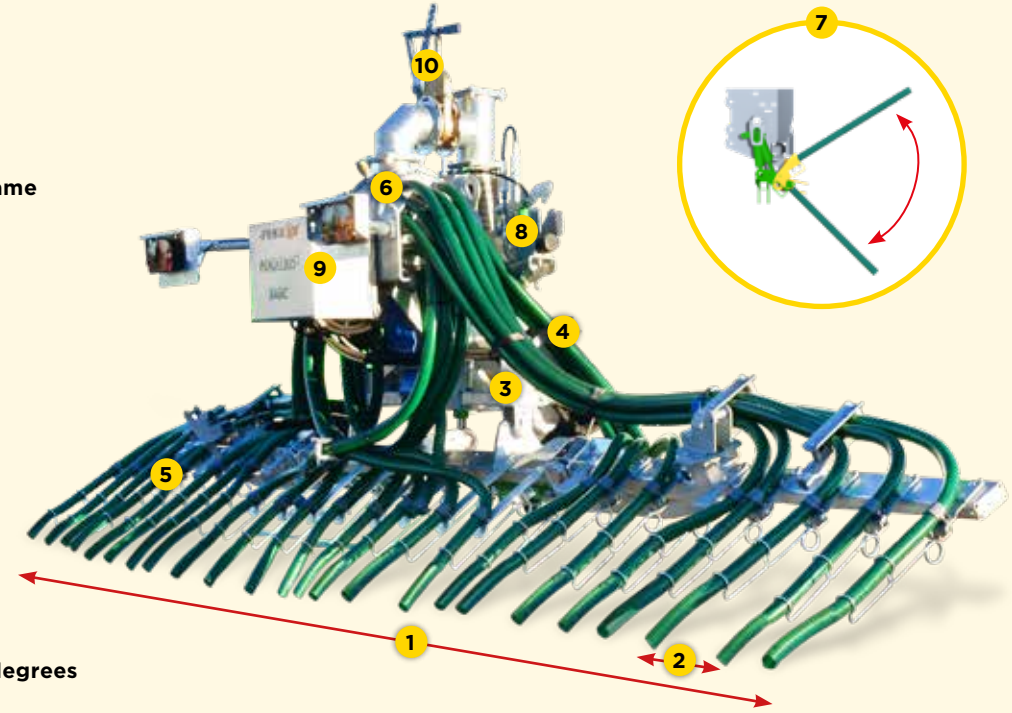
SCAN ME



SPREADING - LINE HOSES

Penditwist line spreading booms are of considerable agronomic interest: thanks to their flexible hoses that run at ground level, they apply the fertiliser directly at the foot of the plant **without slowing down its growth**. Only a small part of the grass is soiled by the slurry. These characteristics make these booms particularly suitable for fertilising crops, but also meadows. Although slurry remains on the soil surface, it is estimated that the resulting reduction in air contact **reduces volatile losses by more than 35%**.

1. Working width: **6 or 7.5 m**
2. **25 cm row spacing**
3. **Fully galvanised high tensile steel frame**
4. **Easy fitting**
5. **Line hoses**
6. **1 eccentric Scalper© macerator**
7. **TWIST anti-drip lifting system**
8. **Lock-Matic© transport safety**
9. **Autonomous electrohydraulic equipment**
10. **Dosing valve with variable opening degrees**



Models	Number of hoses and spacing (cm)	Working width (m)	Number of macerator outlets	Weight (kg)
60/24RP1	24 x 25	6	1 x 24	700
75/30RP1	30 x 25	7.5	1 x 36	760

PENDITWIST START

MEDIUM-WIDTH LINE SPREADING BOOM

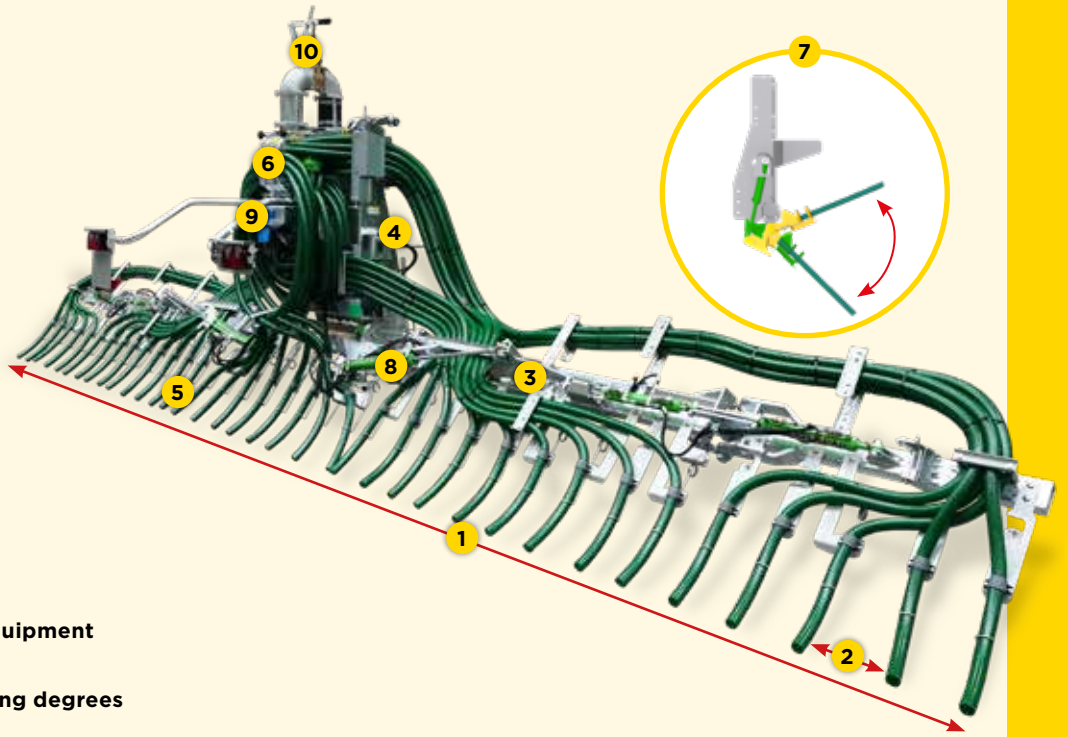
The Penditwist START is a line spreading boom with double folding system and a working width of 9 m, 10.5 m or 12 m. Designed to **meet the specific needs of medium-sized tanker owners**, this implement is very sturdy thanks to its design in high tensile steel profile tubes. The fully galvanised frame ensures an optimal protection against corrosion and a long service life.

SCAN ME

DOUBLE REAR FOLDING SYSTEM

This spreading boom is equipped with hoses with a 25 cm spacing (28 cm on the 12 m model), laying the slurry at the foot of the plants, without dirtying them. It is therefore a **real specialist in meadow fertilisation**. As big brother of the Penditwist BASIC, the Penditwist START allows to increase the yield without increasing the tank overall dimensions since it is **fitted with an ingenious autonomous double rear folding system**.

