

Because perfect
grassland begins with
technology.



Catalogues for
download:



düvelsdorf

GRASSLAND MAINTENANCE TECHNOLOGY | Complete range

CONTENTS:

Why is grassland maintenance important? _____	4
Why should it be raked and rolled? _____	5
Reseeding and new seeding _____	6
GREEN.RAKE expert _____	7
GREEN.RAKE expert + TERRA.ROLLER _____	16
TERRA.ROLLER eco 6.3 m _____	18
TERRA.ROLLER expert _____	20
Seeders _____	24
GREEN.RAKE vario _____	26
TERRA.ROLLER eco 1.2 m to 3 m _____	30
GREEN.RAKE combi _____	34
GREEN.ROLLER classic _____	36
Innovative grassland maintenance _____	40
The company _____	42

 *DO YOU HAVE ANY
QUESTIONS? WE WOULD
BE DELIGHTED TO HELP YOU.*

Telephone: +49 4205 3162-0

Fax: +49 4205 3162-20

E-mail: info@duevelsdorf.de

Note: All illustrations in this catalogue are example images. Machines are configured according to customer requirements.







WHY IS GRASSLAND MAINTENANCE IMPORTANT?

High-quality forage, resistant grass cover and regenerated stands – the right maintenance is essential for healthy grassland.

The quality of forage crops can be sustainably increased through targeted soil cultivation and the correct grassland maintenance. This not only means a higher yield of forage crops, but also a higher milk yield from the forage, which reduces the need for expensive concentrated feed.

In addition, damaged grass cover leaves space for unwanted weeds to proliferate. Raking and

reseeding enables this space to be used to develop young, high-yielding plants. In addition, shallow-rooted, less productive grasses are combed out of the stand at the same time. In addition, raking in grassland maintenance stimulates the tillering of the grass and produces fine soil, which provides a good basis for seed germination.

Permanent and sustainable grassland management regenerates the stand and thus prevents costly reseeding. Healthy grassland and a strong grass cover means having a stand that is resistant to damage from being driven over and adverse weather conditions.

WHY SHOULD IT BE RAKED AND ROLLED?

During wet, cold winters, many grasslands develop an overhang of dead, mouldy grasses. These create the perfect environment for fusaria. In addition, old grass gives the pasture fodder a bad taste in spring. In order to prevent these side effects, plant residues should be raked out at an early stage.

The best tool to ventilate the turf is a rake with strong tines and small tine spacing. The raking brings light and air to the turf, allows the soil to warm up earlier, and stimulates the vegetation. The levelling rail ensures soil accumulations on the surface are removed and spray residue is dispersed. If the seed is introduced directly into the tine section when raking, there are further advantages. By sowing and raking the turf

simultaneously, the seed receives the necessary soil contact and does not remain on the grass blades. This significantly increases the germination rate.

Rolling is indispensable, especially on soils with a high content of organic matter and high air capacity. That's because, for these soil types, when the uppermost layer of earth freezes in the effects of frost, the roots separate from the lower soil layer and the turf. This disrupts the soil contact. Rolling restores it by pressing on the upper layer, making it easier for water to be taken up by capillary action and allowing the deeper soil layers to warm up more quickly. In addition, rolling helps to press the grass plants down after raking and to press seeds down after sowing.



RESEEDING

The basic prerequisite for reseeding should always be an old crop worth preserving.

Benefits of reseeding:

- + Cost-effective (low machine costs, minimal loss of feed)
- + Low production risk (old turf remains)
- + Soil load-bearing capacity remains unchanged
- + No loss of nutrients through soil cultivation (ploughing, cultivating)
- + Low seed quantity due to selective spreading
- + Time window for reseeding is significantly longer

What needs to be considered:

- The pressure of competition between old crops and young reseeded crops can be greatly reduced through aggressive raking; moreover, this creates more gaps in the stand in which high-quality reseeding can become established
- The seeds need good soil contact for germination
- Avoid applying fertiliser directly after reseeding

NEW SEED

If there is no old crop worth preserving, a new seed should be sown for reasons of economic efficiency.

Benefits of new seed:

- + No competition between old and new stock

What needs to be considered:

- The new seed must be maintained by means of raking and reseeding in order to harvest high-quality forage in the long term



GREEN.RAKE expert

For every soil, every application and every size of farm **düvelsdorf** has a suitable machine. From the low-cost 3 m **GREEN.RAKE classic** to the powerful 9 m grassland combination of **GREEN.RAKE expert** and **TERRA.ROLLER** – the **düvelsdorf** product range offers the right solution for everyone. The products are made for a wide range of uses: from vineyards and orchards to municipal areas and organic or conventional dairy farms.

Maximise the potential

The **GREEN.RAKE expert** from **düvelsdorf** offers a wide range of adjustment options. This allows the rake to be adapted to the respective soil conditions by adjusting the pre-pressure, while the aggressiveness and intensity can be easily adjusted on the tine setting. Whether manual or hydraulic, the machine can be easily adapted to your soil conditions and applications. In this way, **düvelsdorf**

helps to make your everyday work easier and to protect the plants and the soil.

High flexibility

Configure your **GREEN.RAKE expert** according to your needs. Make your work easier and increase the quality of the results. The **GREEN.RAKE expert** can be used throughout the year. Its service time is increased even further if a **düvelsdorf** roller is used with the **GREEN.RAKE expert**, equipped with preparation tools if necessary. The rake and roller can be used solo or in combination.

The flexible use of the machine makes it possible to drive over still damp sites with a light machine or with an attachment in front to pull out the old crop, with the option to remove the raked-out material or to let it wither before reseeding with direct rolling in one pass. This increases the possible applications during the year and makes optimal use of the machines.

YEAR-ROUND USE.

The **GREEN.RAKE expert** can be used all year round, especially in combination with a sowing unit, the **TERRA.ROLLER** and optional preparation tools. In the overview you can see, for example, when and for what

purpose you can optimally use the **GREEN.RAKE expert**, **TERRA.ROLLER eco** and **TERRA.ROLLER expert** with levelling bar, tine attachment or knife roller.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
GREEN.RAKE expert: Aerate/rake out/stimulate/crumble												
GREEN.RAKE expert with seeder + TERRA.ROLLER : Grassland seeding/reseeding												
GREEN.RAKE expert with seeder + TERRA.ROLLER : Catch crop seeding												
TERRA.ROLLER : Rolling grassland												
TERRA.ROLLER : Rolling cereals for tillering/rolling seedbed												
TERRA.ROLLER expert with levelling bar: Levelling and flattening the ground												
TERRA.ROLLER expert with tine attachment: Seedbed preparation/stubble breaking												
TERRA.ROLLER expert with knife roller: Plant stubble shredding (rape, cereals, maize) and catch crops												

Standard measures

Additional measures

* Recommendation: 5 – 25 kg seed/grain for reseeding

GREEN.RAKE expert



IMPRESSIVE ON ANY TERRAIN.

The **GREEN.RAKE expert** can be adapted to your specific soil conditions. Optimum contour guidance is not only ensured by the individually suspended, 1.5 m wide tine section – the rake's uniform pre-pressure produced by the parallelogram guidance also provides optimum adjustment to the contours of the ground. How aggressively you rake is up to you. The **GREEN.RAKE expert** can be adjusted from very gentle (e.g. for young grass on sandy, soft soils) to extremely aggressive for restructuring hard soils.

The CAT II and CAT III attachment comes as standard. The rake can optionally be equipped with a seeder (for reseeding or catch crops), a flexboard (for low-wear levelling on stony soils), and hydraulic adjustment of the tine aggressiveness and pre-pressure.

