

# DRILL COMBINATION **COMPACT-SOLITAIR**

 **LEMKEN** THE  
AGROVISION  
COMPANY



# High speed precision

Modern arable farming is characterised by the growth in unit sizes of successful businesses. As a result, the need has arisen for high capacity seed drills that offer flexibility without compromise to the precision of seed placement. A modern cultivator drill must be able to work in minimum-tillage and conventional crop establishment systems. High daily output will be achieved, via a high forward speed in work, a large tank size, and simple and efficient road transport.

Crop establishment will only be optimised if the seed drill can effectively perform the operations listed below. This is particularly important in situations of high volumes of crop residue are on the surface:

- Cultivation tools mix the crop residue uniformly with the soil and level the seed bed without risk of blockage.
- Seed coulters place seed precisely at the required seed depth, in plough-based and min-till situations.
- Seed press wheel firms soil around the placed seed, particularly in dry conditions.
- The working speeds for soil cultivation tools and seeding coulters are ideally matched to each other, to ensure perfect seed bed preparation as well as smooth operation of seed coulters.



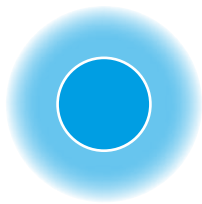


# Compact-Solitaire H/HD Seeding at high speed

The **Compact-Solitaire H/HD** is equipped with the LEMKEN Heliodor compact disc harrow's tool section. The Heliodor consists of two rows of wear-resistant, notched concave discs with 465 mm diameter and 5 mm thickness, which are individually attached to ensure they match the soil profile perfectly. The angle of the discs, in relation to direction of travel and the vertical, serves to ensure both an excellent and uniform mixing process.

The **Compact-Solitaire HD** sets new benchmarks in simultaneous drilling and fertilisation. Drill combinations allowing precise fertiliser placement can produce considerable increases in yields, especially with summer cereals and in regions with short vegetation periods. The divided hopper holds both seeds and fertiliser. Both fertiliser and seeds are metered out via separate, Solitronic-controlled metering devices.

The positioning of the tools and the placement of the fertiliser between two rows of seeds ensure that all plants are optimally supplied with fertiliser and prevent fertiliser burn in roots. As a result, ideal conditions are established for rapid plant growth.





### Efficient mounting of concave discs

the frame with a leaf spring. The leaf springs serve to provide a significantly greater degree of disc lane stability than the otherwise frequently used rubber buffer elements. At the same time the leaf springs also act as an automatic overload protection. Maintenance-free high-quality axial angular-contact ball bearings reliably absorb all loads exerted on the discs. To guarantee correct and permanent disc function, the bearings are further protected by a sealing ring. The special shape of the bearing housing on the disc carrier acts as an additional cover.



### Height-adjustable concave discs

The outer discs on the working section can be individually adjusted to avoid formation of a ridge or furrow where one drilling pass meets the next. Additionally available edge limiters make sure that the flow of soil on light to medium soils remains within the area being cultivated. On the rigid versions of the Compact-Solitair drill, the outer discs can be folded in for transport. This ensures a 3m machine is less than 3m wide during road transport.



### Precise depth

The fertiliser coulters bar is located in front of the tyre packer roller. Fertiliser is precisely deposited to the desired depth between two rows of seeds via the double disc coulters (400 mm Ø) at a coulters pressure of up to 150 kg. The fertiliser depth can be finely adjusted via pins. The individual fertiliser coulters feature automatic overload protection as a standard for use in stony soils. When seeding without under-root fertilisation, the hydraulically adjustable fertiliser bar is raised out of work to protect the fertiliser coulters against wear.



## Compact-Solitair Z and Compact-Solitair KK: Finely tuned cultivation intensity



### **Soil cultivation with a power harrow**

The 3, 4 or 6 metre-wide Compact-Solitair drill combination can be equipped with a Zirkon power harrow for effective seeding even under extremely challenging conditions. The power harrow shows its full strengths in both conventional and conservation tillage. Active soil cultivation for a wide range of applications in easy to difficult soil conditions. Power harrows offer advantages in variable soil conditions.



## Perfect levelling

The depth of the rotary harrow is adjusted mechanically or optionally hydraulically with continuous variability. Hydraulic lift of the power harrow via parallelogram. Wheelmark eradicators and lateral feed discs can be used to level surfaces in front of the power harrow.