1. Working width: **9 to 12 m**
2. **25 or 28 cm row spacing**
3. **Fully galvanised high tensile steel frame**
4. **Easy fitting**
5. **Line hoses**
6. **1 eccentric Scalper© macerator**
7. **TWIST anti-drip lifting system**
8. **Lock-Matic© transport safety**
9. **Autonomous electrohydraulic equipment**
10. **Dosing valve with variable opening degrees**



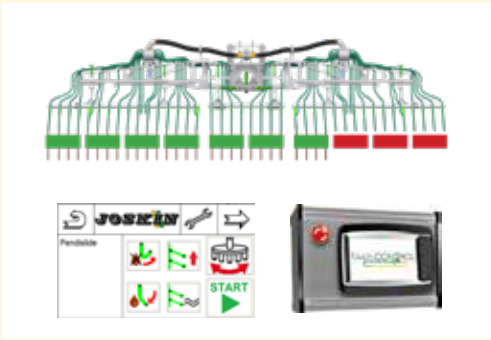
Models	Number of hoses and spacing (cm)	Working width (m)	Number of macerator outlets	Weight (kg)
90/36RP1	36 x 25	9	1 x 36	1,200
105/42RP1	42 x 25	10.5	1 x 44	1,300
120/44RP1	44 x 28	12	1 x 44	1,400

PENDITWIST

LARGE-WIDTH LINE SPREADING BOOM

The Penditwist has a hot-dip galvanised frame for a maximal durability and an optimal protection against corrosion. One or two 6″ (Ø 150 mm) supply pipes connect the rear of the tanker to the Scalper© macerator(s) (one or two depending on the model). These macerators distribute the slurry and direct it towards the line hoses, which are 25 cm or 30 cm apart depending on the model. The Penditwist spreading boom is available in widths from 9 to 18 m. It is **ideal to fertilise meadows and growing crops** (maize, cereals, etc.).

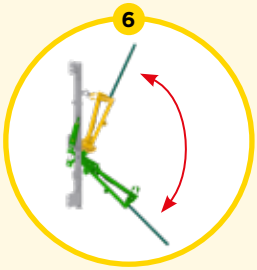
SCAN ME

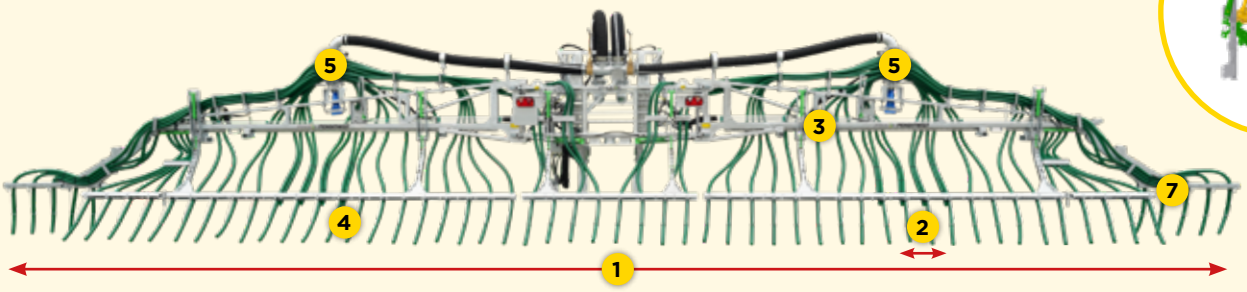


NUMEROUS APPLICATIONS

Thanks to the flexible hoses close to the ground, the spreading boom allows to lay the slurry at the foot of the plant without slowing down its growth. As a result, only a small part of the grass comes into contact with the slurry. These characteristics make the Penditwist **particularly suitable for fertilising crops, but also meadows**. In addition, in their basic version, all hydraulic functions of the boom can be operated separately from the tractor cab.

1. Working width: **9 to 18 m**
2. **25 cm or 30 cm row spacing**
3. **Fully galvanised high tensile steel frame**
4. **Line hoses**
5. **2 eccentric Scalper© macerators**
6. **TWIST anti-drip lifting system**
7. **Anti-crash safety device**





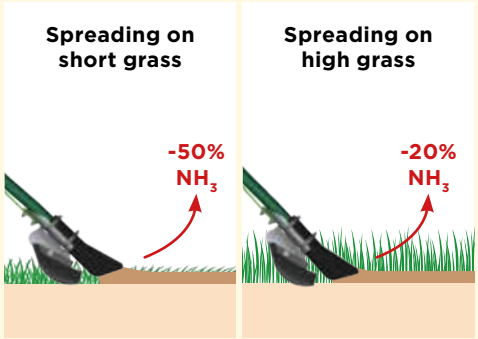
Models	Number of hoses and spacing (cm)	Working width (m)	Number of macerator outlets	Weight (kg)
90/30RP1	30 x 30	9	1 x 36	1,120
90/36RP1	36 x 25	9	1 x 36	1,140
120/40RP2	40 x 30	12	2 x 24	1,520
120/48RP2	48 x 25	12	2 x 24	1,540
135/46RP2	46 x 30	13.5	2 x 24	1,580
135/54RP2	54 x 25	13.5	2 x 36	1,600
150/50RP2	50 x 30	15	2 x 36	1,760
150/60RP2	60 x 25	15	2 x 36	1,780
160/54RP2	54 x 30	16	2 x 36	1,820
160/64RP2	64 x 25	16	2 x 36	1,840
180/60RP2	60 x 30	18	2 x 36	1,920
180/72RP2	72 x 25	18	2 x 36	1,960

PENDISLIDE BASIC

SMALL-WIDTH LINE SPREADING BOOM WITH SKIDS

The Pendislide BASIC is a spreading boom with skids and a 6 m or 7.5 m working width designed to **meet small tanker owners' specific needs and** therefore provide them with a quality spreading solution. It has a lightened structure made of galvanised high tensile steel profile tubes for an optimal protection and a long lifespan. With the skids applying a constant pressure on the ground while moving apart the vegetation, the Pendislide Basic ensures a precise distribution of the slurry as close as possible to the roots. These features make this spreading boom **particularly suitable to fertilise meadows**.

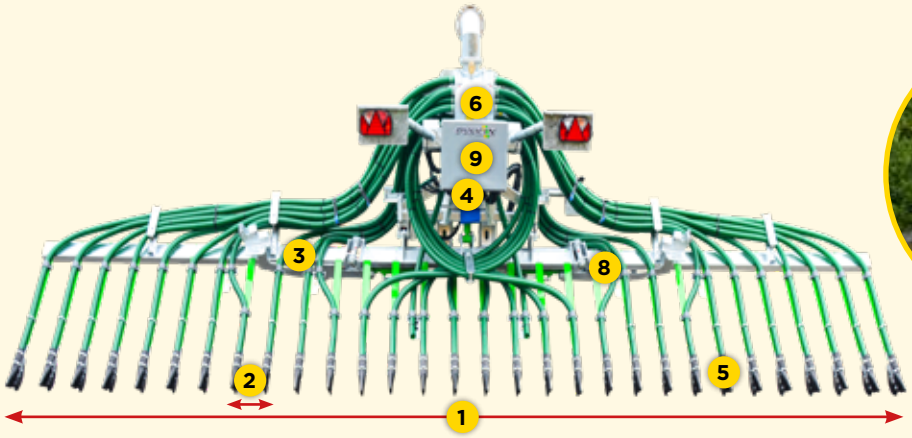
SCAN ME



SPREADING - SKIDS

Pendislide spreading booms are equipped with skids that exert a constant pressure on the ground by means of a system of spring leaves. By moving apart the vegetation, these skids ensure a precise distribution of the nutrients close to the plant base **without dirtying the leaves or fodder**. These implements are therefore ideal to fertilise meadows or growing crops. The permanent contact of the skids with the ground guarantees an even greater reduction in the soiling of the vegetation and a **reduction of up to 80% in volatile losses** depending on the height of the grass.

