



DULKs

machines for organic farming

Product catalogue 2019





Back row: André Dülks, Lisa Rüttger, Steffen Kentenich
Front row: Gerrit Meyer, Markus Dülks

The young team at DULKS GmbH works on innovative, revolutionary machines for vegetable cultivation and arable farming.

The team's aim is to combine ecological aspects and effective techniques in weed control.

The machines make the day-to-day work in the fields easier and create good working conditions.

Society and politicians are encourage the change to more environmentally aware methods of farming. In order to be able to do this cost-effectively with practicality DULKS GmbH has looked at agricultural technology from completely new angles and has found the solution:

the ABRAH!

ABRAH - Method of operation

Precision as you have **never** known it before

Rotary coultter blades lever the weeds, complete with roots, out of the soil.



Circumferential speed = double driving speed

Curved tines loosen the soil.



Circumferential speed = driving speed

Direction of travel and rotation



Rotary coultter blades work up to 2 cm from the row and remove the weeds laterally.



Curved tines break up encrusted soil to the right and left of the row.

The clods of earth are not pushed to the side because of the rolling tools.

First hoeing and the weeds in rows sown close to each other are controlled mechanically!

In any type of soil

This activates **mineralisation** of nutrients in the soil and provides the plants with a more **nutritious soil structure**.

ABRAH - work result



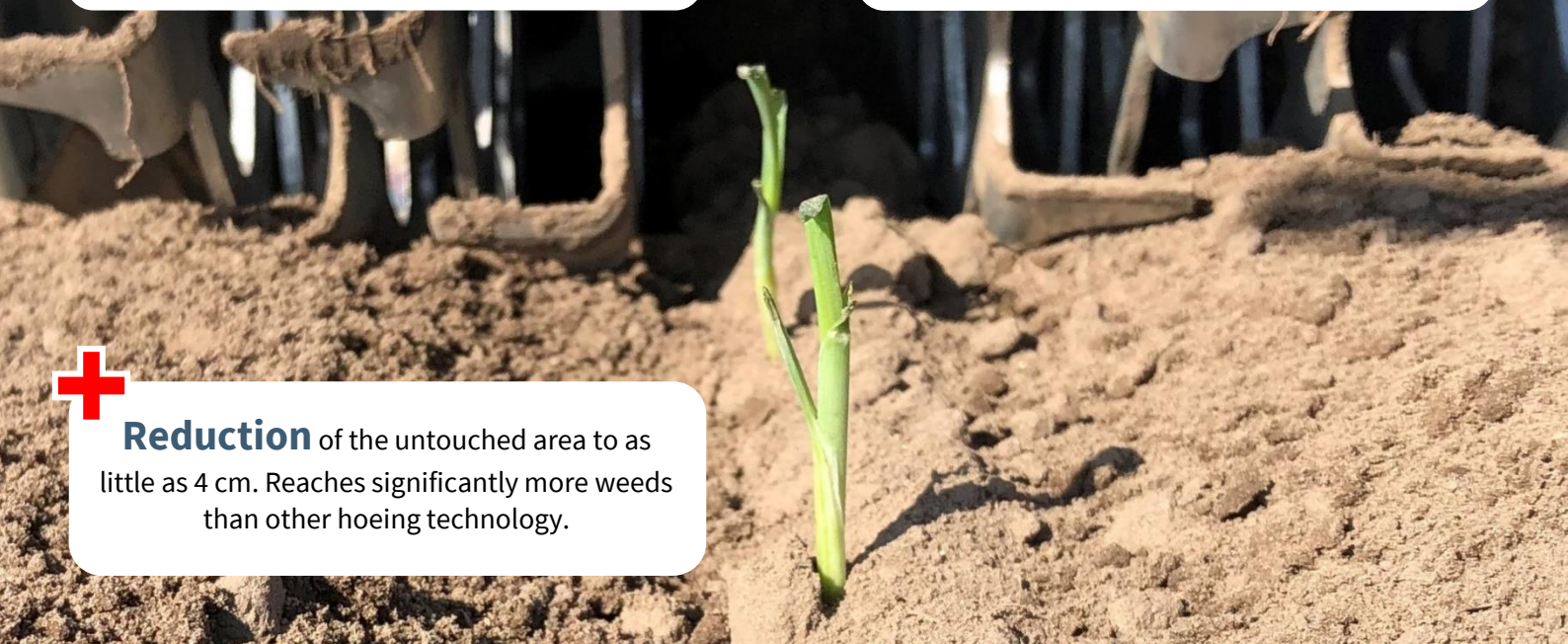
Weeds remain on the surface.