## For sustainable increases in acreage performance

The working parameters of the LEMKEN Zirkon power harrow can be flexibly adjusted to ensure optimum seedbed preparation. Whether seedbeds are to be prepared rapidly and extensively at shallow depths or more deeply and intensively: working parameters such as working depth, rotor speed, tine position and forward travel speed can be individually adjusted to ensure optimum soil cultivation. DUAL shift manual transmission with reversible direction of rotation. This allows optimum seedbeds to be prepared in virtually any soil conditions, particularly heavy and strongly varying soils.



# Perfect adaptation to any soil conditions



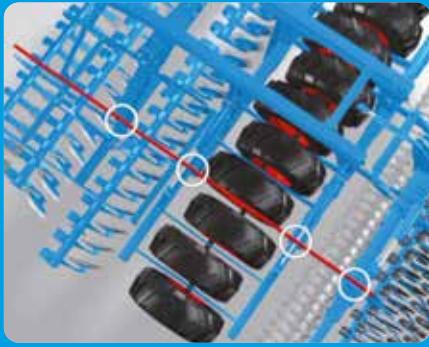
## Large tyre packer roller

The Compact-Solitair from LEMKEN with a diameter of 1,064 mm has the largest tyre packer roller in this machine category. This in turn means that the entire seed base can be uniformly reconsolidated. The tyres 420/65 R 20 enable the air pressure to be reduced to only 0.8 bar at full load.

In addition to this, the offset arrangement of the individual wheels results in an improved self-cleaning process while also ensuring excellent seeding even in wet conditions.

The tyre width is selected such that either three or four seeding coulters can be arranged behind each tyre, depending whether 16.7 or 12.5cm rows are specified.





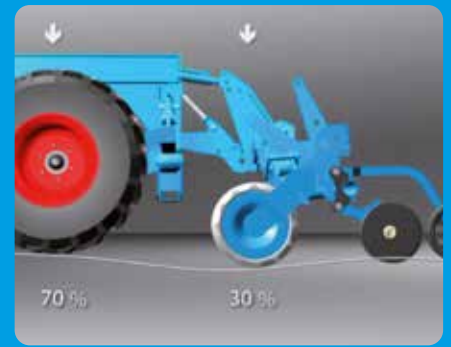
### Perfect soil adaptation

For the folding Compact-Solitair, a soil cultivation, tyre packer and seeder unit section is suspended on a centrally-positioned swinging axle. This enables ideal soil adaptation to be achieved, and uniform pressure distribution maintained, even with large working widths.



### Harrow for levelling

The additional harrow between the tyre packer roller and the seeding coulters enables the seed bed to be ideally levelled. The harrow can be easily adjusted in depth and angle to ensure that it always operates using the best degree of intensity. The additional flat bar helps to improve the levelling yet further.



### Matched pressure distribution

The machine weight can be distributed and varied between tyre packer roller and trapezoidal packing roller according to conditions. The configured pressure distribution is also retained on undulating terrain and thereby achieves ideal reconsolidation. The targeted pressure distribution can be hydraulically configured and adjusted through the Solitronic control system.



### Optimum pre-consolidation of rows

A trapeze packer roller can be added to the Compact-Solitair to obtain defined pre-consolidation of rows directly in front of the OptiDisc double disc coulters. The trapeze packer roller improves both the smooth operation of the seeding coulters and the soil contact of seeds. The trapeze packer roller is available for row distances of 12.5 and 16.7 cm; as the tyre packer roller in front of the trapeze packer roller features large tyres, it has a minimal effect on draft requirement.

However, the additional roller considerably increases the contact surface and thus extends the utilisation period of the implement, especially in wet conditions in autumn.

The optional roller pressure control system optimises the pressure that is applied to the trapeze packer roller. This makes operation considerably easier for the driver, as the roller pressure is automatically adjusted when surface conditions change, ensuring disruption-free work. The pressure control system thus creates an even soil structure and at the same time minimises traction force requirements of the drill combination.

# Accurate metering always

## Easy access to seed tank

The large tank can be easily reached via a generously-sized platform. The extendable ladder and the platform are made of antislip material. The large plastic lid of the seed tank can be easily opened and it reliably protects the seed against moisture. When filling with a telescopic or front loader, overhead loading work conveyor, or Big Bag, the opened lid acts as a baffle. The large tanks with a capacity of 3,500 litres for the rigid machines, and 4,500 litres for the folding models, maximise daily output.