1. Working width: **6 or 7.5 m**
2. **25 cm row spacing**
3. **Fully galvanised high tensile steel frame**
4. **Easy fitting**
5. **Ertalon skids**
6. **1 eccentric Scalper© macerator**
7. **TWIST anti-drip lifting system**
8. **Lock-Matic© transport safety**
9. **Autonomous electrohydraulic equipment**



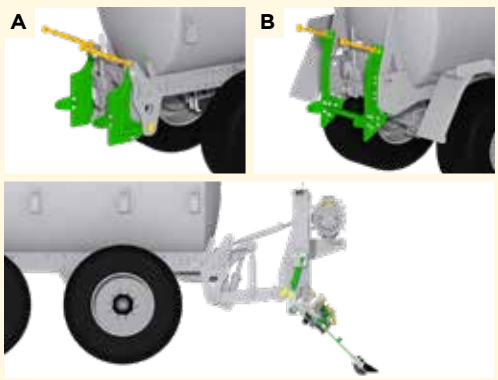
Models	Number of hoses and spacing (cm)	Working width (m)	Number of macerator outlets	Weight (kg)
60/24PS1	24 x 25	6	1 x 24	760
75/30PS1	30 x 25	7.5	1 x 36	840

PENDISLIDE START

MEDIUM-WIDTH LINE SPREADING BOOM WITH SKIDS

The Pendislide START is a line spreading boom with skids and a working width of 9 m, 10.5 m or 12 m. Rather **suited to owners of medium-sized tankers**, it provides a quality spreading solution that quickly pays off. The structure consists of fully galvanised high tensile steel profile tubes: ideal for a long-term protection against corrosion! This spreading boom is equipped with skids with a 25 cm spacing (28 cm on the 12 m model), laying the slurry at the foot of the plants, without dirtying them. The Pendislide START is a **real specialist in the fertisilisation of meadows and arable lands!**

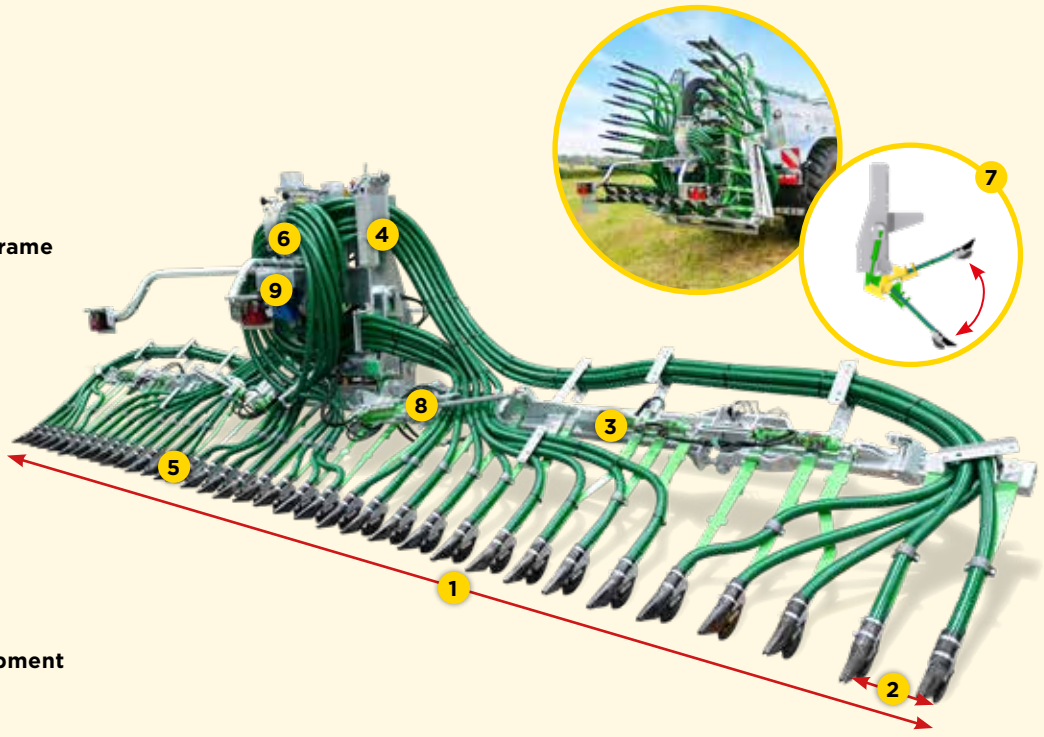
SCAN ME



VERSATILITY

The Pendislide START, **equipped with a double rear folding system**, offers good performances without necessarily increasing the overall dimensions of the tanker. This spreading boom is compatible with a wide range of slurry tankers. Not only can it be fitted to machines with an **integrated linkage or a pre-equipment for integrated linkage (A)**, but it can also be **fitted directly on rear buttresses (B)**. The Pendislide START is equipped with a standard automaton directly connected to the tractor and has all the electrohydraulic equipment necessary for its operation, both in open and closed circuit.

1. Working width: **9 to 12 m**
2. **25 or 28 cm row spacing**
3. **Fully galvanised high tensile steel frame**
4. **Easy fitting**
5. **Ertalon skids**
6. **1 eccentric Scalper© macerator**
7. **TWIST anti-drip lifting system**
8. **Lock-Matic© transport safety**
9. **Autonomous electrohydraulic equipment**



Models	Number of hoses and spacing (cm)	Working width (m)	Number of macerator outlets	Weight (kg)
90/36PS1	36 x 25	9	1 x 36	1,300
105/42PS1	42 x 25	10.5	1 x 44	1,400
120/44PS1	44 x 28	12	1 x 44	1,500