Before: heavily encrusted clods in silty soil.



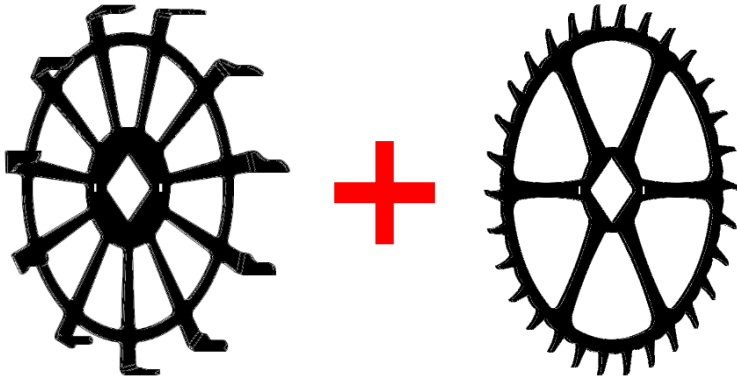
After: weeds are hoed close to the row. The clods of earth are not pushed sideways.



Reduction of the untouched area to as little as 4 cm. Reaches significantly more weeds than other hoeing technology.

Tool combinations

Direction of travel

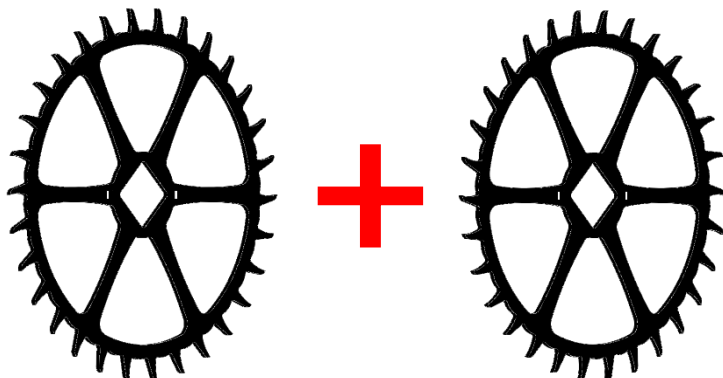
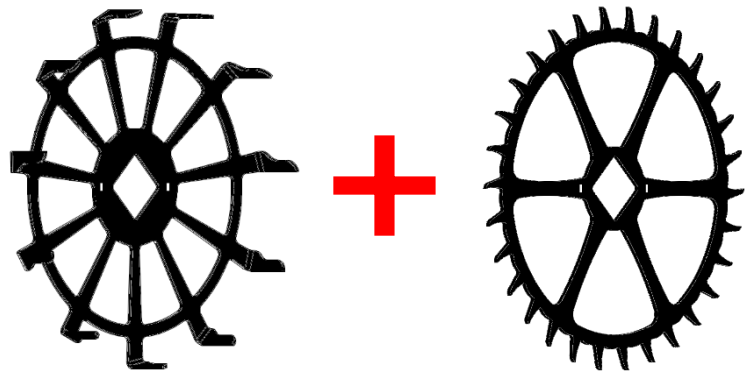


Weed control:

combination of soil structure improvement and intensive weed control by deracination of the weeds.

Weed control in clayey soils:

particularly gentle loosening of very heavily encrusted earth combined with intensive weed control.



