

The seed drill **Solitaire NT**



Agricultural methods – the right tool for everyone



Success begins with sowing.

In agriculture, we continuously strive to **optimize production processes** by adapting the use of machines to the best possible respective tillage processes. The variety of production processes results from **different cultivation methods, crop rotations, geographical locations and environmental conditions**. With its innovative ideas, LEMKEN helps significantly in the implementation of modern production processes in agriculture.

Conservation practices are part of modern agriculture and serve to protect natural resources. This is not only about soil, water and air, but also about **energy efficiency, time management, economic success and the long-term fertility** of agricultural land.

With the new Solitair NT seed drill for mulch and direct seeding, LEMKEN is expanding its portfolio in the field of drilling technology with a solution that is specifically designed to meet the **requirements of conservation cultivation systems**. Whether after minimal soil cultivation or direct seeding – the Solitair NT enables resource-saving **plant cultivation with high efficiency and yield safety**.

Sowing is decisive – for yield, soil health and farm success.

LEMKEN offers all farmers a **practical solution** that adapts flexibly to the various forms of cultivation – from conventional cultivation methods to conservation tillage methods up to direct seeding. You can depend on:

- Precision – for smooth crop emergence and optimal plant development
- Adaptability – for changing conditions, cultures and processes
- Efficiency – through high working width and operating speed
- Comfort – through intuitive operation and easy adjustment
- Reliability – thanks to robust, low-maintenance and long-lasting technology

In mulch sowing, the Solitair NT is convincing with constant seeding quality with minimal soil movement. The special coulter arrangement opens the soil only as far as necessary, **retaining moisture and reducing erosion and weed pressure**. Wide depth guide rollers stabilize the seed coulter and ensure a reproducible seeding depth, even with changing soils and mulch deposits. The hydraulic coulter pressure can be continuously adjusted to the field conditions. The result **is uniform field emergence, clean rows and a homogeneous crop development**.



The Solitair NT also plays to its strengths in direct seeding. The 10-degree downward angle ensures active soil grip and reliable penetration of the seed coulter – even under dry or solidified conditions. The closing roller, which can be adjusted in pressure and angle, specifically restores the soil closure, **promotes capillarity and ensures a quick, even emergence**. The machine runs smoothly in the lane, keeps the depth and enables precise row guidance even at higher travel speeds. This enables the establishment without pre-seeding soil cultivation – safely and efficiently.



In Planting Green, i.e., sowing among living intermediate crop stands with a high biomass content, the Solitair NT remains compact, free and precise. No organic material adheres to the ProDisc seed coulter, so that **clogging-free working** is guaranteed. The discs open a slim seed furrow, prevent hair-pinning and place the seeds exactly at the desired depth. With the adjustable closing roller, the soil closure is reliably produced, moisture is kept and germination is evenly supported. This **saves a work step, protects the soil structure and promotes an active soil life** – with the highest seeding accuracy.



This is how the Solitair NT – components work in focus



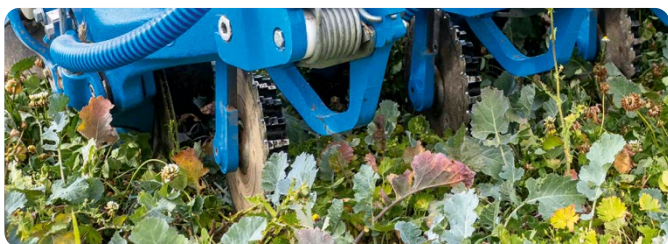
Tank

The single or double hopper has a **large filler opening** and depending on the equipment fitted, allows for various seeding procedures



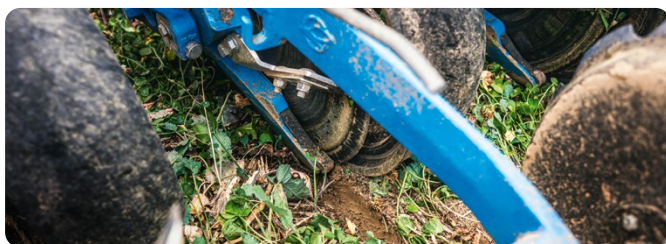
MultiHub

The additional hopper for a **third component** increases the flexibility of multiple seeding option.



Row cleaner (optional)

Organic material is cleared in the area of the seed coulters to reduce hair-pinning to a minimum, thus enabling perfect **seed placement**.



Seed furrows

The downward angle of ten degrees and the inclination of seven degrees to the direction of travel produce **precise seed furrows**.



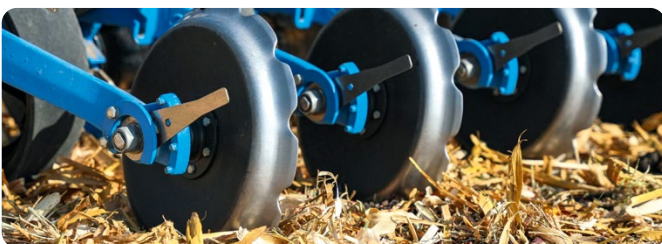
Metering

The easily accessible arrangement ensures **convenient calibration** and fast metering roller changes.



Distributors

The distributor heads are positioned directly above the coulter bar to ensure **even transverse distribution**.



Closing roller

The serrated closing wheel, adjustable in both pressure and angle, ensures **optimal furrow closing**.