PENDISLIDE PRO

LARGE-WIDTH LINE SPREADING BOOM WITH SKIDS

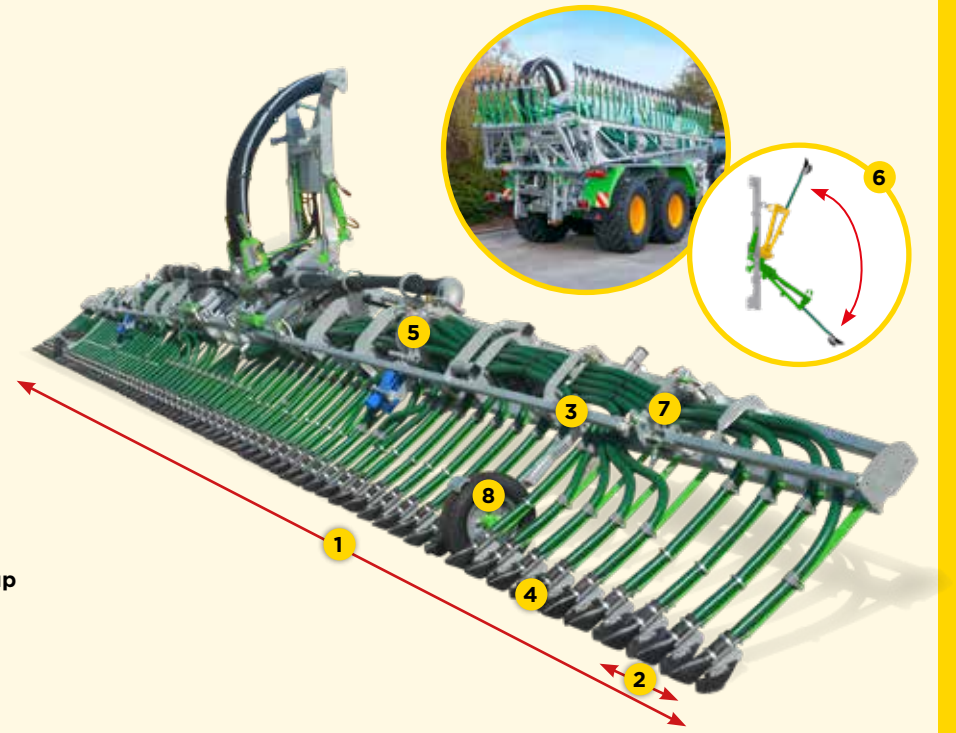
Available from 12 to 18 m wide, the Pendislide PRO is an **ideal line spreading boom with skids to fertilise meadows or growing crops**. Its efficiency and precision are maximum. Even on uneven ground, the design of the frame, combined with the action of the gauge wheels, allows to keep all skids on the ground. A pendulum system integrated into the frame increases the spreading accuracy so that the boom **follows the ground perfectly**. The Ertalon skids, with a 25 cm spacing, make a small furrow and spread the vegetation apart in order to apply the slurry as close to the roots as possible, without soiling the plants.

SCAN ME

OPTIMAL FOLLOW-UP OF THE GROUND

When spreading, the 2 gauge wheels with scrapers protect the boom from all strains by **perfectly following the ground relief**. Thanks to the independent movements of the left and right sides of the boom, the parts of the structure move freely and allow the skids to remain in contact with the ground. The position of the skids at 45° to the ground ensures an ideal adaptation to the irregularities. For very steep areas, the skids can be lowered to 250 mm below ground level, while upward travel is unlimited.

1. Working width: **12 to 18 m**
2. **25 cm row spacing**
3. **Ingenious, sturdy structure in fully galvanised high tensile steel**
4. **Ertalon skids**
5. **2 eccentric Scalper© macerators**
6. **TWIST anti-drip lifting system**
7. **Anti-crash safety device**
8. **2 gauge wheels for an optimal follow-up of the ground, even on hills**



Models	Number of hoses and spacing (cm)	Working width (m)	Number of macerator outlets	Weight (kg)
120/48PS2	48 x 25	12	2 x 24	2,060
135/54PS2	54 x 25	13.5	2 x 36	2,200
150/60PS2	60 x 25	15	2 x 36	2,300
180/72PS2	72 x 25	18	2 x 36	2,500

SPREADING IMPLEMENTS: INJECTORS

SCAN ME

USE

Meadow injectors fertilise the first layer of soil while preserving the present plant cover. To that end, the free-steering elements maintain a constant pressure on the soil, regardless of the irregularities, so that their tools can cut it.

Arable injectors, on the other hand, carry out a **stubble ploughing work while simultaneously burying the slurry in the soil**. Most often used before sowing, they apply the fertiliser as close as possible to the future plant. The slurry is therefore mixed with the soil and spread over the first few centimetres below the soil surface. The nutrients are therefore brought directly to the sowing area, to the first roots of the plant, thereby ensuring a fast growth.

SCALPER© MACERATOR

Some types of slurry contain a lot of fibres and foreign materials. But a blocked opening means that the spreading pattern will be uneven and that the user will have to stop working. **The solution is the patented JOSKIN Scalper© system.** It is a **highly efficient horizontal macerator (vertical on Solodisc XXL)** consisting of self-sharpening, freely rotating circular blades fitted on a blade holder driven by a hydraulic motor. The circular blades and the off-centre arched elliptical holes of the blade holder cut all foreign bodies in the slurry. If the blades hit a hard foreign object, all rear implements equipped with a control automaton are fitted with an electric reverser with a switch in the cab. **JOSKIN** Scalper© macerators are also sold separately to fit existing injectors.

HYDRAULIC FOLDING SYSTEM

In terms of compactness for journeys on public roads, models over 3 m wide are equipped with a **double-acting hydraulic folding system** in order to comply with the required transport width. Once the injector is folded, the elements on the upper arms are held in place by a locking system. A simple notch prevents them from rotating on their axis and falling back. The elements therefore remain very rigid with respect to transport vibrations. On some models, the folding system is also equipped with the Lock-Matic© automatic locking system. It is controlled by the same hydraulic function as the folding system, through steered valves, and ensures a maximal safety during road travel.

MULTI-ACTION

INJECTOR WITH CUTTING SHARES!

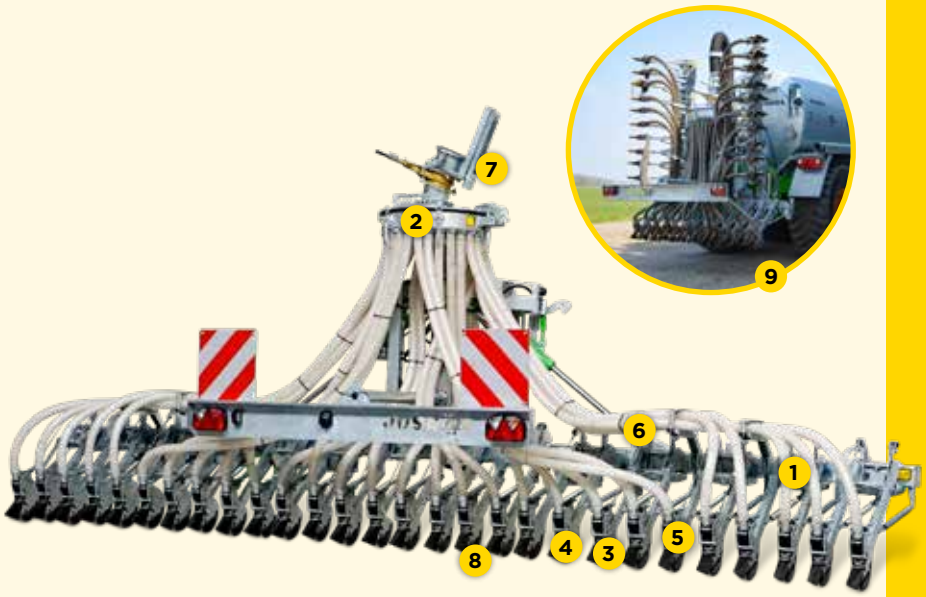
The lightweight Multi-Action is available with a working width from 3 to 7.7 m and is based on a single-beam frame and galvanised self-steering elements. Every 21.5 cm, one element consists of 2 independently moving arms with each a self-sharpening share followed by an injection cone. The slurry is injected through the cones at a depth of 0 to 3 cm. The Multi-Action **requires little maintenance** and **combines modularity and easiness**.