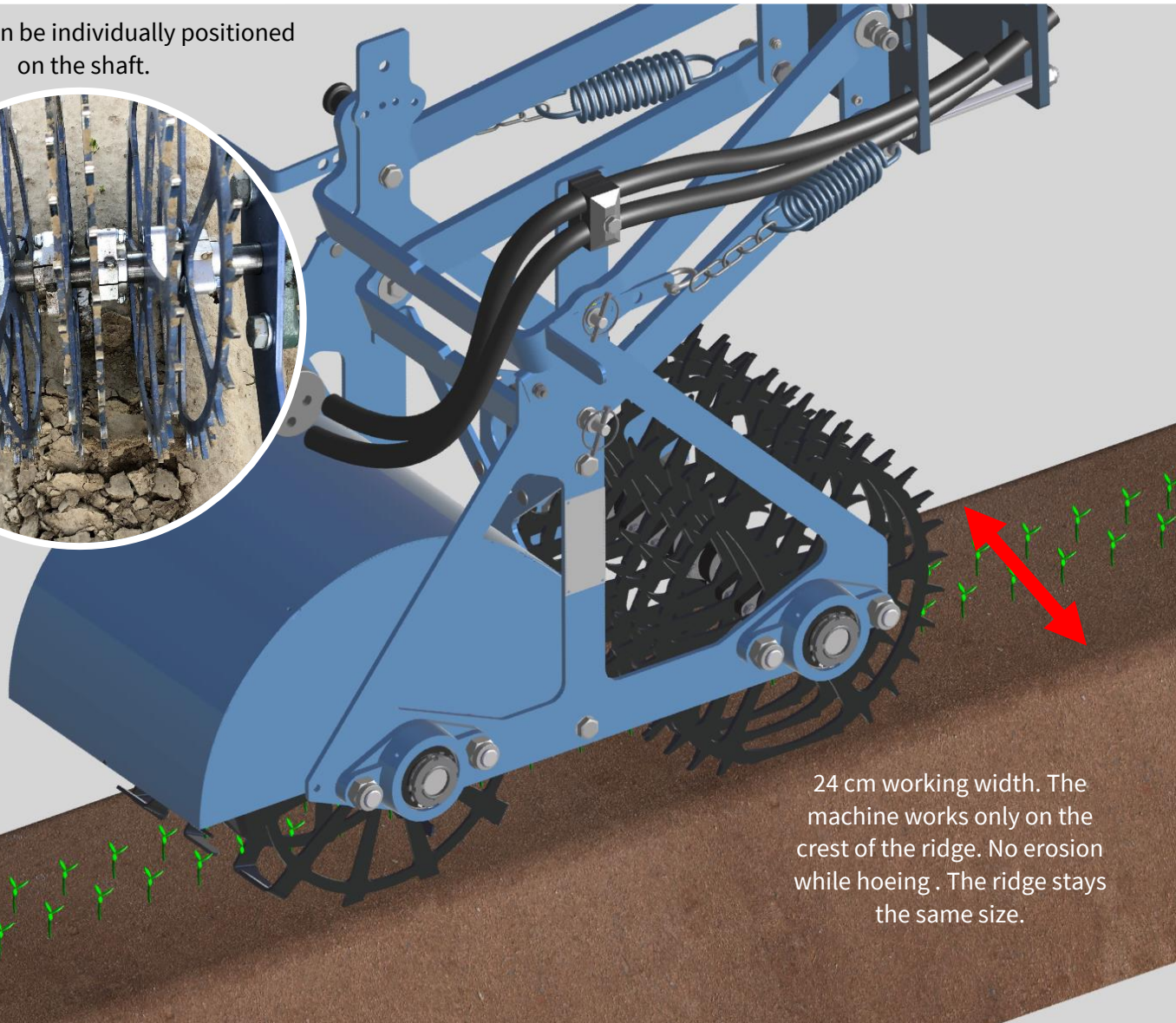
Breaking up encrusted soil:

encrusted soil effectively broken up combined with control of small weeds.

ABRAH Damm



The tools can be individually positioned on the shaft.



24 cm working width. The machine works only on the crest of the ridge. No erosion while hoeing . The ridge stays the same size.



50% cost savings in hand-weeding in comparison with other weeding techniques.



First mechanical hoeing between double and triple rows.