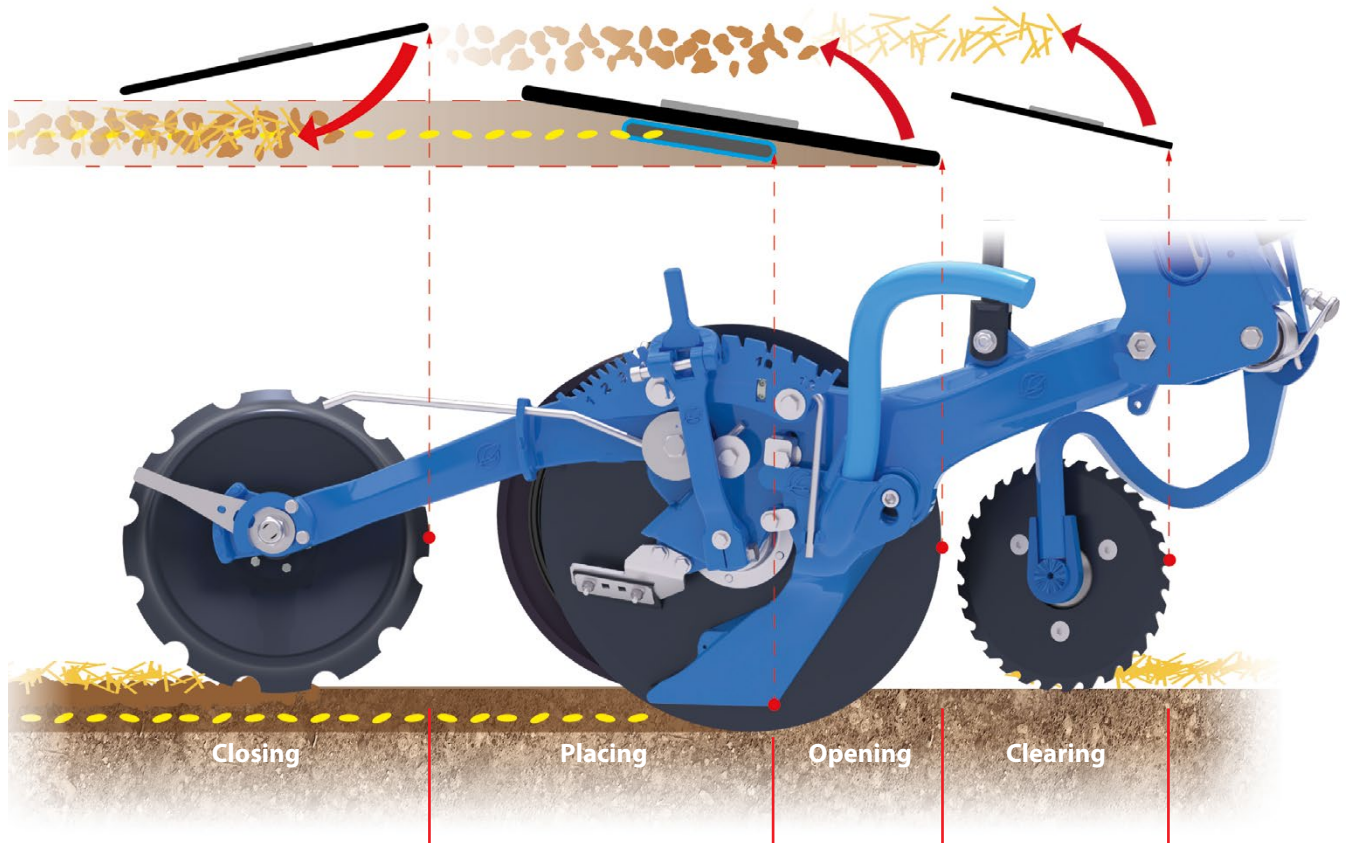


Tyre equipment

Large-volume tyres – with the option of a VF version – are offered for **maximum soil protection**.

ProDisc coulters for seeding

The LEMKEN Solitair NT is a seed drill that is suitable for numerous agriculture processes. Whether **direct seeding, planting green, mulch sowing or reseeding in the grassland**, the seed coulters rise to every challenge and ensure a perfect crop emergence. Properties such as the **optional clearance in the seed furrow area, the contour adjustment or the safe closing of the seed furrows** contribute significantly to this.



Numerous elements. One unit.

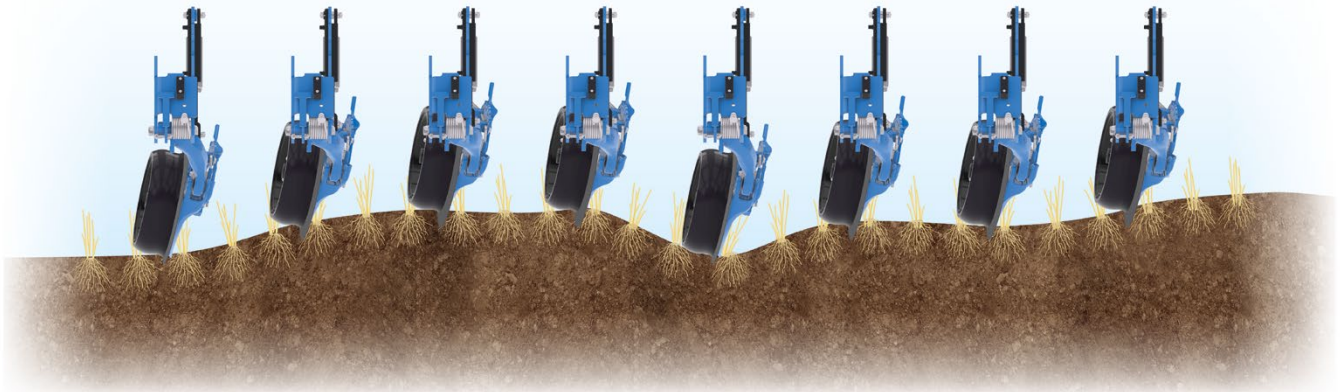
Row cleaner

The downward angle of the seed coulters and the row cleaner help minimize the **hair-pinning – where plant residues and other materials are pressed into the seed slot**. The integrated parking position for the row cleaner is unique: If the field conditions change, the row cleaners can be locked by a tool-free adjustment.