## Segmented metering for precise seed spacing

For the seeding of the various seeds, the six-piece cell wheels can easily be set, using the tool set included, to seeding quantities of 1.5 to 300 kg per hectare. The combination of electrical drive and engageable cell wheels ensures that the sowing shaft always turns at optimum speed when seeding. This combination of speed and volume adaptation per sowing shaft revolution serves to guarantee a significantly enhanced longitudinal distribution of seed along the row. The Compact-Solitair has two to four feeder units to match the working width. The feeder units can be electrically actuated using the Solitronic electronic control system and (as an option) they can be hydraulically activated/deactivated on a section width basis.



## Simple and fast calibration

The calibration tray protects the individual feeder units against dirt when working. Thanks to its excellent accessibility it can be quickly and easily removed from its holder and slid into the calibration position. This prepares the machine quickly for the calibration sample. The calibration process is conducted through the Solitronic electronic control system. The LEMKEN standard delivery package includes digital scales in a practical aluminium case. This in turn means that accurate seed rate is guaranteed.



# Control and headland management



## Solitronic - an electronic all-rounder

The electronic Solitronic control system is responsible for all control and monitoring functions on the Compact-Solitaire seed drill. The clearly arranged LVT 50 display shows graphically created menus with a simple user interface. The hectare readings per field, day and year are determined and stored electronically. All tramline variants can be managed using the on-board computer. The control system for the seeding shafts, general headland management, the coulter pressure setting, and the section-width switch off (option), are core functions in the Solitronic control system.

Headland management is activated by one double acting spool valve which raises the soil cultivation tools, coulter bar and bout markers in the pre-selected order. The operating effort for the driver at the headland is thereby reduced to a single operation. In the ISOBUS version, the Compact-Solitaire can be operated from the CCI-1200 terminal. This allows tramlines to be created freely in the field via GPS using Tramline Control. HeadlandCommand substantially simplifies implement control at the headlands and controls implement lifting and lowering to prevent both gaps and double passes. CCI.Control allows fertiliser and seeds to be applied variably to specific width sections in order to save resources and increase yields.

# Blockage-free seed placement



## Outboard seed distributors

The seed distributors are located outside the seed tank directly above the coulters. For the purpose of uniform seed distribution the coulters hoses from the distributor to the coulters are as short as possible and all the same length. The continuous drop in the sowing hoses prevents blockages. The distributor can be easily opened for inspection purposes. The emptying hose included, enables residual quantities to be removed quickly from the seed tank by way of the seed distributor.



## Maintenance free OptiDisc double disc coulters

The Compact-Solitair is equipped with the latest maintenance-free double disc coulters OptiDisc or OptiDisc M. They operate efficiently on ploughed land, or in mulch sowing. Seed is always placed at a uniform depth because each seeding coulters is guided by a rubber-tyred depth wheel. With the OptiDisc, the hydraulically generated coulters pressure of up to 70 kg ensures that a constant seeding depth is maintained even under difficult conditions. The depth of the double disc coulters remains ideal even at high forward speeds. With the OptiDisc M, up to 45 kg pressure are mechanically applied to the seeding coulters. The coulters pressure is easily adjusted via a lever system. Pressing in the seed using the depth guide wheel as a pressure roller ensures perfect soil consolidation with optimum water channelling and uniform rooting. This results in swift, uniform seed germination.





### **Individually switching feeder units on/off**

Each feeder unit can be separately switched on and off. This function can be operated from the tractor seat using the Solitronic electronic control system (option). This allows half width shut off if required for tramlines, and avoidance of large overlaps at headlands.



### **Tramline system**

The Compact-Solitair can be equipped with up to 2 x 4 seeding hoses with TramlineControls for the creation of tramlines. When creating tramlines the excess seed is returned to the seed tank through large hoses. Automatic swivelling of the tramline flap ensures that the air pressure in the system remains constant. This in turn guarantees uniform distribution of the seed even when the tramline is switched off.



# Versatile utilisation



## **Bout markers with shearbolt protection**

The hydraulic bout markers are mounted well forward and therefore always in the driver's field of vision. Shearbolts help to avoid any serious damage should an obstacle be overlooked. The Solitronic electronic control system with integrated headland management controls the changeover of bout markers at the headland. The Solitronic control system can be used to decide at the start of a field whether the right or the left marker or whether both markers should be used to start off with. The disc angle can be easily adjusted to increase or decrease the size of the mark left in the soil.



## **Spring-mounted levelling tines**

If the Compact-Solitair is to be used on ploughed land, it is advisable to use hydraulically adjustable levelling tines. They reliably level all wheel tracks and plough furrows and, when not required, can be raised up from the driver seat using a double acting control unit. For easier adaptation to light or heavy soil, the tines' wear plates can be set to grip or drag position.