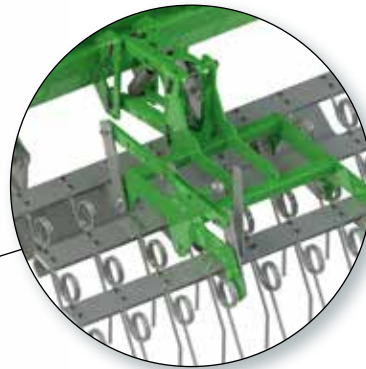
ADVANTAGES:

- + Easy tine section configuration, as the pre-pressure remains constant when setting the aggressiveness
- + Wide adjustment range for all soil conditions
- + Individually suspended tine sections guided by parallelograms
- + Spring-loaded, robust levelling rail with collision protection
- + Integrated collection trough for convenient calibration

Generous side tread



Lower link hook
for coupling the
TERRA.ROLLER



Adjustment of
tine aggressiveness



Parallelogram guidance with
pressure adjustment



Levelling rail
with shear bolts

TECHNICAL DATA

Working widths in m	3 / 6 / 7.5 / 9
Weight in kg	630 / 1,180 / 1,350 / 1,470
Number of tine rows	3
Tine spacing in mm	50
Tine diameter in mm	10
Transport width mm	3,000
Attachment	CAT II / CAT III

WELL DESIGNED DOWN TO THE LAST DETAIL:



Rake tines

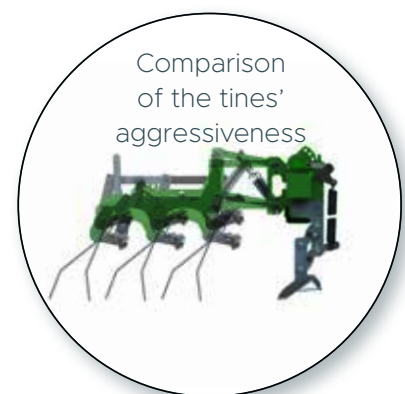
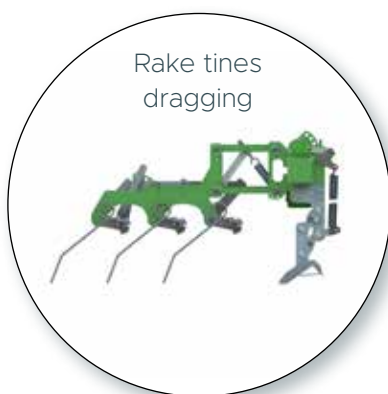
The 10 mm thick tines' double twist results in a larger field of motion with a long service life. At the same time, the offset as well as the standard spacing of 50 mm enable weeds and mosses to be optimally raked out. If a tine is lost, the loss protection system ensures that the broken tine is pulled along and does not remain on the grassland.



Mechanical adjustment of the rake tines

The aggressiveness of the rake tines and thus their effect on the soil and turf are optimally adjusted by means of an easily accessible lever. You can choose between five levels. This makes the tines perfectly adaptable to any work application.

TINE SECTION SETTING OPTIONS:



The **GREEN.RAKE expert** offers five different aggressiveness settings, from very soft to aggressive, so you are well prepared for all soil conditions.

Whether with low or high preload – the **GREEN.RAKE expert** delivers optimum results.



Hydraulic adjustment of the tine aggressiveness

The aggressiveness of the tines can be set and adjusted. The hydraulic adjustment allows the intensity to be infinitely modified in comfort from the cab during operation.

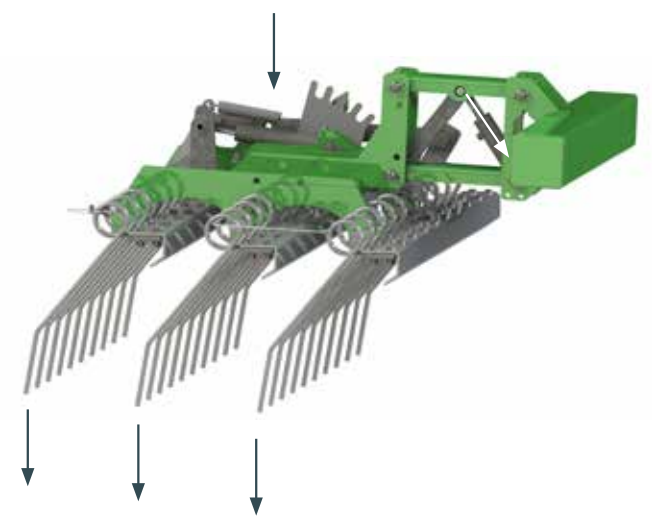
The adjustment is made via a single-acting control unit.



Hydraulic pre-pressure adjustment

The working depth of the tines is adjusted by adjusting the pre-pressure. The pre-tensioned hydraulic cylinders compensate for height differences in the surface.

For changing ground conditions, the hydraulic adjustment extends the adjustment range with more comfortable operation from the cab. The standard way to set the pre-pressure is by means of a spring.



The **GREEN.RAKE expert** can be optionally equipped with hydraulic tine aggressiveness and pre-pressure adjustment.

WELL DESIGNED DOWN TO THE LAST DETAIL:



Heavy-duty levelling rail

The robust levelling rail leaves a cleanly levelled soil surface. The collision protection and the spring-preloaded, adjustable suspension prevent damage when approaching or driving over obstacles. The rail can be dismantled quickly and easily for the best use of the **GREEN.RAKE** expert in arable farming.

Adjustment of the levelling rail

The plug-in lever makes it easy to adjust the pre-tension on the levelling rail to four levels. With a low preload, e.g., young stock can be levelled gently; with a correspondingly high preload, the levelling effect can be significantly increased if required. The setting lever is within easy reach on the implement for quick handling.



Flexboard

On stony soils, the flexboard ensures optimum and low-wear levelling. The plates are individually mounted on leaf springs to avoid stones and foreign bodies and thus ensure smooth operation. The plates can be mounted in two positions to adjust the working intensity. The flexboard can be purchased as an option.



Seeders

The **GREEN.RAKE expert** comes with a seeder on request. There are a total of five models to choose from. A tail wheel, tractor meter cable or GPS sensor are available options for speed-dependent sowing.

Side tread

If the **GREEN.RAKE expert** is equipped with a seeder and coupled with a roller, the tread is positioned to the side.



Collection trough

If your rake is equipped with a seeder, the practical collection trough enables a convenient calibration test. The rail system with parking position provides a neat way to store the collection trough on the implement. In addition, any residual quantities can be quickly emptied due to its size.

WELL DESIGNED DOWN TO THE LAST DETAIL:



Tail wheel

The tail wheel's speed sensor measures the combination's working speed to ensure uniform seed distribution. A further sensor determines the rake's working or transport position. The seed shaft is thus automatically switched on and off and prevents double sowing in the headland.

Quick assignment

KENNFIXX® hose markings are installed as standard to ensure that the hose markings are assigned to the correct connections quickly and easily.



Coupling set for **TERRA.ROLLER**

The optionally available coupling set enables the **GREEN.RAKE expert** to be connected to the **TERRA.ROLLER eco** or **TERRA.ROLLER expert**.

The resulting rake-roller combination ensures complete processing in a single operation.



FLEXIBLE FRONT USE.

The front attachment kit for the **GREEN.RAKE expert** 3 m and 6 m allows it to be driven in front of the tractor as well. This improves weight distribution and increases manoeuvrability when combined with a **TERRA.ROLLER**.





Rake-roller combination w **GREEN.RAKE** expert +

WELL COMBINED.

The rake-roller combination consists of **GREEN.RAKE expert** and the **TERRA.ROLLER eco** or the **TERRA.ROLLER expert** (both machines are presented in detail on the following pages) and combines the advantages of both machines. This makes it an all-rounder for arable and grassland. The rake and roller can be used together or independently of each other. This allows a higher rate of equipment use as well as complete processing in one operation, as the roller can be used individually in arable farming and the rake on its own in grassland. Coupling and uncoupling is quick and straightforward thanks to the attachment in the lower link hook.