SCAN ME

WORKING PRINCIPLE

The self-sharpening cast steel share cuts a furrow in the ground, while the injection cone gently and evenly applies the slurry in the middle of this furrow, without splashing the vegetation. The share is fastened on a long arm ensuring a great clearance up to 25 cm to compensate the ground unevenness, but also to avoid all vibrations on the elements, even at a speed higher than 10 km/h. This share also ensures a **regular spreading without splashing**. Thanks to return springs acting as mechanical shock absorbers, a certain pressure is exerted on the share of the Multi-Action to keep it on the ground.

1. **Fully galvanised high tensile steel frame**
2. **Scalper© macerator**
3. **Self-sharpening cast steel shares**
4. **Free-steering elements** (+15°/-15°)
5. **Mechanical pincers**
6. **Hydraulic folding system (automatic Lock-Matic© locking system)**
7. **Full electrohydraulic control by automaton**
8. Injection depth: **0-3 cm**
9. Transport width: **2.6 or 3 m**



Models	Working width (m)	Transport width (m)	Number of elements	Number of macerator outlets	Weight (kg)
3010/14MA	3.01	3	7[1]	1 x 14	520
4300/20MAH	4.3	2.6	10[1]	1 x 20	960
5160/24MAH	5.16	2.6	12[1]	1 x 24	1,100
6020/28MAH	6.02	2.6	14[1]	1 x 28	1,200
6880/32MAH	6.88	2.6	16[1]	1 x 32	1,380
7740/36MAH	7.74	2.6	18[1]	1 x 36	1,500

[1] *2 shares per element.*

SOLODISC

HIGH-PRECISION DISC INJECTOR!

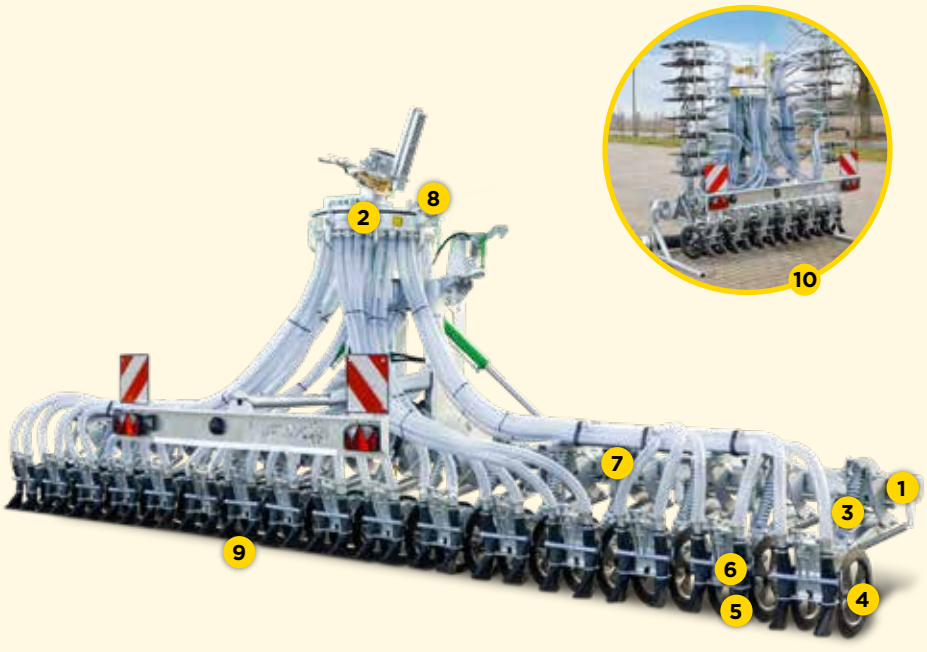
The Solodisc, with its large-diameter discs (Ø 400 mm), is the ideal implement for the **injection on all types of crops, but also on meadows**. Available in a variety of working widths, it is based on a single-beam frame and galvanised self-steering elements with a **21.5 cm** spacing. Each one comes with a pair of discs and 2 injection cones. The working depth of the Solodisc is adjustable up to 6 cm and is kept constant by applying a continuous pressure to the linkage.

SCAN ME

WORKING PRINCIPLE

The Solodisc has easily interchangeable self-sharpening discs to adapt the machine to all your needs. Made of cast steel, they are extremely durable and wear-resistant. They are combined to injection cones in order to keep a high spreading volume. The discs make a furrow in the soil, up to 6 cm according to the type of surface, so that the injection cone can lay the slurry homogeneously in the heart of the furrow, **without damaging the vegetation and ensuring a faster penetration into the soil**.

1. **Fully galvanised high tensile steel frame**
2. **Scalper© macerator**
3. **Mechanical compensation up to 20 cm**
4. **Self-sharpening spoked discs** (Ø 400 mm and 20 mm thick) for a reduced weight
5. **Free-steering elements** (+15°/-15°)
6. **Mechanical pincers**
7. **Hydraulic folding system (automatic Lock-Matic© locking system)**
8. **Full electrohydraulic control**
9. Injection depth: **0-6 cm**
10. Transport width: **2.64 or 3 m**



Models	Working width (m)	Transport width (m)	Number of elements	Number of macerator outlets	Weight (kg)
3010/14SD	3.01	3	7[2]	1 x 14	750
4300/20SDH	4.3	2.64[1]	10[2]	1 x 20	1,260
5160/24SDH	5.16	2.64[1]	12[2]	1 x 24	1,420
6020/28SDH	6.02	2.64[1]	14[2]	1 x 28	1,680
6880/32SDH	6.88	2.64[1]	16[2]	1 x 32	1,980
7740/36SDH	7.74	2.64[1]	18[2]	1 x 36	2,180

[1] 2.54 m with hydraulic compensation.
[2] 2 discs per element.

SOLODISC XXL

HIGH-PRECISION XXL DISC INJECTOR!

The Solodisc XXL is a versatile disc injector, ideal for high-precision spreading. The free-steering elements are fully galvanised and fitted with a pair of discs, with a **18.75 cm** spacing, followed by injection cones. Thanks to the large diameter of the discs (**Ø 400 mm**), the Solodisc XXL **can work on stubble fields, young plants, and especially on meadows**. To maintain a constant injection depth (up to 6 cm), pressure is continuously applied on the linkage.

SCAN ME

WORKING PRINCIPLE

The Solodisc XXL is fitted with 20 mm thick self-sharpening discs with a diameter of 400 mm that are assembled on hubs with large watertight conical bearings which can be tightened up. Made up of metal, rubber and NBR nitrile, these discs are sturdy and ensure a **long lifespan to the** Solodisc XXL. Specially designed for **JOSKIN**, **they are lighter than solid discs for an equivalent sturdiness.** Thanks to their diameter, the required traction power is less high.

