

# COMPACT DISC HARROW **RUBIN 9**



# Stubble cultivation today







The modern stubble cultivator has three main functions – to encourage germination of weed and volunteer seeds; to incorporate straw; and to repair damage to compacted soil.

### **Weed Control**

If a crop is to achieve its maximum yield potential, it needs to be able to grow free from competition from weeds and volunteers. A good cultivator will encourage weed and volunteer seeds to germinate as soon as possible after harvest. They can then be destroyed by chemical or cultural means before the crop is planted. To be efficient at weed control, the cultivator should prepare a seedbed similar to that required by a grass ley - fine soil, with seeds near to the surface, and firmed into the ground to retain moisture. Once germinated, the field can be cultivated again, or sprayed with herbicide to kill the weeds before the crop is planted.

### **Incorporate Straw**

High yielding crops produce a lot of straw which contains valuable nutrients that will benefit crop growth if released into the soil. Straw will decompose most rapidly if kept in the oxygen layer of the soil (top 5cm) where aerobic bacteria are active. Therefore, mixing straw, and other crop residues, into the top 5cm immediately after harvest will encourage nutrient release. Nearer to seeding time, non-decomposed straw should be mixed deeper into the soil, leaving clean soil near the surface for seed germination and root establishment.

### **Europe's Leading Compact Disc Harrow**

The Rubin is designed to intensively mix soil and straw at depths of up to 10cm. It is ideal for preparing a stale seedbed, to help with weed control, or to incorporate straw in the oxygen layer of the soil. Large diameter discs ensure Rubin can cope with set-a-side, lodged cereals, maize stalks, or tall green manure crops.



# High performance in shallow cultivation



In contrast to conventional tined cultivators, the Rubin compact disc harrow has two rows of scalloped concave discs, which thoroughly mix soil and plant material.

## **Convincing tool arrangement**

Space between the two rows of discs is 107 cm. This, together with the open frame of the Rubin, ensures blockage-free operation even when there are large amounts of organic material.

Discs are spaced at 250mm intervals, across the width of the machine, to allow free flow of material between them. The rear row is offset to the front row giving an overall spacing of 125mm.

Each row of the scalloped discs has height and angle adjustable rebound harrows, controlling the soil flow from the discs and, when working diagonally across the rows, helping to complete a thorough straw distribution.

Additional outer levelling discs enable exact alignment with previous bouts without forming ridges. Each disc is attached to the frame by an offset leg to enable a precise setting.

Due to the combination of the position of the disc and its angle, ease of penetration is maximised even in hard ground conditions.

Following-rollers from the wide range of LEMKEN rollers offer precise depth control.





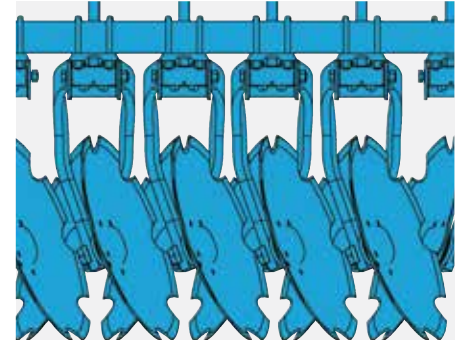




# Excellent quality of work thanks to large, individually suspended concave discs



**Intensive mixing over the whole width**



**Large-diameter concave discs**

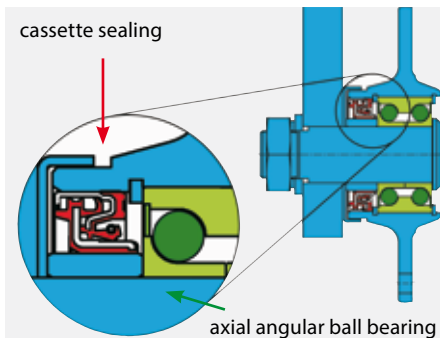
Machines using smaller discs have to work deeper to achieve complete soil movement across the working depth. Rubin's ability to move all soil, even at shallow depths, offers the potential for reduced power requirement and fuel consumption.