The combination is operated simply by two double-acting control units.

ADVANTAGES:

- + Low support load with large working width
- + Roller and rake can also be used independently of each other
- + Simple operation due to two double-action control units
- + Combined rake and roller can be suspended in a coupled state

POSSIBLE APPLICATIONS:

- Intercropping on cereals or maize stubble
- Stubble breakage and intercropping in one operation
- New planting of grassland in spring/late summer
- Complete restoration of grassland



with

TERRA.ROLLER

Combination in public road traffic

On public roads, the roller must be equipped with an air-brake system and firmly mounted to the rake. The certificate required for road travel is supplied as standard with all combinations of **GREEN.RAKE expert** and air-braked **TERRA.ROLLER**, from a working width of 6 m upwards. All rollers and rake-roller combinations can be equipped to comply with the road traffic licensing regulations.



TERRA.ROLLER eco 6.3 m



PERFECT PRICE AND PERFORMANCE.

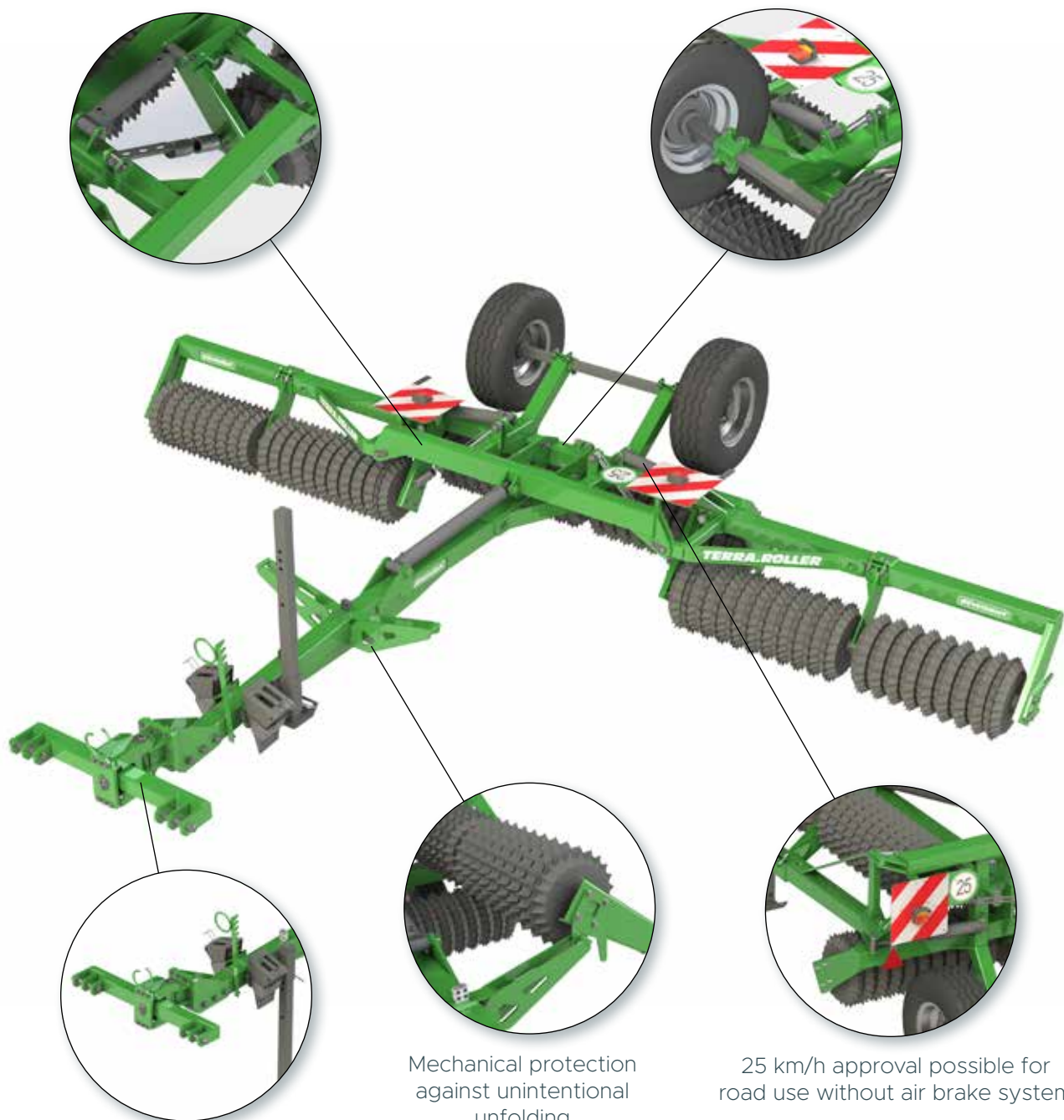
The **TERRA.ROLLER** eco with Cambridge or toothed rings offers the ideal entry into the professional roller segment. With a working width of 6.3 m, it makes soil cultivation simple, whether on arable or grassland. Furthermore, the machine impresses with a transport width of only 2.5 m. The **TERRA.ROLLER** eco can be used all year round. The roller is particularly suitable for soil reconsolidation, for rolling after sowing and for seedbed preparation. It can be hitched to the CAT II and CAT III lower link hitches as standard. The air brake and larger wheels are optionally available.

ADVANTAGES:

- + Easy, straightforward operation
- + Versatile in agriculture and grassland
- + Attachment to the **GREEN.RAKE** expert possible

Spring for equalising the loading pressure of the individual roller segments

Continuous axle (robust and safe on the road)



CAT II / CAT III lower link as standard
2x double-acting connections for folding the machine, labelled with KENNFIX®.

TECHNICAL DATA

Configuration		Empty weight in kg			Transport dimensions in m		
Working width	Ring type	Total	Axle load	Coupling load	Length	Width	Height
6.3 m	Cambridge Ø 460	2,480	1,760	720	5	2.5	1.7
	Cambridge Ø 550	3,400	2,520	880	5	2.5	1.7
	Toothed ring Ø 450/500	3,220	2,340	880	5	2.5	1.7

TERRA.ROLLER expert



ONE ROLLER. MANY POSSIBILITIES.

The **TERRA.ROLLER expert** professional roller impresses on the field and on grassland with uniform ground pressure and optimum adjustment to the terrain. The three-part earth roller scores points from the first glance with its particularly robust frame. Further strengths are revealed out on the field. On the one hand, the individually suspended roller elements ensure optimum adjustment to the soil surface. On the other hand, the roller delivers an even ground pressure over the entire working width. The pressure is adjusted mechanically or hydraulically, depending on the equipment version. The **TERRA.ROLLER expert** can be supplied with both seeder equipment and seedbed preparation

tools on request. The compressed air brake system, also available as an option, ensures safe road travel.