1. **Fully galvanised high tensile steel frame**
2. **Eccentric Scalper© macerator**
3. **Mechanical compensation up to 13.5 cm**
4. **Self-sharpening spoked discs** (Ø 400 mm and 20 mm thick) for a reduced weight
5. **Free-steering elements** (+10°/-10°)
6. **Hydraulic pincers**
7. **Hydraulic folding system (automatic Lock-Matic© locking system)**
8. **Full electrohydraulic control by automaton**
9. Injection depth: **0-6 cm**
10. Transport width: **2.82 m**
11. **Mechanical side bumper**

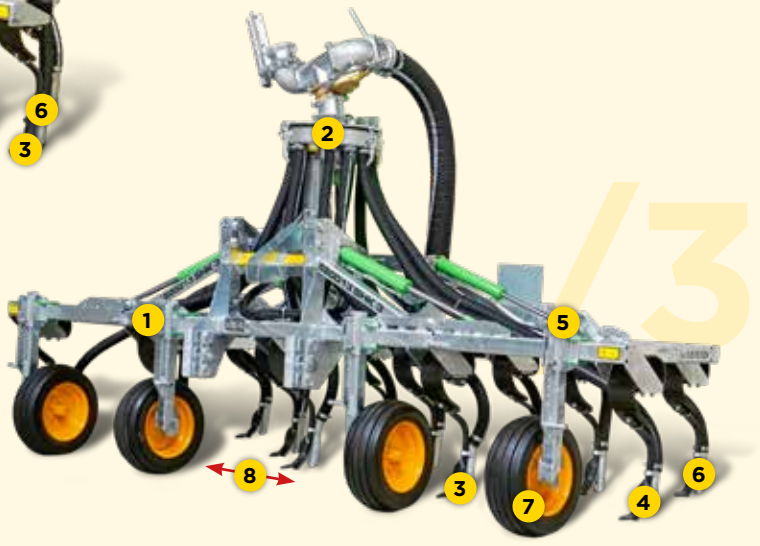
Models	Working width (m)	Transport width (m)	Number of elements	Number of macerator outlets	Weight (kg)
XXL6375/34SDH2	6.37	2.82	17[1]	1 x 36	2,100
XXL7125/38SDH2	7.12	2.82	19[1]	1 x 44	2,320
XXL7875/42SDH2	7.87	2.82	21[1]	1 x 44	2,460

[1] *2 discs per element.*

TERRAFLEX/2 /2XXL /3

IDEAL ON HEAVY AND STONY SOILS!

Designed on the basis of a galvanised double-beam frame, the Terraflex consists of 2 or 3 rows of spring tines ending with 6.5 cm wide reversible shares. These spring tines allow a better loosening of the ground, a good mixing of the vegetable residue and a tearing of the plough soil for a better rooting of the plants in depth. The vibrating effect protects the injector against damaging obstacles. To conclude, the Terraflex is **ideal for heavy and stony soils**.



1. **Fully galvanised high tensile steel frame**
2. **Scalper© macerator**
3. **Ø 60 mm injection outlets**
4. **Reversible spring tines** (6.5 cm wide)
5. **Hydraulic folding system**
6. Injection depth: **0-15 cm**
7. **Individual adjustment of the tine depth via 200/60-14.5 gauge wheel**
8. **Row spacing: 30, 37.5 or 40 cm**
9. Transport width: **from 2.6 to 3 m**

WORKING PRINCIPLE

The share of the Terraflex opens up the soil for the slurry to be applied at a depth of up to 15 cm. The vibrating effect of the tines **increases their strength and the hammering effect on obstacles**. In order to choose the good compromise between flow rate, distribution and flow of organic manure, the row spacing of the Terraflex is 30, 37.5 or 40 cm depending on the model. For maize, the 37.5 cm width is ideal, as it corresponds to half the row spacing for this type of crops. In the event of many stubbles, the model with a 40 cm row spacing is ideal to take advantage of the greater spacing and to better mix the crop residues with the soil and allow the slurry to pass through more easily.

PANTOGRAPH FOLDING SYSTEM

This patented folding system is standard on the Terraflex XXL 8625/23SHK/2 and offers many advantages. It allows you to take advantage of an injector with a XXL working width while complying with the legal transport requirements. Its mechanism folds the 61 cm long end wings according to the pantograph principle, i.e. as a folding parallelogram. The wings move towards the front when switching to “transport” mode. Its specific advantage is not only the reduced structure height (approx. 3.42 m) compared to a conventional folding system, but also the compactness of the folded injector, as well as the centre of gravity shifted downwards and forwards (in transport position).

Models	Working width (m)	Transport width (m)	Number of tines	Tine spacing (cm)	Number of macerator outlets	Weight (kg)
2700/9SK/2	2.7	2.6	9	30	1 x 14	880
2800/7SK/2	2.8	2.6	7	40	1 x 14	800
3900/13SHK/2	3.9	2.6	13	30	1 x 14	1,040
4400/11SHK/2	4.4	2.7	11	40	1 x 14	1,140
4500/15SHK/2	4.5	2.6	15	30	1 x 17	1,280
5100/17SHK/2	5.1	2.6	17	30	1 x 17	1,420
5200/13SHK/2	5.2	2.6	13	40	1 x 14	1,280
XXL 5625/15SHK/2	5.62	2.87	15	37.5	1 x 17	1,780
XXL 5700/19SHK/2	5.7	2.87	19	30	1 x 19	1,920
XXL 6300/21SHK/2	6.3	2.87	21	30	1 x 24	2,040
XXL 6375/17SHK/2	6.25	2.87	17	37.5	1 x 17	1,860
XXL 7125/19SHK/2	7.12	2.87	19	37.5	1 x 19	2,060
XXL 8625/23SHK/2	8.62	3	23	37.5	1 x 24	2,520
4400/11SHK/3	4.4	2.65	11	40	1 x 14	1,300
5200/13SHK/3	5.2	2.65	13	40	1 x 14	1,420
6000/15SHK/3	6	2.65	15	40	1 x 17	1,510
5100/17SHK/3	5.1	2.65	17	40	1 x 17	1,600
5700/19SHK/3	5.7	2.65	19	40	1 x 19	1,680

TERRASOC

IDEAL ON SANDY SOILS!

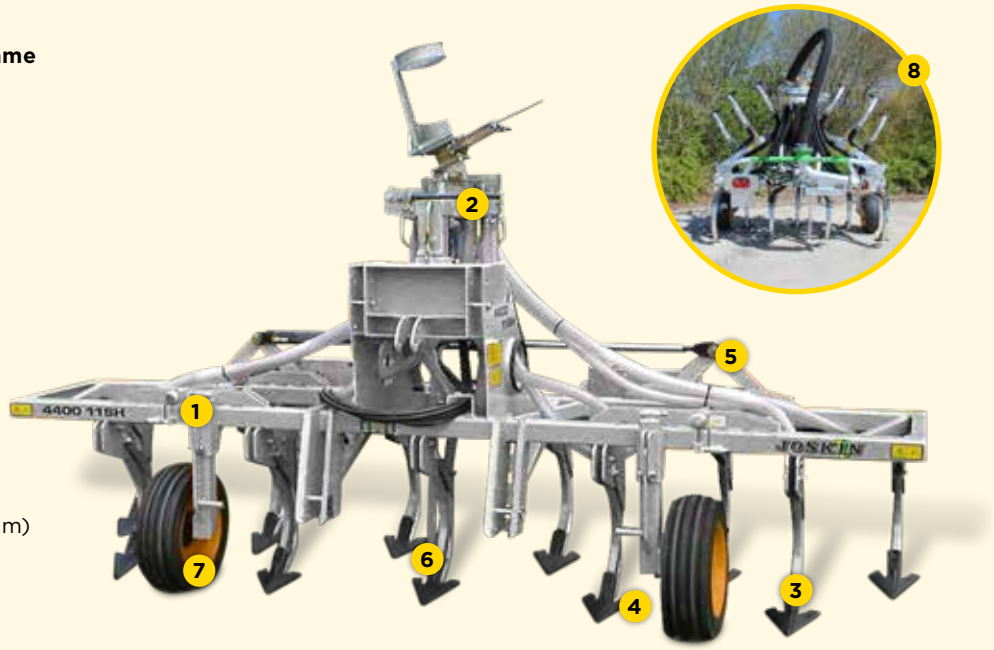
The Terrasoc is made of a galvanised double-beam frame with 2 rows of rigid tines with 24 cm flat "duckfoot" shares at their ends. The shape of the tines and the wide opening of the shares provide a **very good slurry flow** and an **adjustable spreading depth up to 12 cm**. The shear bolt security protects the tines against destructive obstacles. The Terrasoc is therefore the **ideal injector for sandy soils with few stones**.