- If the disc cutting angle is less than that of the Rubin, it may not be possible to move all soil to the full working depth.
- Good penetration, and a large disc angle, allow the Rubin disc to move all soil even when working as shallow as 7 cm.

The LEMKEN Rubin scalloped concave discs have a diameter of 620 mm and a thickness of 6 mm. This guarantees a superb working quality.

- The large discs have four times the contact area of smaller discs.
- Downtime is reduced, working time in the field is maximised and maintenance costs are reduced.





### Long-life disc bearings

Only special axial angular ball bearings are used for the Rubin concave discs. They provide maintenance-free operation. There is no need to grease or adjust them.

- External screw bearing caps and an internal six fold cassette sealing ensure optimum protection against dust and moisture.
- Bearings are located on the rear side of the disc avoiding crop wrapping, and protecting them from wear from the soil.



### Optimal disc suspension

The concave discs on the Rubin are attached individually using pre-tensioned spring elements. These ensure that optimal pressure is always maintained on the discs, enabling high working intensities. This is clearly demonstrated in the comparison with other forms of suspension.

- The suspension design allows discs to lift over obstacles, but prevents sideways movement.
- The sturdy pre-tensioned coil springs ensure more precise maintenance of the working depth, even in harder and heavier soils. This has proven to be an important advantage compared to the softer rubber pads.



Thus, gaps in the cultivation horizon are consistently avoided.

- Working reliability of the metal springs is substantially higher than that of rubber attachment systems.
- Another advantage of this suspension is the sturdy overload protection. Individual concave discs can deflect upwards independently of one another to avoid obstacles, for example stones. The coil springs ensure that the concave discs rapidly return to their working position once they have passed over the obstacle.





# The semi-mounted system



## Reliable, convenient and versatile

The LEMKEN Rubin is available in semi-mounted version of 4m and above. There is the choice of transport or combination axle.

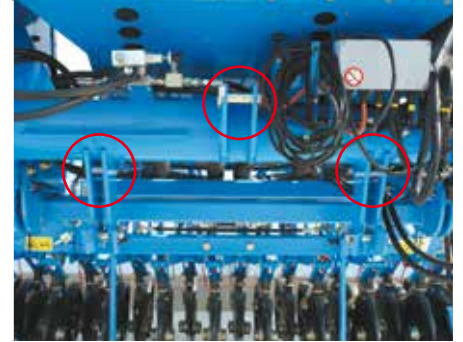
- The semi-mounted system takes the load off the tractor and guarantees safer road transport, even with large working widths.
- The semi-mounted Rubin with the combination mounting system can also be delivered with a three-point attachment enabling a seed drill or other cultivation implements such as furrow presses or rollers to be mounted.



## An efficient team

The Rubin compact disc harrow can be combined with the Solitair pneumatic seed drill using the combination axle.

- The drill can be fitted very quickly to provide a high output drill combination for mulch seeding.
- In this combination the Solitair's parallelogram-controlled double disc coulters with depth control wheels, guarantee precise seed placement, even at high working speeds.



## Implement combinations for any job

Seed drill attachment points are the same on all LEMKEN semi-mounted implements fitted with the combination axle. Therefore the same Solitair 9 can very quickly be attached to the correct soil preparation implement to work efficiently.

- This system allows the Solitair drill to be easily attached to the Rubin and Heliodor compact disc harrow, the Zirkon power harrow, the Kristall cultivator, or the Kompaktor seedbed cultivator. The drill can be tailored to meet varying requirements.





# A Gigant for large farms



For large farms LEMKEN offers the two system carriers Gigant 10 S and Gigant 12 S. Two Rubin disc harrows can be mounted on one frame to provide widths of 8 m up to 12 m. Hydraulic folding allows a total transport width of 3, 3.5, or 4m depending on model.