ADVANTAGES:

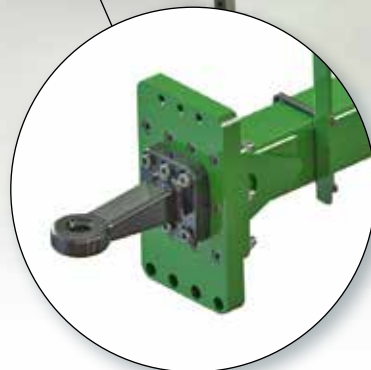
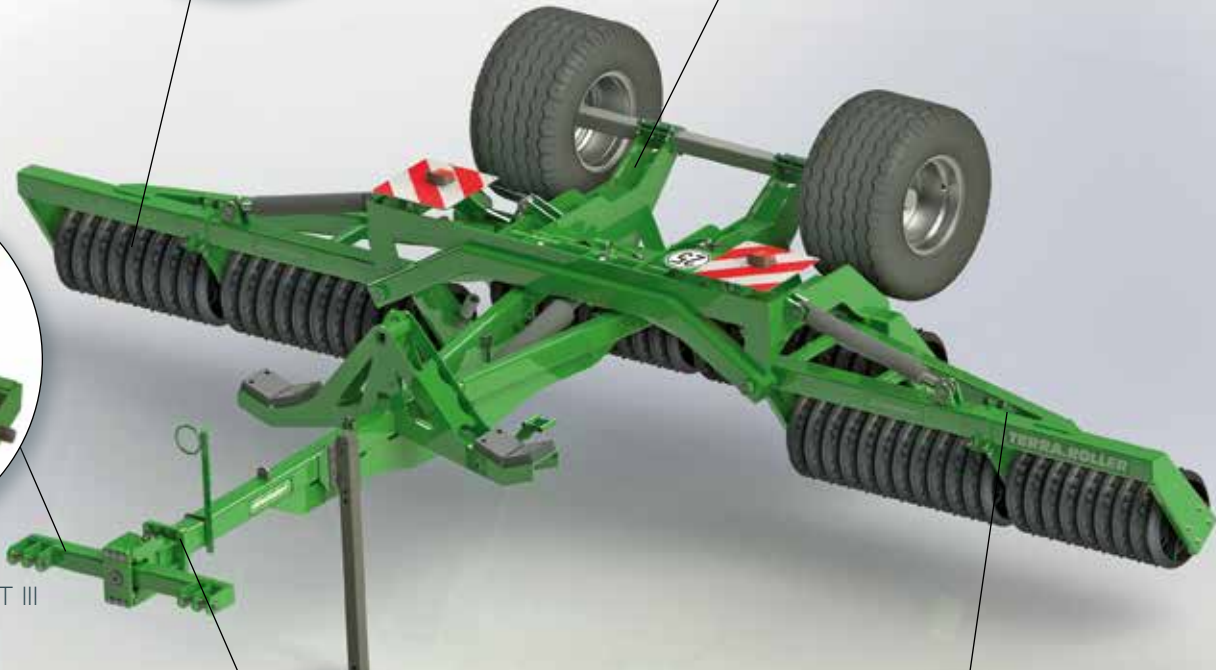
- + Perfect ground adjustment
- + Uniform ground pressure
- + Robust frame
- + Low support load
- + Optionally available with seeder
- + Optionally available with seedbed preparation tools

Stable axle suspension with
continuous carrying axle

Triple bearing
50 mm shaft



Attachment in CAT II / CAT III
lower link hook



Conversion to towing eye
or K80 possible



Sturdy, robust
frame

WELL DESIGNED DOWN TO THE LAST DETAIL:



Seeder

For spreading catch crops, for example, the **TERRA.ROLLER expert** can also be delivered with an optional seeder. The seeder can be retrofitted with a tread at any time.

Weight distribution

The pre-tensioned springs transfer the middle roller element's weight to the two outer surfaces and thus ensure an even distribution of ground pressure. This in turn leads to a uniform working pattern across the entire width.

Hydraulic weight distribution is offered as an option.



Transport position

With a transport width of just 2.50 m, the **TERRA.ROLLER expert** can be moved conveniently and safely on the road. The **düvelsdorf** professional roller must be equipped with an air brake system for an axle load of three tonnes or higher in order to be able to obtain approval for public road traffic.

THE RIGHT RING FOR EVERY APPLICATION.

The **TERRA.ROLLER** offers a lot of room for manoeuvre. That's why there are also different types of rings to choose from. To obtain the optimum solution for your soil conditions, you can choose between Cambridge and toothed ring elements in different sizes.



Cambridge elements

The Cambridge rings achieve both fine crumbling and good surface compaction. The large bearing clearance in the serrated ring, which moves irregularly in working mode, produces a self-cleaning effect and thus prevents the roller from sticking when used on heavy soils.

ADVANTAGES:

- + Promotes early and uniform seedling emergence
- + Prevents snail infestations
- + Protects young plants on windy areas from blowing away

POSSIBLE APPLICATIONS:

- On arable and grassland
- Reseeding and new seeding of grassland
- Intercropping
- Tillering stimulation

Toothed ring elements

The toothed ring elements break up heavy clods of earth due to their higher weight and aggressive structure. This makes the sowing layer quite fine for a depth of 2 to 3 cm and gives the seeds good soil contact. The coarse particles remaining on the surface prevent silting up, evaporation and drifting.

ADVANTAGES:

- + Supports the fight against pyralid moths by breaking up the maize stubble
- + Aggressive crushing of soil clods
- + Narrow structure and large number of tooth tips lead to intensive crumbling

POSSIBLE APPLICATIONS:

- On arable and grassland
- Reseeding and new seeding of grassland
- Intercropping
- Stubble cultivation

TECHNICAL DATA

	Cambridge elements		Toothed ring elements ²
Working widths in m	6.3 / 7.7 / 8.3 / 9.3		
Transport widths in m	2.5		
Roller diameter in mm	460	550	450 / 500
Weight per element pair in kg	22	35	32
Number of element pairs	Ten pairs per meter working width		
Total weight in kg	3,140 / 3,500 / 3,740 / 4,080	4,020 / 4,700 / 4,920 / 5,220	3,680 / 4,460 / 4,480 / 5,040
Axle load ¹ in kg	2,240 / 2,520 / 2,720 / 2,900	2,980 / 3,420 / 3,520 / 3,680	2,660 / 3,180 / 3,560 / 3,560

¹ Any **TERRA.ROLLER** over 3,000 kg total weight comes with a TÜV certificate to obtain a general operating permit (German ABE certification) as standard. Any **TERRA.ROLLER** with an axle load of more than 3,000 kg must be equipped with an air brake system for this purpose.

² The toothed rings are made of ductile iron.

Seeders



SEEDERS OVERVIEW

Function	ES4 Standard	ES 8 Standard	ES 8 Turbo	Lehner Vento	HS 8 Turbo	HS 12 Turbo
Control module	Profi	Profi	Profi	Vento	SEED.CON	SEED.CON
			SEED.CON	SEED.CON		
			Profi Speed			
Blower	Electric	Electric	Electric	Electric	Hydraulic	Hydraulic
Power consumption	10 A	10 A	25 A	40 A	5 A / 25 l / min	5 A / 25 l / min
Outputs	4	8	8	8	8	12
Hose diameter in mm	30	25	30	30	30	30
Calibration function	Yes	Yes	Yes	Yes	Yes	Yes
Weight in kg	35	50	65	67	110	150
Tank size in l	130	300	300	230	300	500
Dimensions in mm L × W × H	600 × 500 × 1,350	650 × 900 × 1,300	900 × 650 × 1,350	919 × 527 × 1,199	1,250 × 650 × 1,350	1,250 × 700 × 1,660
Maximum working width in m	3	6	6	6	8	9
Standard seed shafts	25	15	15 / 25	Complete set	15 / 25	15 / 25
Suitable for	Grass seeds + small seeds	Grass seeds + small seeds	Grass seeds + various intermediate crops	All seeds	All seeds	All seeds

Control modules



Profi



Profi Speed



SEED.CON smartphone/tablet



SEED.CON ISOBUS



ACCURATE SOWING.

The right technology for every application – that's our motto. That's why we offer different seeder versions with varying functions to meet almost any requirement.