Testimonials

„The ABRAH allows precise chipping between the twin rows, which saves a lot of manual labour. Simple technology with a huge effect!“

Günter Achleitner

Achleitner Biogemüse KG

ABRAH Ridge in organic carrots and parsnips



„The ABRAH enables early and precise chipping, the best investment for our carrots since we started cultivating them 30 years ago!“

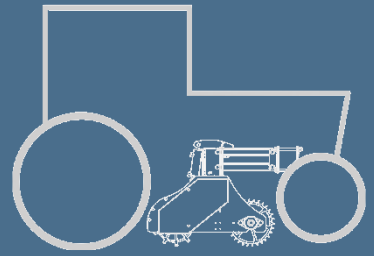
Heinz-Peter Christiansen

Christiansen's Biolandhof

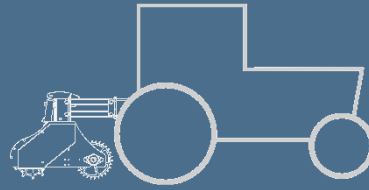
ABRAH Ridge in organic carrots

ABRAH Beet

Can be attached both to the rear and to the intermediate shaft.



Hydraulic loading and unloading allows it to be adjusted to various degrees of soil hardness.



The tools can be individually positioned on the shaft.

A variety of machine widths available for different bed widths.



Up to 70% cost savings as compared with competitors' products.



First mechanical hoeing of rows 5 – 20 cm apart.




Testimonials

„We particularly cherish the ABRAH when the false seedbed has not been able to destroy the weeds sufficiently due to the weather conditions, or there are gaps in the herbicidal effects.“

Joachim Raed

Raed Gemüsebau

ABRAH Bed in conventional baby-leaf



„In my master’s project, I compared various weed control procedures in conventional spinach cultivation. The effect of the ABRAH in the false seedbed was surprisingly positive when compared with the thermal procedures.“

Sebastian Küppers

RWZ Straelen

ABRAH Bed in conventional spinach

ABRAH Strip Till



Weeds to the left and right close to the row. The rest of the area between the rows can be weeded with a share hoe.

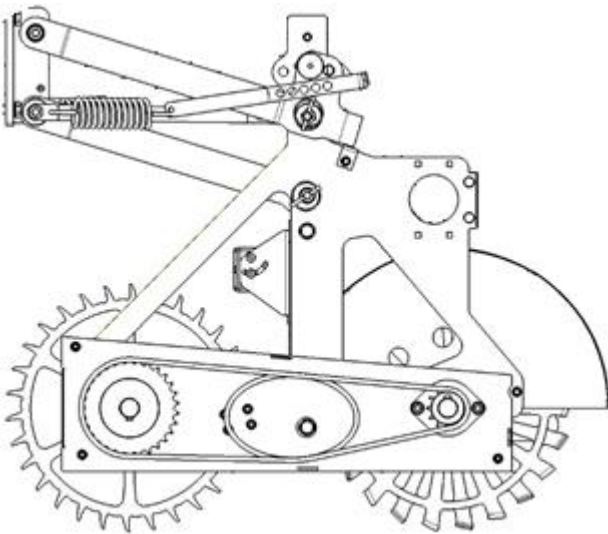


Basic body is identical to ABRAH Damm

ABRAH - drive concept

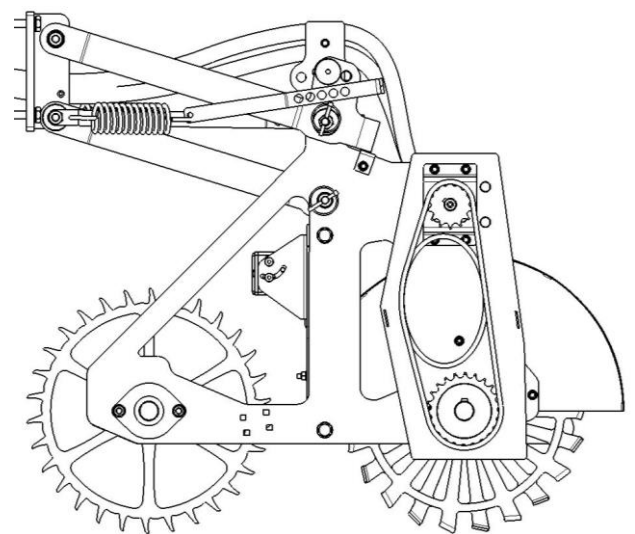


A major component in the ABRAH's operation is the higher rotation speed of the rear axle in comparison with the front axle. This lifts the weeds, complete with roots, out of the soil and they are left lying on the surface.