Hydraulic cylinder

The individually suspended seed coulter and the wide depth guide rollers enable **optimum contour adjustment** and ensure **precise seed placement** also on uneven surfaces. The hydraulic cylinder used has several tasks: it enables 400 mm of vertical movement up and down, it serves as a lifting and overload element for the seed coulters, and while helping the coulter pressure (up to 340 kg) which can be conveniently adjusted from the tractor cab.

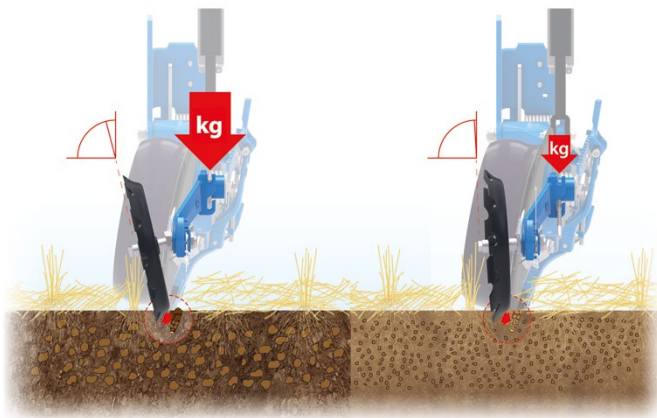


ProDisc single-disc coulter

The coulter disc with ten degrees downward angle and an angle of seven degrees to the direction of travel ensures a **minimum requirement for tractive force and prevents soil compaction** in the seed placement area. At the same time, it guarantees safe opening of the seed furrow with the LEMKEN ProDisc seed coulter – high coulter pressures are only necessary in extreme conditions due to the easy penetration into the soil. The seeding depth can be freely chosen between zero and ten centimetres. The **depth is adjusted without tools** via a preloaded lever for each seed coulter.

Seeding shoe

The seeding shoe is one of the key elements for **precise seed placement**. In order to meet the different conditions and seed depths and always achieve a perfect seed placement, two angular positions of the seed shoe are possible. In addition, a furrow closer at the lower end of the seed coulter prevents the seed from escaping from the seed furrow. Due to the arrangement in the shadow of the coulter disc, the **wear of the seeding shoe will be reduced to a minimum**.

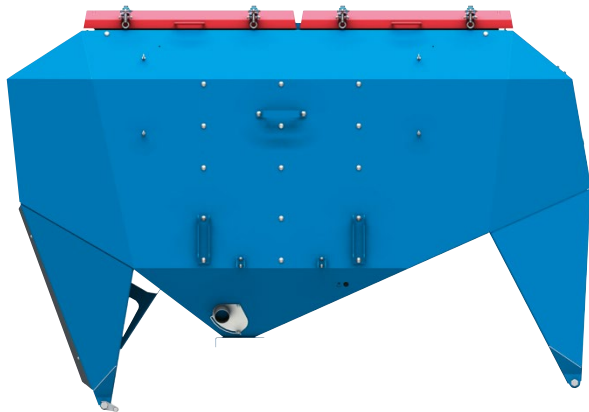


Closing roller

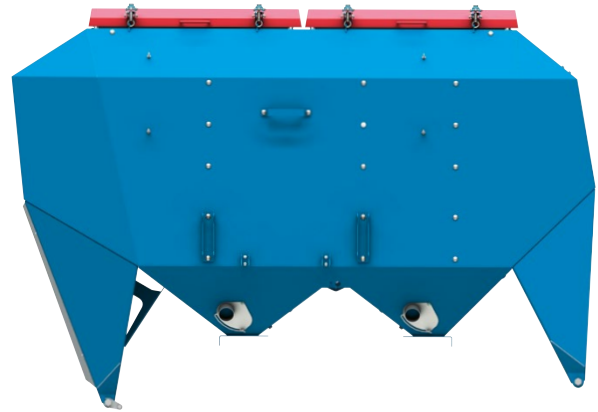
The final step on the way to the perfect crop emergence is the closing of the seed furrow. For absolute flexibility under all operating conditions, both the pressure and angle of the locking roller can be adjusted without tools. An aggressive angle position and a high pressure of the closing roller guarantee the **best work results even in very dry conditions**.

Everything **on board**

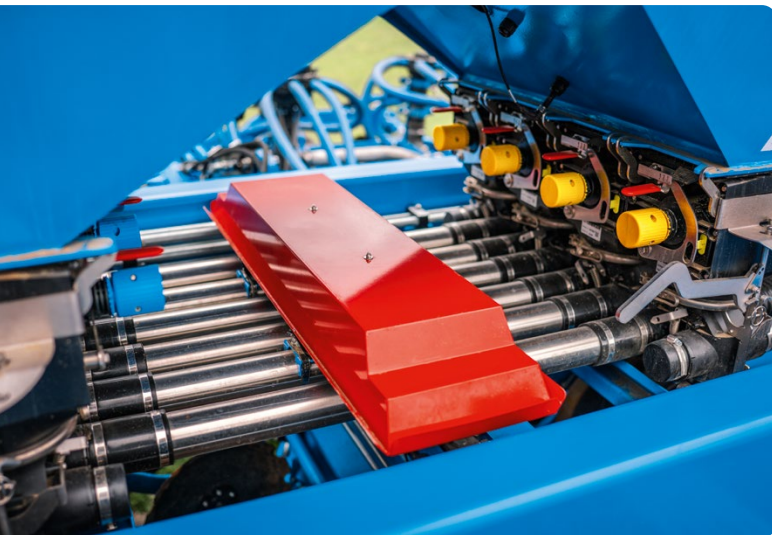
The Solitair NT is all about performance and efficiency. That's why the Solitair NT is equipped with large-volume metal tanks: The tank's capacity and layout must be matched so that **the correct quantities of different components** can be stored. The Solitair NT comes with a 4,400 litre single tank as standard, which can be optionally replaced by a 5,100 litre double tank. Both versions can be extended with the 500 litre MulitHub, allowing **up to three components** to be applied.