SCAN ME

WORKING PRINCIPLE

The slurry is fed through an injection hose that follows the shape of the tine and is applied under the sole of the share that has opened the soil. With the Terrasoc, slurry is injected over the entire width of the share (from 15 to 24 cm depending on the type of slurry and ground), which contributes to a high spacing between the tines, as well as less tractor power. The distance between the tines is 40 cm, and the distance between the two rows is 70 cm. This wide spacing **prevents any clogging of the soil and crop residues** as well as the "rake" effect. Finally, the rubber gauge wheels allow a centralized adjustment of the working depth.

1. **Fully galvanised high tensile steel frame**
2. **Scalper© macerator**
3. **Ø 60 mm injection outlets**
4. **Rigid tines with duckfoot shares** (24 cm wide) – on 2 rows
5. **Hydraulic folding system**
6. Injection depth: **0-12 cm**
7. **Rubber gauge wheels** (Ø 605 x 210 mm)
8. Transport width: **from 2.6 to 2.85 m**



Models	Working width (m)	Transport width (m)	Number of tines	Tine spacing (cm)	Number of macerator outlets	Weight (kg)
2800/7S	2.8	2.6	7	40	1 x 14	700
3600/9SH	3.6	2.7	9	40	1 x 14	940
4400/11SH	4.4	2.7	11	40	1 x 14	1,020
5200/13SH	5.2	2.85	13	40	1 x 14	1,130

TERRADISC2

FOR INTENSIVE STUBBLE PLOUGHING!

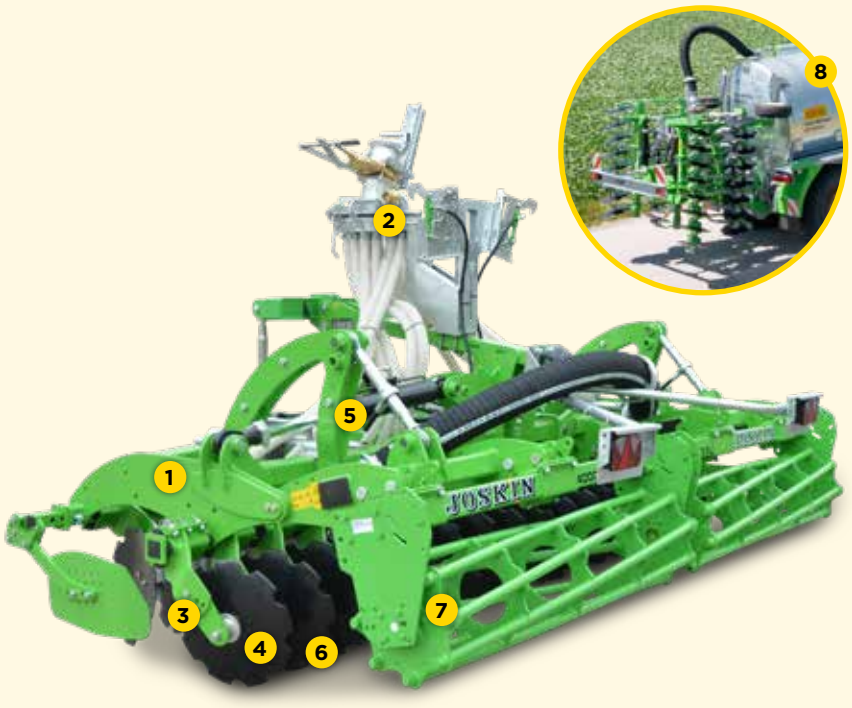
The Terradisc2 combines 2 actions: **slurry injection and stubble ploughing**. It works the soil over a width of 4, 5 or 6 m at a depth of up to 10 cm. The injection hoses are placed behind the first row of discs and inject the slurry with a 25 cm row spacing. The second row of discs then covers the slurry. The Terradisc2 impresses with its versatility, **simplicity** and **efficiency**!

SCAN ME

WORKING PRINCIPLE

The 510 mm diameter discs of the Terradisc2 are light and toothed. They are fitted on two rows, which are 80 cm apart, with an opposite angle. The wide spacing between the rows **prevents any clogs of the soil and crop residues**. Each disc has its own hub with very watertight bearings with oil bath. The maintenance time is therefore reduced to a minimum. The elements are connected to the frame by a silent-block system with 4 rubber shock absorbers, which absorb all vertical strains and do not require any frequent lubrication.

1. **Painted high tensile steel frame**
2. **Scalper© macerator**
3. **Ø 60 mm injection outlets**
4. **Ø 510 mm toothed discs – on 2 rows**
5. **Hydraulic folding system with Lock-Matic© automatic locking system**
6. Injection depth: **0-10 cm**
7. **Individual adjustment of the disc depth via 200/60-14.5 gauge wheel or cage roller**
8. Transport width: **3 m**



Models	Working width (m)	Transport width (m)	Number of discs	Spacing (cm)	Number of macerator outlets	Weight (kg)
XXL4000/32TDH	4	3	32	12.5	1 x 16	2,900
XXL5000/40TDH	5	3	40	12.5	1 x 20	3,200
XXL6000/48TDH	6	3	48	12.5	1 x 24	3,500

EQUIPMENT
(spreading booms and injectors)

MANAGEMENT AND CONTROL - ISOBUS

The ISOBUS universal 'plug and play' solution simplifies things: **"one terminal for a wide range of equipment, regardless of the manufacturer."** The interface of the **JOSKIN** control box, just like that of the automaton, can be replaced by the ISOBUS terminal that is already present in the tractor cabin, if it is equipped with one. Thanks to this system, one single control box in the cabin replaces several ones: a direct way to high-tech agriculture! This system centralises, for instance, the electrohydraulic controls, the pressure sensors, the management of the injectors. The terminal is also compatible with a GPS system for a precise guidance when spreading on different plots.