## **Wheelmark eradicator discs**

The use of tools is recommended for eradicating wheelmarks on light and loose soils. The wheelmark eradicator discs available for all folding Compact-Solitair models reliably eradicate any wheelmarks. The discs can be optimally adjusted to the tyre width and penetration depth. Solitronic with integrated headland management takes care of the raising and lowering processes at the headland. Wheelmark eradicator discs are considerably less prone to blockages compared to tine tools, especially in situations with ample harvest residue.



# Precision seeding with the Compact-Solitair



## Versatile applications

The Compact-Solitair can be combined with the Azurit single-seed drill for precision seeding. This allows seedbed preparation, seeding and row fertilisation to be performed in just one pass. Previously, most farmers used a rotary harrow in combination with precision seeding technology. The LEMKEN Azurit can even be easily used with the Heliodor at high working speeds.

The extended range of applications of this drill combination in both cereal and precision seeding ensures that it can be optimally utilised. A standardised three-point interface in the folding Compact-Solitair permits rapid changes between a coulter bar and the Azurit. In the rigid version, this function is taken over by an optional coupling frame.

## Large fertiliser hopper

The generously dimensioned seed hopper in the Compact-Solitair serves as fertiliser tank when using the implement for precision seeding. The maize pack also comprises a metering system that is suitable for fertiliser and an additional hydraulic supply for the single-seed drill. An additional harrow at the coupling frame provides for optimum levelling behind the tyre packer.







# Technical data

Model	Working width (cm)	KW HP	Discs (Number)	Number of rows Seeding coulters/ fertiliser coulters	Row spacing Seeding coulters (mm)	Row spacing Fertiliser coulters (mm)	Kerb weight (kg) <sup>1</sup>	Tank capacity (Litres)
<b>Trailed, rigid</b>								
Compact-Solitaire 9/300 H 125	300	88-147 120-200	24	24	125	–	3,503	3,500
Compact-Solitaire 9/300 H 167	300	88-147 120-200	24	18	167	–	3,431	3,500
Compact-Solitaire 9/400 H 125	400	103-176 140-240	32	32	125	–	4,039	3,500
Compact-Solitaire 9/400 H 167	400	103-176 140-240	32	24	167	–	3,943	3,500
Compact-Solitaire 9/400 HD 167	400	103-176 140-240	32	24/12	167	334	4,283	3,500

Model	Working width (cm)	KW HP	Rotor speed (min <sup>-1</sup> ) at 1,000 min <sup>-1</sup>	Number of rows Seeding coulters/ fertiliser coulters	Row spacing Seeding coulters (mm)	Row spacing Fertiliser coulters (mm)	Kerb weight (kg) <sup>1</sup>	Tank capacity (Litres)
<b>Trailed, rigid</b>								
Compact-Solitaire 9/300 Z12 125	300	88-147 120-200	330/440	24	125	–	3,644	3,500
Compact-Solitaire 9/300 Z12 167	300	88-147 120-200	330/440	18	167	–	3,572	3,500
Compact-Solitaire 9/400 Z12 125	400	103-176 140-240	330/440	32	125	–	4,231	3,500
Compact-Solitaire 9/400 Z12 167	400	103-176 140-240	330/440	24	167	–	4,135	3,500
<b>Trailed, hydraulically folding</b>								
Compact-Solitaire 9/600 K K 125	600	147-232 200-315	330/440	48	125	–	9,444	4,500
Compact-Solitaire 9/600 K K 167	600	147-232 200-315	330/440	36	167	–	9,298	4,500

# WE'RE HERE FOR YOU

## Supplying high-quality original wear parts

Our original LEMKEN wear parts ensure that your LEMKEN machine stays what it is: the genuine product. Whichever machine you need a spare part for, we ensure that the original parts are always available for all LEMKEN machines. Not only in the short term, but for years to come.

## Delivering spare parts speedily

The right parts at the right time in the right place — this is how a reliable replacement parts service should operate. Our professional logistics handling service ensures we can supply a wide range of replacement parts at speed, whenever and wherever they are needed.





LEMKEN 03/24, 175 0532/en. All data, dimensions and weights are subject to ongoing further technical development and are therefore not binding. Weights given are always based on standard features. All information given is subject to change without notice.

**LEMKEN GmbH & Co. KG**  
 Weseler Straße 5  
 46519 Alpen, Germany  
 Tel. +49 2802 81-0  
 Fax +49 2802 81-220  
 info@lemken.com  
 www.lemken.com

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