The table on page 24 gives you an overview of what's on offer. Four different controls are available for the seeders: Profi, Profi Speed, **SEED.CON** and the Lehner Vento control. The ES 4 Standard, the ES 8 Standard and the ES 8 Turbo with Profi control are intuitive to operate thanks to their simple and practical controls. This allows the seeder to be easily switched on and off from the cab, the spread rate to be continuously adjusted and a calibration test to be carried out.

The **SEED.CON** control module works wirelessly and offers a range of features, such as speed-dependent seed dosage, as well as hectare and hour counters. The user-friendly interface on your own smartphone or tablet makes the control even more practical and simple. All settings can be

made either from the cab or directly on the seeder. Further advantages of the **SEED.CON** control system are the quantity control during operation and the additional operation via an ISOBUS terminal.

ADVANTAGES:

- + Sowing close to the ground, less sensitive to wind compared to disc spreaders
- + Exact lateral distribution
- + Spreading in large working widths
- + High tank volume (up to 500 litres)

Convenient to adjust

The **SEED.CON** control's intuitive user interface makes setting your seeder particularly convenient.



GREEN.RAKE vario



COMPACT GRASSLAND MAINTENANCE.

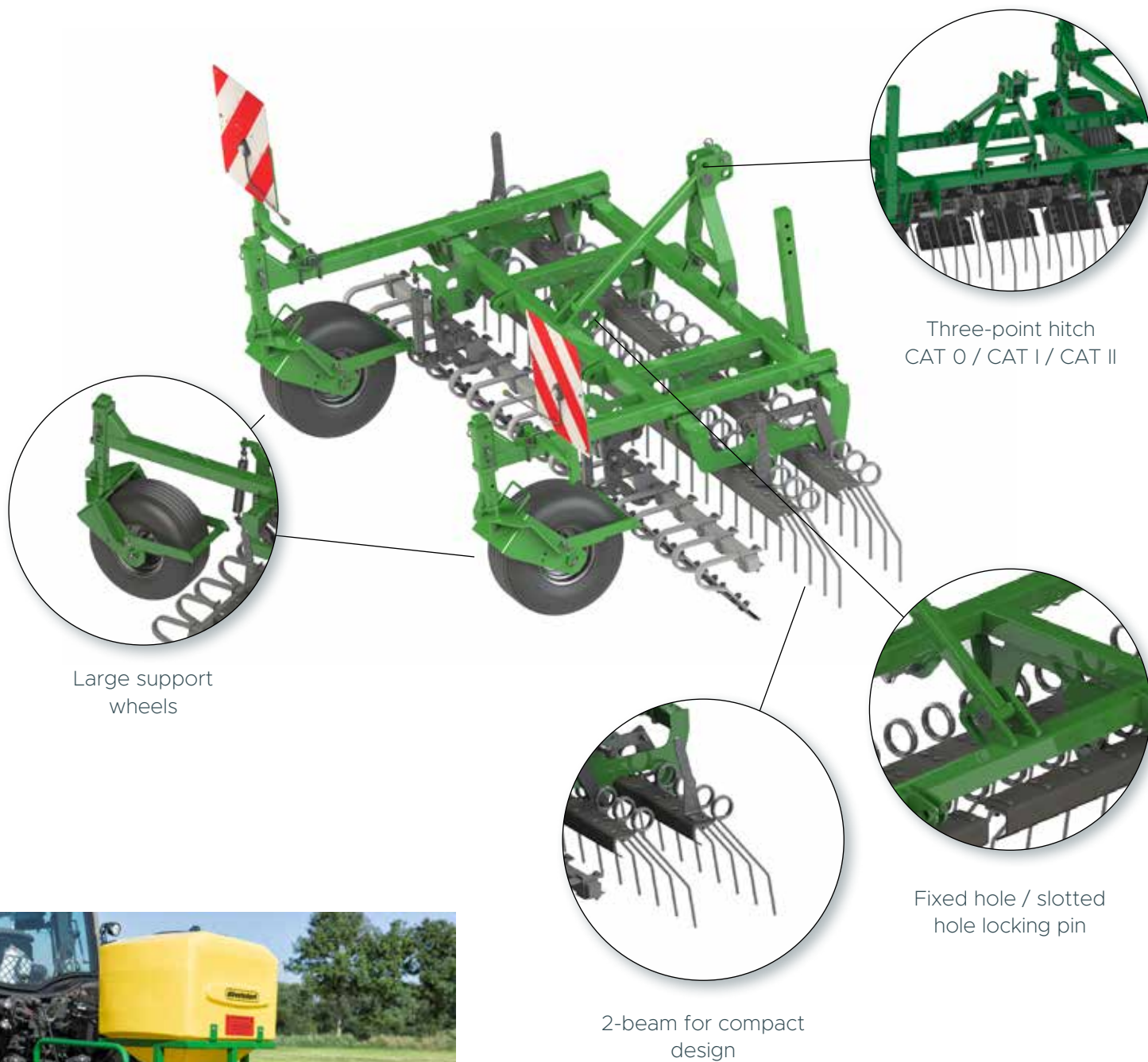
The **GREEN.RAKE vario** is a light, compact professional machine designed for front mounting. The rake is available in working widths of 1.2 m, 1.6 m, 1.8 m, 2 m, 2.5 m und 3 m. The rake's design makes it suitable for smaller towing vehicles. This means the **GREEN.RAKE vario** also offers smaller farms the possibility of professional machine work. It can also reseed crops perfectly when used in combination with the **TERRA.ROLLER eco** and a seeder.

The **GREEN.RAKE vario** is particularly attractive for grass areas that are difficult to access, such as steep slopes, dykes or narrow access roads. In addition, the 1.2 m to 2 m versions are particularly suitable for use in vineyards, orchards and vegetable cultivation. For rake operation without reseeding, the implement can also be driven with an optional rear three-point hitch in the rear hydraulics for working widths of 2 m or more. The rake has a robust flexboard and a reliable tine guard as standard.

The **GREEN.RAKE vario** can be optionally equipped with foldable lighting in the working widths 1.2 m to 2 m. Thus, plants and fruits are protected when passing through row crops.

ADVANTAGES:

- + Large support wheels
- + Convenient tine section configuration
- + Compact design
- + Low weight
- + Can be driven in the front as well as in the rear (from 2 m)



Reseeding is possible in combination with **TERRA.ROLLER eco**. A seeder can also be mounted on the **GREEN.RAKE vario** with a working width of 2 m or more.

GREEN.RAKE vario



TECHNICAL DATA			
Working width in m	1.2	1.6	1.8
Number of tines	20	26	30
Tine distance in mm	60		
Tine bars	2		
Tine sections	1	1	2
Distance between tine bars in mm	260		
Wheels	1	2	2
Attachment	CAT 0 / CAT I / CAT II		
Weight in kg	205	230	310
Equipment	Flexboard, tine guard		

TECHNICAL DATA			
Working width in m	2	2.5	3
Number of tines	33	20	26
Tine distance in mm	60		
Tine bars	2		
Tine sections	2	1	1
Distance between tine bars in mm	260		
Wheels	2	1	2
Attachment	CAT 0 / CAT I / CAT II		
Weight in kg	315	352	375
Equipment	Flexboard, tine guard		

POSSIBLE APPLICATIONS:

- Aeration and encouragement of tillering in areas that are difficult to access, such as slopes or dykes.
- Only a small towing vehicle required
- Combine with **TERRA.ROLLER eco** and a seeder for reseeding pasture areas.
- The 1.2 m to 2 m versions are primarily suitable for use in orchards, vineyards and vegetable cultivation.



TERRA.ROLLER eco 1.2 m to 3 m



COMPACT HIGH PERFORMANCE.

With working widths of 1.2 m, 1.6 m, 1.8 m, 2 m, 2.5 m and 3 m, the compact **TERRA.ROLLER** eco roller is ideal for grassland and arable farming as well as for use in vineyards, orchards and vegetable cultivation.