Single tank
4,400 litre tank volume



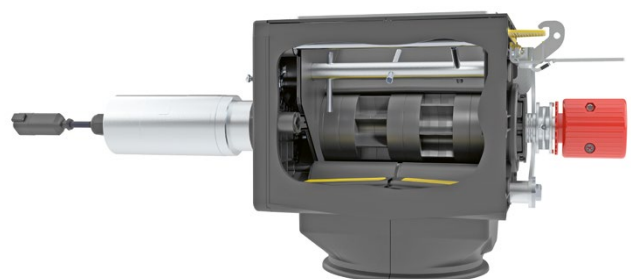
Double tank
5,100 litre tank volume



It's all in the metering

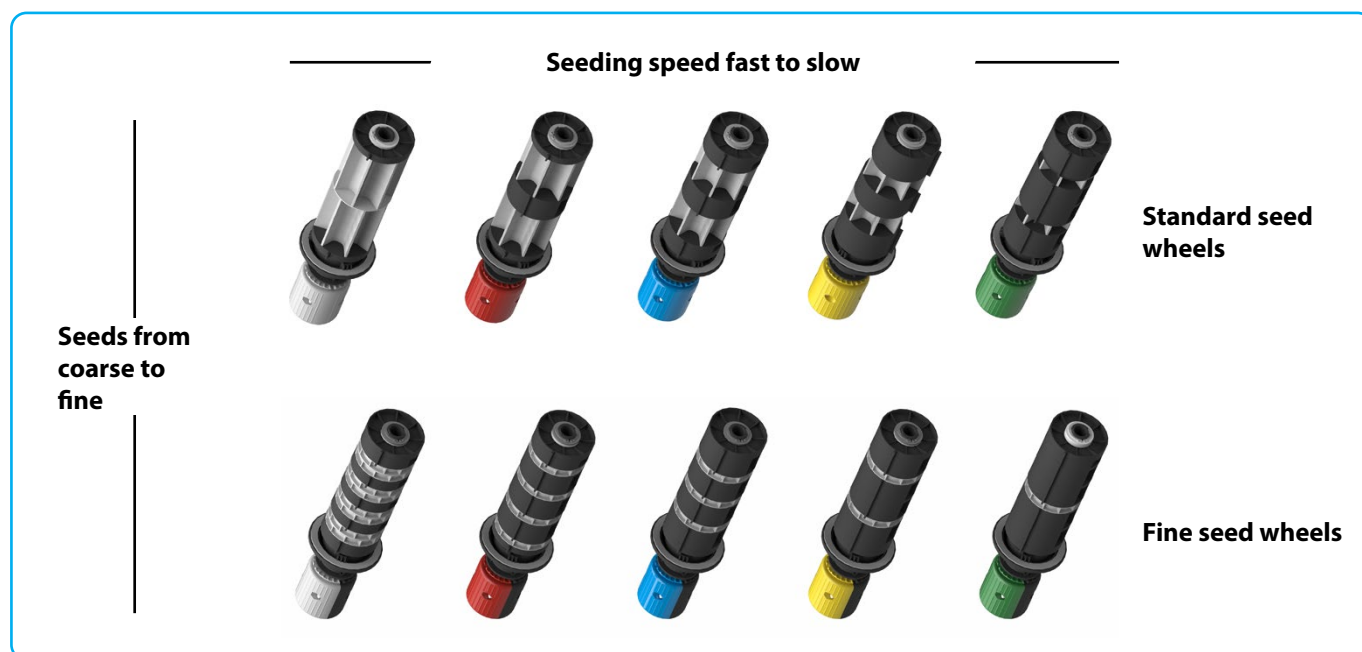
Even the basic version of the Solitair NT comes with four fertiliser-proof metering units per tank or half tank respectively, each of which supplies one distributor with seed – a **prerequisite for manual width section control, which can also be controlled automatically via Section Control as an option.**

LEMKEN's modular metering system is based on a seed wheel and bottom flap system. This makes the corrosion-resistant metering system **easily accessible**, whether for calibration testing, adjustment or cleaning. To prevent blockages, an **agitator shaft is also fully integrated into the metering system**. However, if fertiliser residues or seed deposits do accumulate, the entire metering unit can be dismantled without tools.