On the Gigant 12 S, a Servocontrol wheel at the rear ensures sufficient weight is transferred to the tractor when turning on headlands. The optional Servo-Uni-wheel can also be used on public roads to reduce the maximum axle load below 10 tonnes.

## **Reduced fixed costs**

The Gigant tool frame can be used together with the Rubin, Heliodor, Smaragd, and Kompaktor. This extends its period of use and reduces overall fixed costs.



# Technical data

kW	HP	Description	Discs number / Ø (mm)	Working width (app. cm)	Weight (app. kg) without roller	Transport width (app. m)
<b>mounted, rigid, folding outer discs</b>						
64 - 92	87 - 125	Rubin 9 / 250 U	20 / 620	250	1,480	2,5
77 - 110	105 - 150	Rubin 9 / 300 U	24 / 620	300	1,640	3,0
90 - 129	122 - 175	Rubin 9 / 350 U	38 / 620	350	1,800	3,5
103 - 147	140 - 200	Rubin 9 / 400 U	32 / 620	400	1,960	4,0*
<b>mounted, hydraulic folding</b>						
103 - 147	140 - 200	Rubin 9 / 400 KU	32 / 620	400	2,890	3,0
115 - 165	157 - 225	Rubin 9 / 450 KU	36 / 620	450	3,111	3,0
129 - 184	175 - 250	Rubin 9 / 500 KU	40 / 620	500	3,331	3,0
154 - 221	210 - 300	Rubin 9 / 600 KU	48 / 620	600	3,785	3,0
<b>semi-mounted, hydraulic folding</b>						
103 - 147	140 - 200	Rubin 9 / 400 KUA	32 / 620	400	3,652	3,0
115 - 165	157 - 225	Rubin 9 / 450 KUA	36 / 620	450	3,961	3,0
129 - 184	175 - 250	Rubin 9 / 500 KUA	40 / 620	500	4,241	3,0
154 - 221	210 - 300	Rubin 9 / 600 KUA	48 / 620	600	4,921**	3,0
<b>Gigant 10 S system carrier, trailed, hydraulic folding</b>						
206 - 294	280 - 400	Gigant 10 S / 800 Rubin 9 U	64 / 620	800	6,966	3,0
<b>Gigant 12 S system carrier, trailed, hydraulic folding</b>						
257 - 368	350 - 500	Gigant 12 S / 1.000 Rubin 9 U	80 / 620	1.000	10,936	3,5*
309 - 441	420 - 600	Gigant 12 S / 1.200 Rubin 9 U	96 / 620	1.200	12,382	4,0*

\* exceeds the allowed transport width

\*\* Axle load exceeds 3t, braked version

All information, measurements and weights are subject to continuing technical further development and therefore non-binding. Given weights are always based on the basic equipment. The right to change specifications is retained.



# Service decides



When you have bought a machine from LEMKEN, the well known, almost proverbial LEMKEN service starts. 18 customer-oriented factory branches and outdoor storage areas in Germany as well as our own sales companies and importers in more than 50 countries, and a strong dealer network, ensure that machines and spare parts are supplied quickly. If a part is not in

stock, it can be delivered to the customer within 24 hours via the LEMKEN logistics centre which is manned round-the-clock 365 days a year.

## **Knowledge from the LEMKEN specialist**

Well trained customer service technicians are available to farmers,

contractors and trade, who are using machinery for the first time, as well as for professional maintenance and repairs. Thanks to regular training courses, LEMKEN customer service is always up to date with the latest LEMKEN technology.

## **Original spare parts from LEMKEN**

LEMKEN wearing parts are designed for a maximum service life. High-quality materials, the latest production methods, and an intensive quality control ensure a long service life. Therefore, all original spare parts bear a unique identification with the registered LEMKEN trademark. Original spare parts can be ordered at any time online on the Internet via the LEMKEN information and ordering system.





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