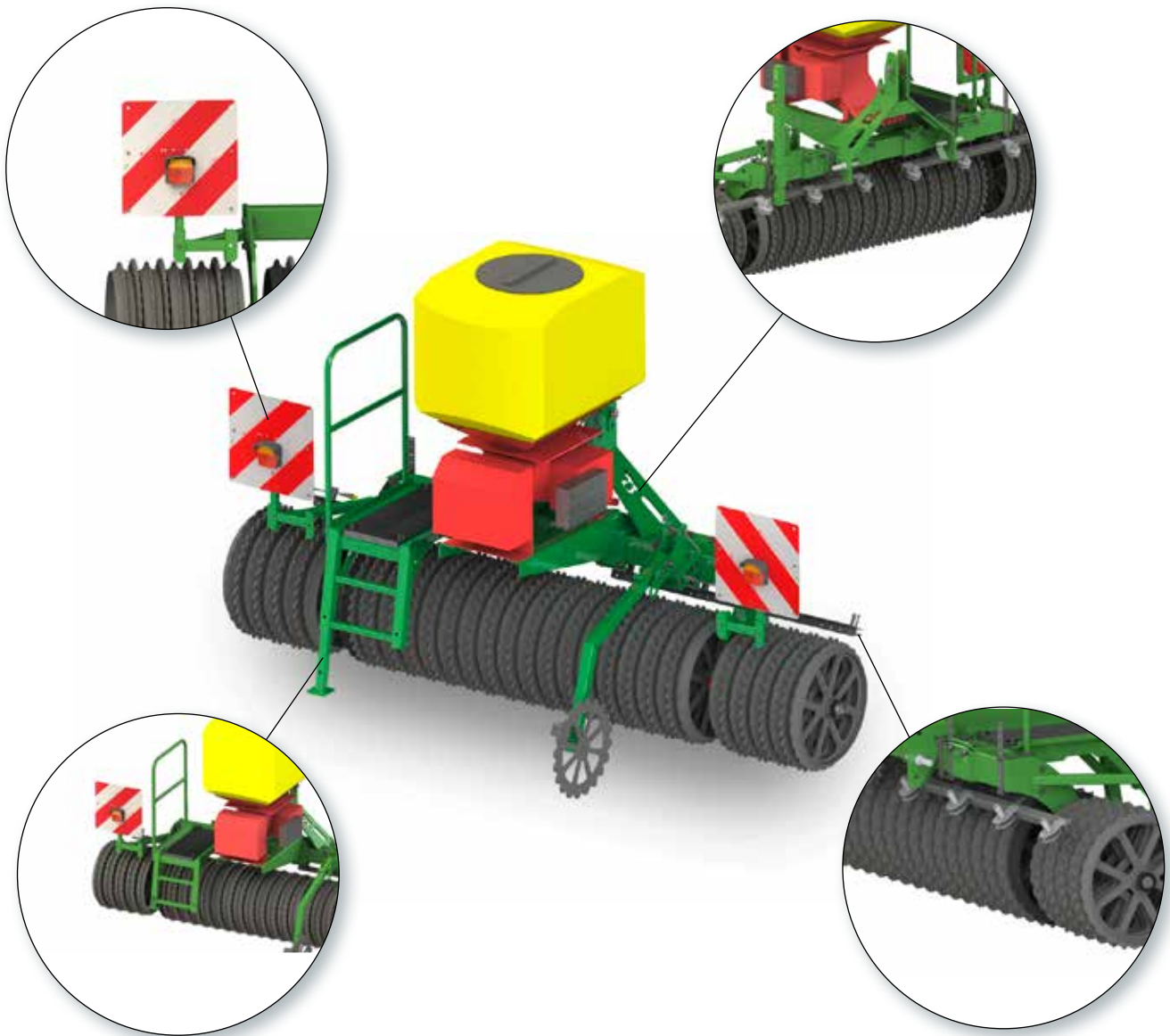
The roller can be used flexibly in the rear or in the front. Furthermore, a seeder can be mounted, making it an ideal supplement to the **GREEN.RAKE** vario.

ADVANTAGES:

- + Three-point CAT I and CAT II attachment
- + Middle bearing of roller in track width of approx. 0.95 m
- + Optional seeder with 130 l tank volume and four outlets
- + Foldable lighting for driving through row crops (optional up to 2 m)

Lighting with warning signs

Stable three-point attachment CAT I /II



Tread with handle

Baffle plate for even distribution



TERRA.ROLLER eco 1.2 m to 3 m

TECHNICAL DATA						
Working width in m	1.2			1.6		
Ring type	Cambridge	Cambridge	Toothed ring	Cambridge	Cambridge	Toothed ring
Ring diameter in mm	460	550	450/500	460	550	450/500
Weight in kg	390	480	450	480	600	580
Transport width in m	1.2			1.6		
Transport height in m	1.27	1.32	1.28	1.27	1.32	1.28
Transport length in m	0.7	0.75	0.72	0.7	0.75	0.72
Bearing distances in m	1.1	1.1	0.87	0.94	0.94	0.87
Attachment	CAT I / II					
Attachment height H1 / H2 in mm ¹	505/615	555/616	505/565	505/615	505/616	505/565

TECHNICAL DATA						
Working width in m	1.8			2		
Ring type	Cambridge	Cambridge	Toothed ring	Cambridge	Cambridge	Toothed ring
Ring diameter in mm	460	550	450/500	460	550	450/500
Weight in kg	530	670	650	590	740	720
Transport width in m	1.8			2		
Transport height in m	1.27	1.32	1.28	1.27	1.32	1.28
Transport length in m	0.7	0.75	0.72	0.7	0.75	0.72
Bearing distances in m	0.94	0.94	0.87	0.94	0.94	0.87
Attachment	CAT I / II					
Attachment height H1 / H2 in mm ¹	505/615	555/616	505/565	505/615	505/616	505/565

TECHNICAL DATA						
Working width in m	2.5			3		
Ring type	Cambridge	Cambridge	Toothed ring	Cambridge	Cambridge	Toothed ring
Ring diameter in mm	460	550	450/500	460	550	450/500
Weight in kg	642	913	889	739	1,065	1,029
Transport width in m	2.6			2.98		
Transport height in m	1.27	1.32	1.28	1.27	1.32	1.28
Transport length in m	0.7	0.75	0.72	0.7	0.75	0.72
Bearing distances in m	1.85					
Attachment	CAT I / II					
Attachment height H1 / H2 in mm ¹	530/600	580/650	530/600	530/600	580/650	530/600

¹H1: Distance / height between ground and bottom lower linkage hole. H2: Distance / height between ground and top lower linkage hole.

Available as toothed ring or Cambridge roller

You can equip your roller with Cambridge or toothed ring elements to achieve the best results for your application. To find out which version is right for you, see page 23.



Seeder

The **TERRA.ROLLER eco** can be optionally equipped with seeders. An overview of our seeders can be found on page 24.

Can be used on grassland

Levelling, aerating, sowing and rolling: all this is possible in a single operation with the **GREEN.RAKE expert** 3 m and **TERRA.ROLLER eco** 3 m grassland combination. The best possible maintenance for your grassland.



GREEN.RAKE combi



GRASSLAND MAINTENANCE 4 IN 1

Levelling, raking, sowing, rolling – with the **GREEN.RAKE combi** you can do it all in just one operation. Despite its scope of performance, it's the combination machine's compactness that stands out. Three rows of rakes built into a robust frame make the **GREEN.RAKE combi** not just sturdy, but easy to pull and manoeuvre as well. The easy three-point attachment is particularly practical. In addition, the height-adjustable tine section guarantees a perfect working pattern. By integrating a larger number of rake tines than the **GREEN.RAKE classic**, the **GREEN.RAKE combi** provides even better soil aeration. The tines are arranged at a distance of 65 mm and thus help to intensively rake out matted grass and weeds.