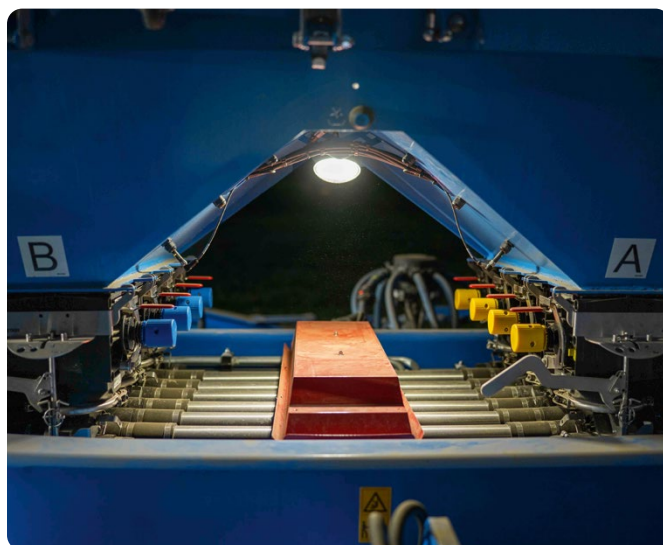


Ready for every type of seed

The size and weight of the seeds of different crop species and of different types of fertiliser can vary greatly. Standard and fine seed wheels are therefore available for the various crops. To change the seed wheel, the seed wheel area can be easily separated from the seed hopper using a slider. This allows **the seed wheel to be replaced or cleaned even with a full seed container**. The coloured marking on the handle clearly identifies which seed wheel is fitted.



The sowing rate depends on the working speed. The speed signal for metering is provided either by a radar sensor on the drawbar or by the tractor's speed signal.



Advantageously placed

With the new LEMKEN ProDisc seed coulters, up to three different components can be applied in the single-shot version. Different strategies can be implemented in sowing:

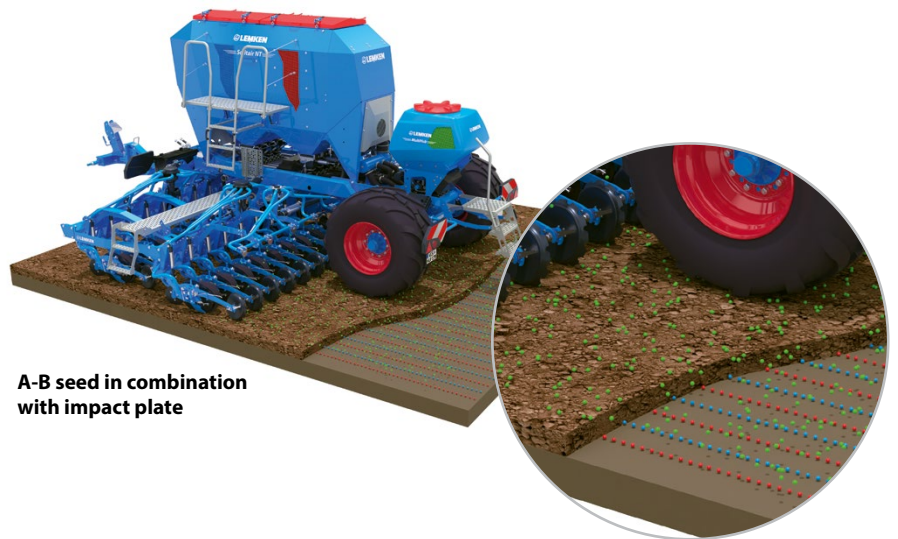
- **simultaneous fertilisation and drilling**
- Separation of components according to seed size with separate metering to **prevent segregation of seeds in the hopper**
- **simultaneous sowing or spreading of main crop, undersown crop or other components**



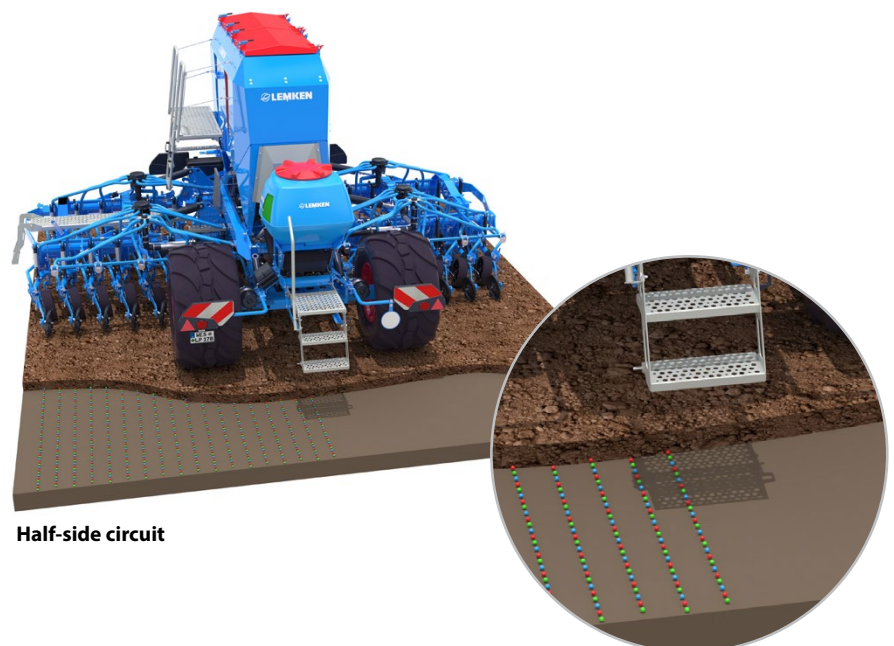
Single-shot method

Maximum flexibility and precision in sowing is possible with the double container when an A-B seed is performed. This allows **two different components to be applied in double row spacing**. The four distributors enable a half-side circuit, which can be used for all seeding procedures.

If the container is additionally extended by a 500 l capacity MultiHub, the Solitair NT sets **new standards in terms of efficacy and adaptability**. The component of the MultiHub is applied either via the existing seeder lines into the ProDisc seed coulters or via an impact plate behind the seed coulters – the MultiHub adapts to the section widths of the seed drill. The container is **fully integrated into the user interface as an additional seeding line**.