SCALPER© MACERATOR

The **JOSKIN** Scalper© macerator is extremely efficient to **improve the flow of some types of slurry that contain many fibres and foreign materials**. It consists of self-sharpening, freely rotating circular blades fitted on a blade holder driven by a hydraulic motor. The circular blades (pivoting on their own axis) and the off-centre arched elliptical holes of the blade holder inevitably cut all foreign bodies in the slurry. If the blades hit something too hard, the rotation direction of the Scalper© is reversed by the "Switch-Matic" system (option) until the obstacle is chopped. The **JOSKIN** Scalper© macerator is also sold separately for individual solutions.

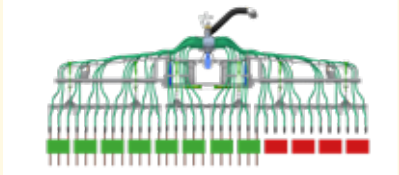
REDUCTION OF THE SPREADING WIDTH

As an option, it is possible to **temporarily reduce the spreading width of the implements** by using ball valves. These are placed at the outlet of the Scalper© macerator and are manually operated. For example, you can avoid spreading in the tracks of the sprayer when fertilising your crop fields. Another very useful solution is the pneumatic section control. In this case, a balloon system installed on the spreading line after the Scalper© macerator is inflated (by a compressor) to temporarily block the hose (Section Control).

SCAN ME **Configure** your spreading boom in a few clicks!

SCAN ME **Configure** your arable injector in a few clicks!

SCAN ME **Configure** your meadow injector in a few clicks!



ADJUSTMENT

Several tools are available to **adjust the spreading works**. As standard, a manual multi-position valve fitted on the inlet of the macerator adjusts the slurry flow in steps. The Terrasoc and Terraflex can also be fitted with an extra pair of rubber gauge wheels to even out the injection depth. If an ISOBUS system is present, the 'Section Control' can be used to automatically control the opening and closing of the sections of the spreading implement coupled to the slurry tanker. An external GPS antenna receives the position and the ISOBUS compares it with previously recorded positions in order to close the sections on areas that have already been fertilised.

HARDOX COUNTER BLADES

JOSKIN manufactures all its counter blades in HARDOX steel. It has 6 times the tensile strength of conventional steel and 3 times the ultimate stress. It is also significantly lighter for the same strength. Its use in this case is mainly justified by its low abrasion qualities. **JOSKIN** offers **different types of counter blades** for different flow rates (m^3/ha) at the same spreading speed. They differ only in the size of the holes: the larger the holes, the greater the spreading rate at the same speed.

SCATTERER ON SPREADING IMPLEMENT

It is possible to equip your spreading implement with an exact/goose-neck/swinging scatterer in order **to fertilise areas where the use of your spreading implement is impossible** (e.g. due to the soil moisture or working width). In this case, a system of manual or hydraulic valves directs the flow of slurry to the scatterer.

EQUIPMENT
(spreading booms)

ASSEMBLY WITH OR WITHOUT LINKAGE

Most **JOSKIN** slurry tankers are standard equipped with fixing points to add a linkage, which allows to fit all spreading implements from the **JOSKIN** range, including the widest end heaviest ones, with a 3-point or 4-point hitch. The linkage is designed to be compact and to bring the implement as close as possible to the tank in order to **keep a compact vehicle and a good load distribution**. Some implements can be mounted without a linkage, such as spreading booms which - for the most part - have a linkage system integrated into the boom.

AUTOMATIC LUBRICATION

After a working day, it is usually necessary to lubricate the grease nipples: this is why the automatic lubrication can be a very useful tool for a long service life of the machine. The system consists of a grease tank, an electric pump and a timer, all of which send the grease to where it is needed via cleverly placed pipes. You save time, you don't forget anything and the machine is **always well maintained**.

DOUBLE FOLDING SYSTEM

The double folding system is standard on the 18 m Penditwist spreading boom and available as an option on the 15 m and 18 m Pendislide PRO models. This manual or hydraulic folding principle allows one spreading boom to **have 2 working widths** if required (18 and 15 m or 15 and 12 m). When double-folded, it is also **more compact for transport**, allowing shorter tankers to benefit from a wider spreading implement.

METAL SHARES

As an option, it is possible to replace the **standard synthetic shares (A)** of the line spreading booms with skids with **cast iron models (B)**. These have the advantage of being more resistant to wear, especially on stony ground. However, they are heavier than Ertalon skids and are more expensive.

WORKING LIGHTS

At **JOSKIN**, we are aware that the working day in the agricultural world does not end with nightfall! In order to be able to continue your work in good conditions, you have the possibility to equip your vehicle with **one or more LED working lights**.

DOUBLE FEEDING SYSTEM

A double feeding system is two tank outlets operating in parallel. This solution is very interesting when it comes to **feeding wide implements**, such as spreading booms of 18 m or more.

SCAN ME

Configure your spreading boom in a few clicks!

EQUIPMENT
(injectors)

HYDRAULIC PINCERS

The **JOSKIN** meadow injectors are fitted as standard with mechanical (hydraulic on Solodisc XXL) anti-drip pincers releasing the injection hose automatically when the injection element touches the ground (and inversely when the element leaves it). Each pincer has a rounded jaw and a pinch stop to limit the wear to the rubber injection cone as much as possible. They can be replaced by hydraulic pincers, **which can be opened or closed at any time** without having to lift or lower the injector.

EXTRA WIDE SHARE

Tines with reversible blue reinforced shares (Kongskilde Vibroflex) can replace the standard model. They are designed to **bury and mix larger quantities of straw and plant residues**. They are characterised by 2 folds that allow the earth to go up and the plant material to go down at the same time, a vertical zone (above the share) for a better mixing of plants and soil, an 11 cm width, an even greater robustness, their reversibility, a design for burying mulch and a very good mechanical weed control effect (roots and seeds).

HYDRAULIC COMPENSATION

The springs of the injection elements on the Solodisc act as mechanical shock absorbers and apply the discs with a certain pressure to the soil, thus limiting variations in injection depth and allowing a vertical movement of the elements to adapt to transverse irregularities in the ground up to 25 cm. As an option, the springs can be replaced by a hydraulic cross-compensation system keeping the **same ground pressure for each element** (communicating vessels principle).

"WET GROUNDS" DEVICE

All arable and meadow injectors controlled by a sequential block have a system (standard or optional depending on the model) to lift the injector in wet areas, thus **preventing it from sinking too deeply**. This device consists of a valve that lifts the rear implement when going from a dry area to a wet one, while keeping the feeding valve open and the macerator active.

LEVELLING HARROW

As an option, Terraflex injectors can be equipped with a levelling harrow that **loosens "light" soil after injection**. The harrow can also be equipped with scraping tines for an even more intensive loosening.

UMBILICAL SYSTEM

The entire range of **JOSKIN** injectors can be used with an umbilical system (i.e. **without a tanker**) since all implements can be fitted independently on our slurry tankers or on a specific support for the 3-point hitch of the tractor.

SCAN ME **Configure** your arable injector in a few clicks!

SCAN ME **Configure** your meadow injector in a few clicks!

JOSKIN®

SLURRY SPREADING

Discover all our **BROCHURES** on **joskin.com**

Rue de Wergifosse, 39 - 4630 Soumagne (Belgium) • E-mail: info@joskin.com • Tel.: +32 (0) 4 377 35 45