The **GREEN.RAKE combi** is especially recommended for grassland maintenance in spring and for intercropping in autumn.

TECHNICAL DATA

Working widths in m	3 / 4.5 / 6
Ring type	Cambridge Ø 460 (3 m, 4.5 m, 6 m)
	Toothed ring (3 m, 4.5 m)
Weight in kg ¹	1,300 / 2,100 / 2,580
Number of tine rows	3
Tine spacing in mm	75 / 65 / 65
Tine diameter in mm	10
Transport width mm	2,930 / 2,990 / 2,990

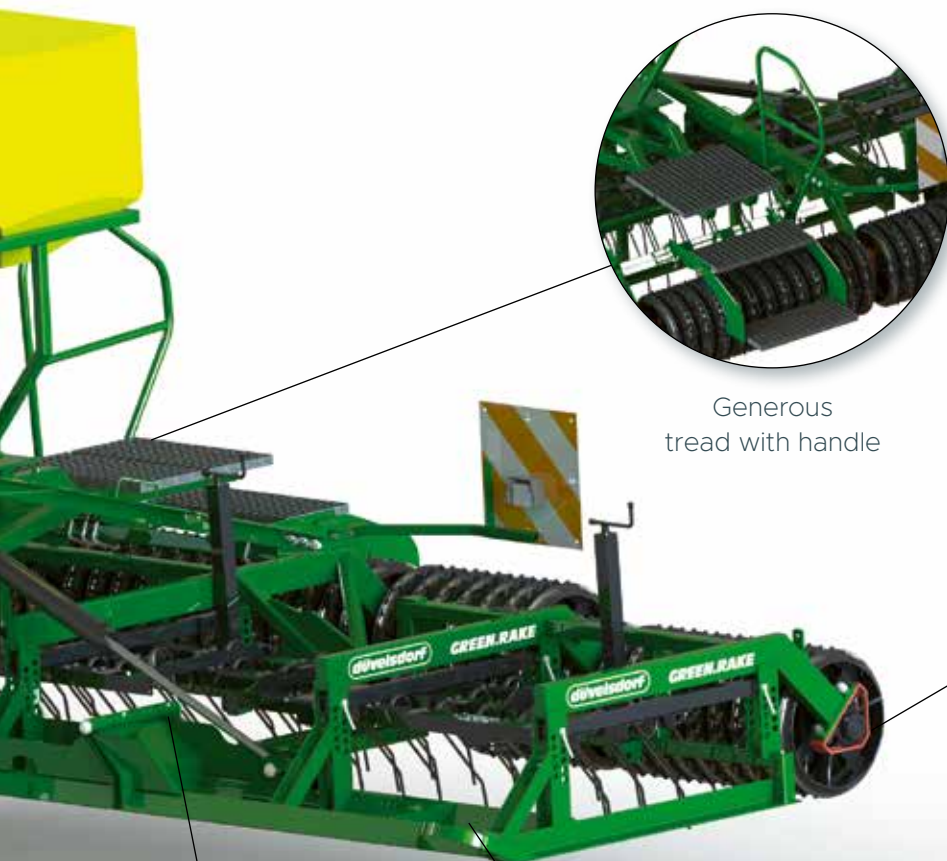
ADVANTAGES:

- + 4 in 1: levelling, raking, sowing, rolling in just one operation
- + Optimum ground adjustment
- + Compact structure

¹Weight for **GREEN.RAKE combi** Cambridge Ø 460

POSSIBLE APPLICATIONS:

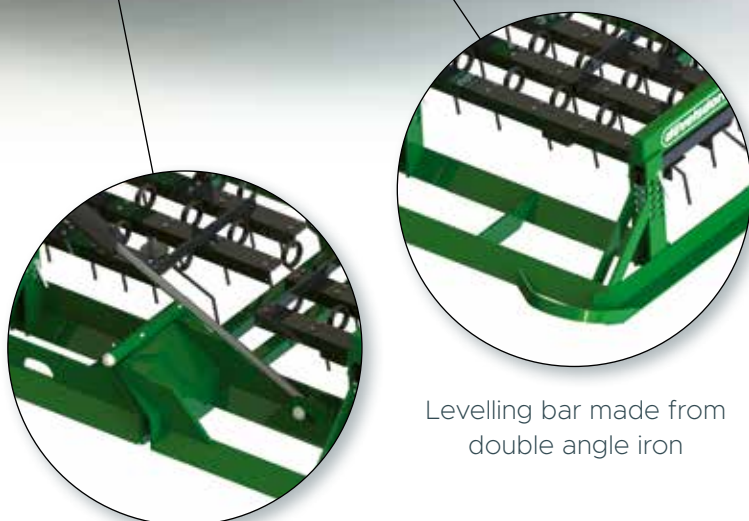
- Raking out of weeds with simultaneous reconsolidation of the soil
- Pressing the seed down for the best possible soil contact
- Complete springtime grassland maintenance in one operation
- Intercropping in autumn



Generous tread with handle



Large protected bearings



Levelling bar made from double angle iron

Robust hinge



GREEN.RAKE classic



EXEMPLARY MEADOW CARE.

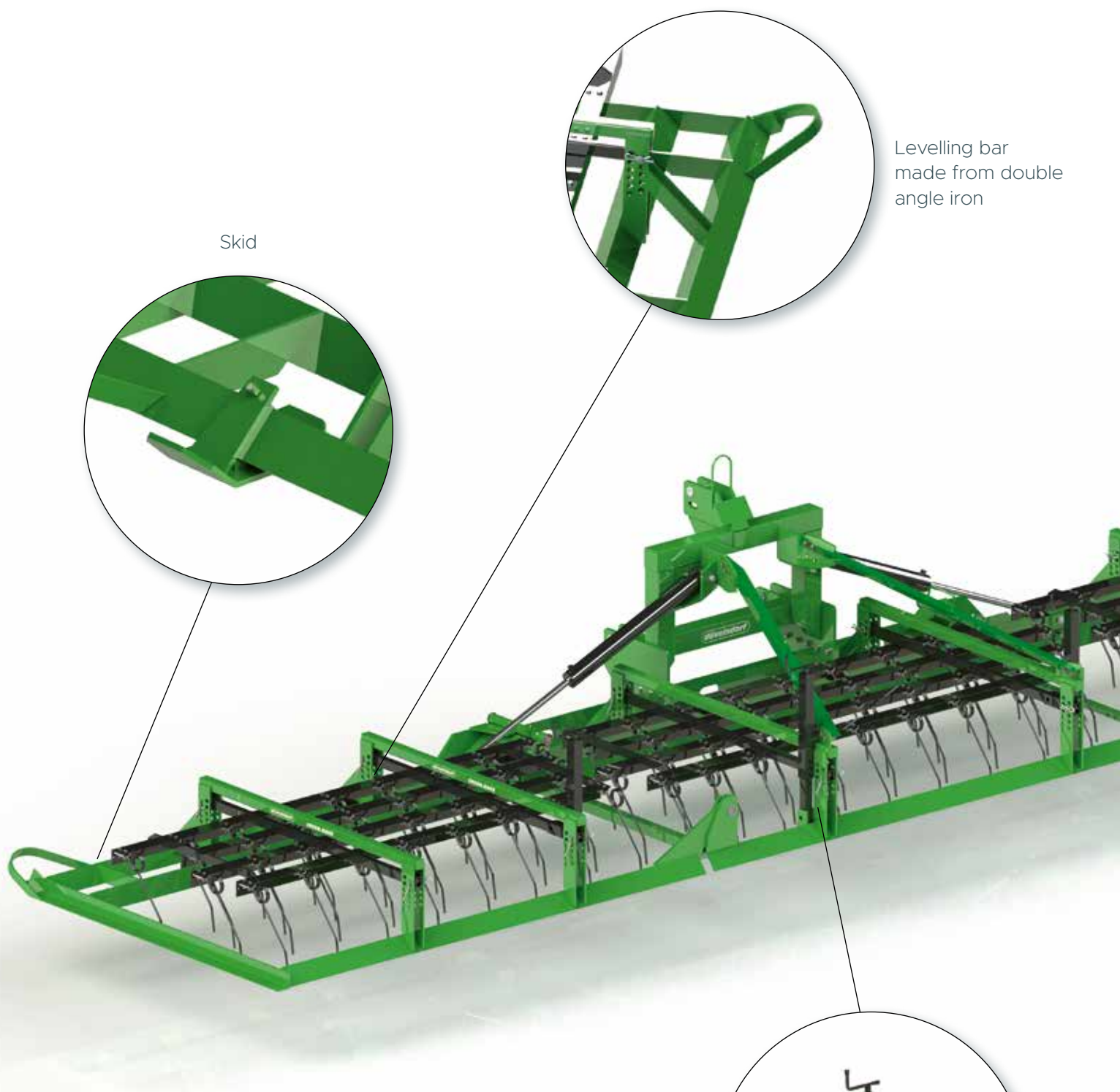
The **GREEN.RAKE classic** offers the highest level of working comfort. Its four-row tine section ensures maximum permeability and minimum risk of clogging.