A-B seed in combination with impact plate

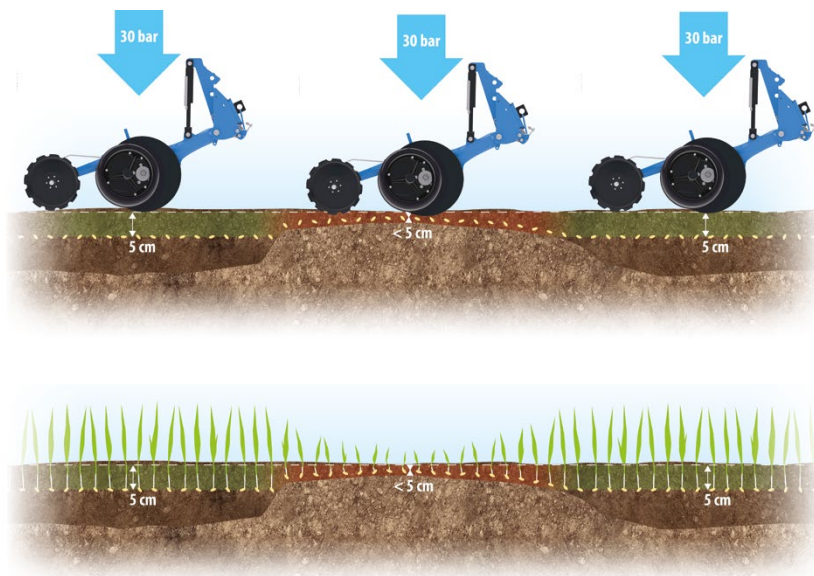


Half-side circuit

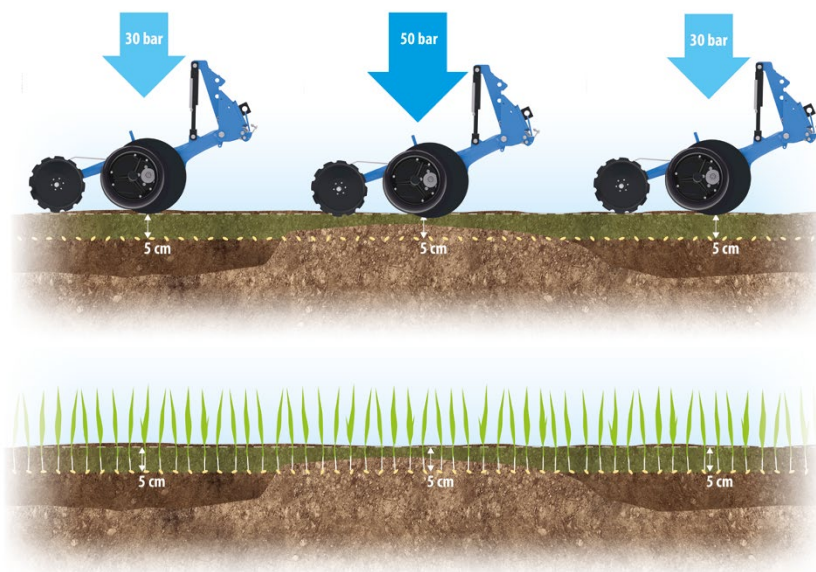
Precision with **changing soil conditions**

The coulter pressure setting forms the basis for uniform stocks: The **seeding depth remains constant even in changing soil conditions** – from damp depressions to hard lanes to gentle hilltops. The seed is not deposited too deeply or too shallow, side compression is avoided and the crop emergence is visibly more homogeneous. A **uniform, vital stock** facilitates further stock management and **stabilises the yield level**.

The optional automatic coulter pressure control offers an intelligent solution for the Solitair NT: The **system independently recognises the prevailing soil conditions and adjusts the coulter pressure fully automatically** – in real time and without the driver intervening. The driver is significantly relieved, as there is no need for manual adjustment.



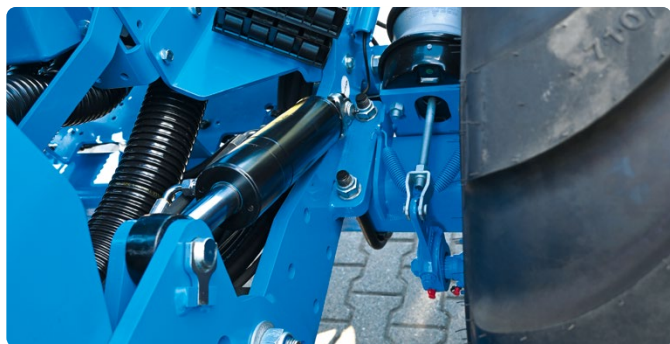
no coulter pressure control



automatic coulter pressure control

In addition, the coulter pressure control pays off economically: Uniform seeding depth means a **higher emergence rate**. Missed areas and reseeding will be less frequent, yield losses will decrease due to uneven stocks. The correctly adjusted coulter pressure **also reduces wear on the seeding unit and ensures a clean sectional pattern**. The bottom line is: Those who use the automatic coulter pressure control deposit more precisely, work more efficiently and create yield potential in the best possible way.

Adapted to **individual conditions**



Axle lift

Due to the axle lift, the **ground clearance** is also increased. This means that even the steepest field entrances are not a problem for the Solitair NT.



Tyre equipment

The Solitair NT can be equipped with large-volume VF tyres for maximum **soil protection**.



Parking position

If the **field conditions** change, the row cleaners can be locked by a tool-free adjustment. They are then in the shadow of the coulter mounting.