As with all **düvelsdorf** products, the choice of materials for the **GREEN.RAKE classic** was made with great emphasis on sturdiness. For this reason a robust frame is used. The **GREEN.RAKE classic**'s outstanding feature is the double levelling bar. This allows even better levelling of uneven surfaces such as molehills or damage caused by wildlife. The bar glides over the ground and allows you to work on damp or marshy surfaces without damaging the grass. The intensity of the rake tines can be set via the height adjustment by means of spindle and hole pattern. For work that needs to be

particularly gentle to the soil, such as in soft to boggy areas, the **GREEN.RAKE classic** can also be optionally equipped with two to four skids.

ADVANTAGES:

- + Robust frame
- + Adjustment of the rake intensity
- + Tine loss protection
- + 4-row tine section
- + Sturdy 10 mm tines



Skid

Levelling bar
made from double
angle iron



Spindle with
hole pattern

TECHNICAL DATA

Working widths in m	3 / 6 / 8
Weight in kg	560 / 1,000 / 1,100
Number of tine rows	4
Tine spacing in mm	75
Tine diameter in mm	10
Transport width mm	2,950

GREEN.ROLLER classic



FOR OPTIMUM SOIL CONTACT.

The **GREEN.ROLLER classic** – sturdy, safe and well-designed. The rolling element with rounded edges measures 1.2 m in diameter and has a wall thickness of at least 12 mm to ensure it creates a flat surface. The roller's weight can be effortlessly regulated using water, which is let in or out via two filler necks. This allows up to 2 tons of working weight per metre of working width and enables very good reconsolidation to be achieved. Particularly high driving comfort is achieved by the centrally arranged surge wall, which prevents the contained liquid from rocking the implement. In addition to the robust frame, the large spherical roller bearings and the continuous shaft in the rolling element provide the required sturdiness. Parking is facilitated by a spindle-adjustable parking support. A spring-loaded scraper prevents contamination of the rolling element. Whether air-braked or unbraked – you decide which chassis your **GREEN.ROLLER classic** should have. The transport width is particularly important

for road travel. The 2.7 m wide roller stays below the 3 m transport width and can therefore be moved in road traffic without a special permit. For the braked version in 2.5 m and 2.7 m, a TÜV certificate is also issued.

All **GREEN.ROLLER classics** that are supplied with a chassis are equipped with lighting and hydraulics as standard.

ADVANTAGES:

- + Rolling element can be braked in working position via compressed air brake system
- + 2.7 m working width under 3 m transport width
- + Chassis can be retrofitted at any time
- + Extension of up to max. 3 rollers possible with coupling cable

TECHNICAL DATA

Working widths in m	2.5 / 2.7 / 3
Weight* in kg	2,650 / 2,770 / 2,890
Transport width mm	2,720 / 2,970 / 3,220

* Weight for **GREEN.ROLLER** classic chassis, braked



Coupling cable attachment kit

The optional coupling cable attachment kit enables up to three meadow rollers to be quickly and easily connected to form one coupled trailer. In this way, considerably more area can be machined in a shorter time.

Innovative grassland maintenance

Site-specific reseeding of grassland

Modern electronics can also replace the various methods of approximation in grassland management too. This is because, just like in arable farming, site-specific cultivation promises more precise use of seed and fertiliser. The Isaria plant sensor from Fritzmeier Umwelttechnik in combination with the **GREEN.RAKE** expert and **TERRA.ROLLER** expert as well as the sowing unit with **SEED.CON** control ensure precise grassland reseeding. During grassland reseeding, the plant sensor regulates the seed rate according to the plant density. So the grass seeds land exactly where they are needed. This enables slow-growing grasses to establish themselves better and gaps in the stock to be closed more quickly. This permanent rejuvenation of the grass cover improves the yield and thus increases the quality of the forage.



COMMENTS FROM THE PRESS AND INDUSTRY:

Thomas Dehlwes, organic farmer from Lilienthal:

"The sensor-supported automatic control of the reseeding helps us to better identify gaps in the stock and to close them more quickly. This will improve our grassland yield. At the same time, the system relieves the driver on long working days."





ADVANTAGES:

- + Site-specific seed dosage
- + Consistently optimised grass seed output throughout the entire working time
- + Relief for the driver

profi 10-2019

"The company Fritzmeier Umwelttechnik has developed the new control algorithm "smart4grass" for the plant sensor Isaria. This enables a sensor-controlled spread rate for grass seeds. Together with düvelsdorf's electronically controllable universal device, this makes site-specific grassland reseeding possible whereby the device automatically sows more in areas with thin and poorly developed grass than in green areas with well-developed grass. The higher precision of the sensor-controlled system compared to a manual quantity adjustment improves the grassland's quality, according to our initial experience."

The company



QUALITY FROM OUR OWN PRODUCTION.



For 100 years, the company **düvelsdorf** has been developing solutions for agriculture, municipalities and industry. From the sweeper to the roller – the family-run company designs machines and equipment for practical use. One focus is on the production of long-lasting technology for grassland maintenance. In addition to implements for front loader attachments for agricultural, forestry and municipal applications, the extensive product portfolio also includes numerous implements for front and rear hydraulics.

INSIGHTS INTO THE COMPANY – UKRAINE AND GERMANY:

Thanks to the company's own factory in Western Ukraine, **düvelsdorf** is able to monitor every production step precisely and thus ensure the highest quality. Specially trained employees take great care in the manufacture of the individual machines.

Only high-quality functional materials are used. This lays the foundation for the robust and

durable machines as early as the individual part production stage.

Final assembly, storage and order picking are all carried out centrally at the company's headquarters in Germany. The final quality check is also carried out there. Only once that is completed can the machines and equipment be sent to the customer.



Machines and equipment for agriculture and forestry.

In addition to products for grassland maintenance, **düvelsdorf** offers a wide range of machines for agriculture and forestry. An overview of the entire product portfolio can be found in the current **düvelsdorf** product catalogue. If you are interested, please ask your local dealer.



Düvelsdorf Handelsgesellschaft mbH | Im Forth 10 | 28870 Ottersberg, Germany
Telephone: +49 4205 3162 0 | info@duevelsdorf.de