Pre-emergence marker

The Solitair NT is optionally available with a pre-emergence marker to mark the tramline as it is created. This **lowers automatically when applying a tramline**.



Filling auger

In order to **help load seed into the hopper**, a hydraulically swivelling filling auger is available, which is integrated into the Solitair NT.



MultiHub

The MultiHub enables a **third component** for seeding, which can be applied via the ProDisc seed coulter or the impact plate. The MultiHub is fully integrated into the user interface as an additional seeding line.



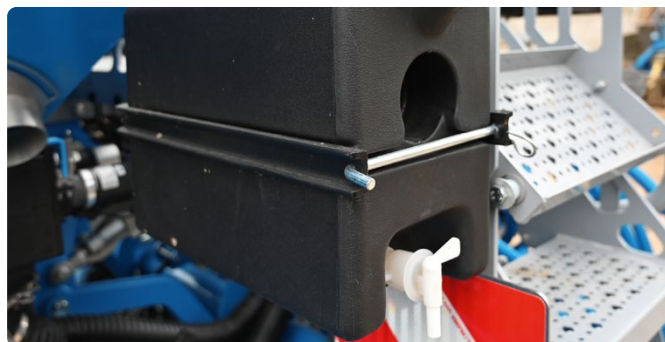
Impact plate

If the component is to be applied from the MultiHub **to the soil surface**, the application via the impact plate is recommended. For this purpose, it is transported from the hydraulically driven blower to the two distributors of the impact plates.



Hydraulic track markers

The hydraulic track markers are centrally located and always in the driver's field of vision. The hydraulic overload protection makes **working as comfortable as possible even under difficult conditions**.



Hand wash canister

Dust, lubricants or stains – contact with these is where hands get dirty while seeding. However, hands can be cleaned directly at the integrated hand washing container with 18 litres of water supply and soap dispenser.



Drawbar

The Solitair NT features a long drawbar for **maximum manoeuvrability** when working with wide rear wheels or twin tyres.

Tramlines for crop maintenance

An **integrated hydraulic tramline mechanism** is optionally available for the ProDisc seed coulters. The symmetrical distribution of the seed tubes ensures absolutely even transverse distribution even in tramline mode.

The **seed rate is automatically reduced** when the tramline is activated. Changing the distributor cartridges is easy, ensuring quick **adaptation to different tramline systems**, which greatly increases the flexibility of the machine – especially when it is used on multiple farms.

Distributor in seeding mode (top: Distributor head for tramline mode)



Distributor head for tramline mode active (distributor head is lowered for sowing mode)



Smart and **mobile**



iQblue drill is the **ISOBUS-based operating concept** for the Solitair NT. Thanks to the uniform LEMKEN design, drivers can quickly find their way around the system, which is controlled either via a LEMKEN CCI terminal or any universal ISOBUS terminal.

Separate width section control

The Multi-boom function can be used to automate the control of **separate width sections for fertiliser and seed**. This **prevents overlaps**. It is also possible to **process three application maps in parallel** so that seed and fertiliser are only applied where they can be used efficiently.

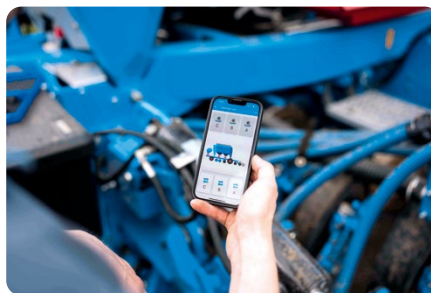
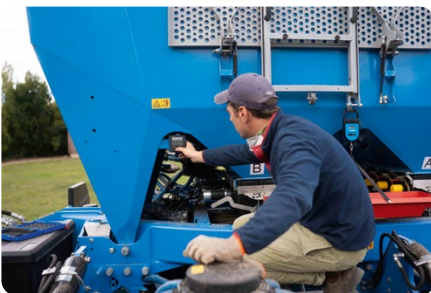
And let's go: iQblue Go app

The iQblue Go app is optionally available for Android and biogas devices. It establishes a wireless connection to the Solitair NT, enabling **convenient handling** during calibration testing or residue drainage, for example.

The integrated machine overview displays information on a range of parameters, including working speed and the current application rate. However, it also provides **access to machine data**, such as the total application rate and the number of hectares worked, and allows the error memory to be read out – from any location.



Numerous possibilities for the calibration test



The calibration test can be carried out either directly on the machine or via the iQblue software solution on the tractor terminal or a smartphone.

Precisely calibrated

The Solitair NT offers **numerous variants for the seeding locations of the individual components**, which are easily selectable at the push of a button. Four dosing wheels per container and two dosing units on the MultiHub create maximum flexibility. The component from the MultiHub can be applied, for example, via the impact plate, but also via one or both rows of coulters. This allows you **to react flexibly and in the shortest possible time to the different conditions**.

Technical Data

Solitair NT	
Working width [m]	6
Transport width [m]	3
Transport height [m]	3,300
Length [m]	7,000
Axle load [kg]	6,900
Drawbar load [kg]	2,100
Total weight [kg]	9,000
Single tank volume [l]	4,400
Volume of double tank (40:60) [l]	5,100
Volume MultiHub [l]	500
Filler opening single tank [m]	2.23 x 0.8
Filler openings double tank [m]	2 x 1.07 x 0.8
Filling height single tank [m]	3.2
Filling height double tank [m]	3.2
Distance between rows [cm]	16.7
Number of ProDisc seed coulters	36
ProDisc coulters pressure max. [kg]	340
Coulter disc Ø [cm]	48
Share position	7° to direction of travel, 10° downward angle
Tyre size	710/50 R 26.5
Power requirement (min.) [kW/hp]	132/180
Number of da spool valves	2
Power Beyond	1
Load sensing cable	1
Unpressurised return line [max. 5 bar]	1
Oil quantity hydr. blower min; max [l/min]	20 – 35
Lower link implement attachment	Cat. 3/4
Drawbar implement attachment Ø bolt [mm]	40 – 50
Ball head implement attachment	K 80



"It is not possible to make it rain more. Therefore, the logical consequence is to think about a cultivation system, which allows me to save as much water as possible."

Moritz Müller-Schönau,
Farmer and arable farming consultant
from Arzberg (Saxony)

Three years ago, Moritz Müller-Schönau

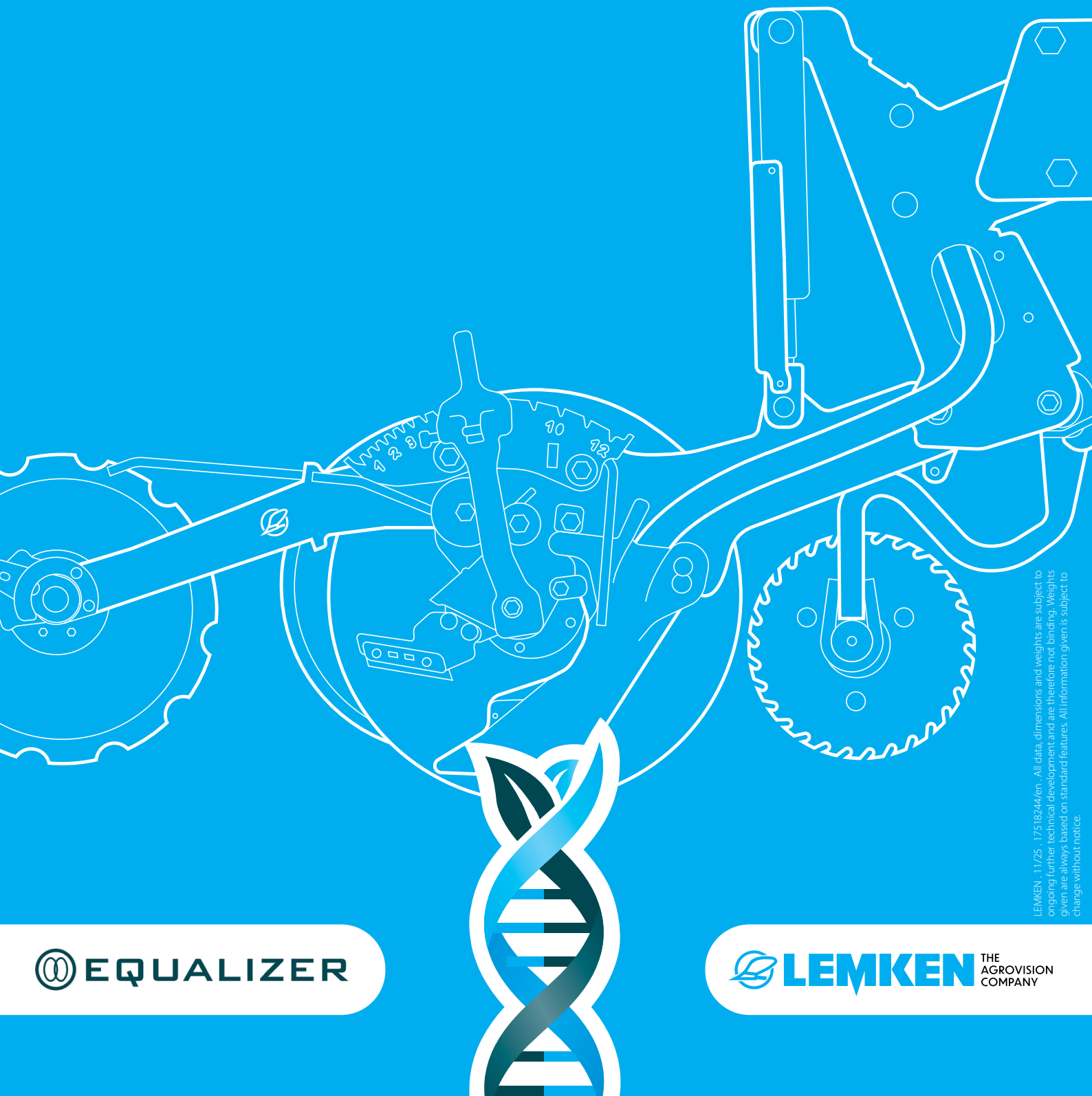
took over the "Gut Kamitz" 400-hectare farm in the Elbauen near Arzberg – and is forging new paths. The hot, dry climate and the floodplains require continuous soil cover. At the same time, he wants to promote biodiversity and establish a stable beneficial insect population.

He found the right answer in the direct seeding with the Solitair NT to keep the investment costs in machines as low as possible. Today, he grows barley, grain corn, rape-seed, soy, wheat and catch crops and uses the possibilities of seed drills: Companion seed, seed in mulch layers and subsoil fertilisation – for efficient stocks and lively soils. As a leading company for direct seeding, the farm manager contributes his experience to the practical research of the Saxony State Ministry for the Environment and Agriculture.

Jointly developed

For agriculture worldwide.

As a specialist for direct seeding, the EQUALIZER contributes many years of experience and proven technologies to the joint development. With the Solitair NT, a new generation of seed drills has been created at LEMKEN that combines numerous applications and efficacy.



 **EQUALIZER**

 **LEMKEN** THE AGROVISION COMPANY

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