Self-propulsion

The rear axle is driven by the front axle by means of a chain drive. The transmission of the toothed gears turns the rear axle at double speed.



Hydraulic drive

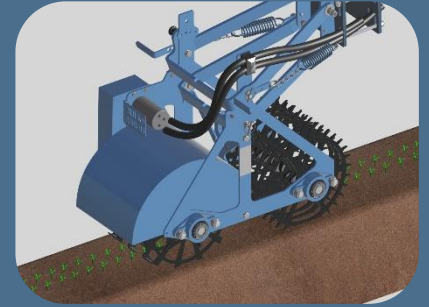
Hydraulic drive gives the tools stronger torque and makes them more efficient in difficult conditions.

The front axle runs without drive.

The rear axle is driven by a hydraulic motor. The rotation speed can be progressively adjusted by means of a valve.

The same drive concept for all ABRAH models. Self-propulsion is also used for the ABRAH Strip Till.




ABRAH - Composition



ABRAH

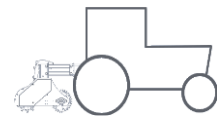


Available frames

-  Omega profile from Schmotzer or Kult/Kress
-  Frame from Einböck
-  Square tube

Frame

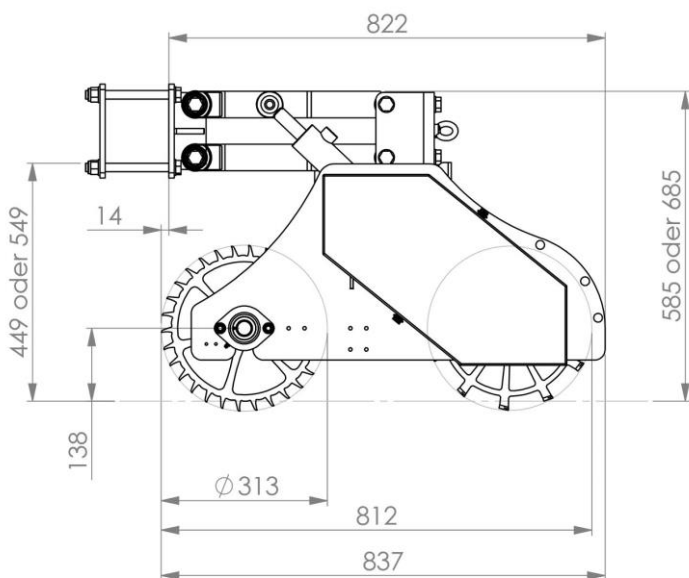
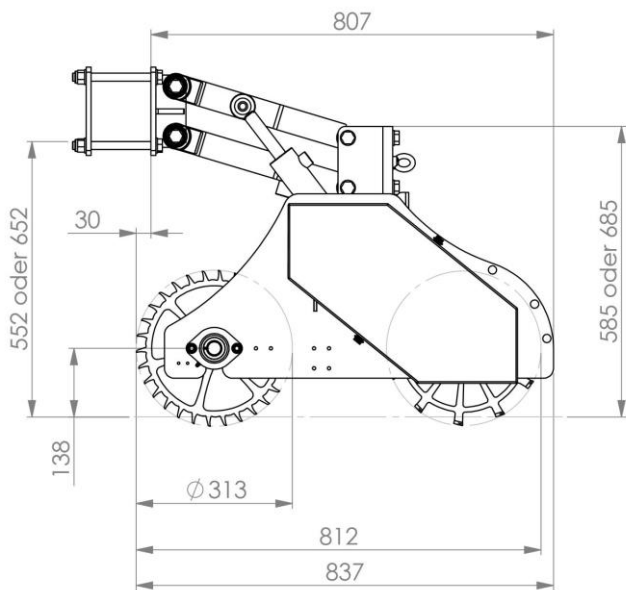
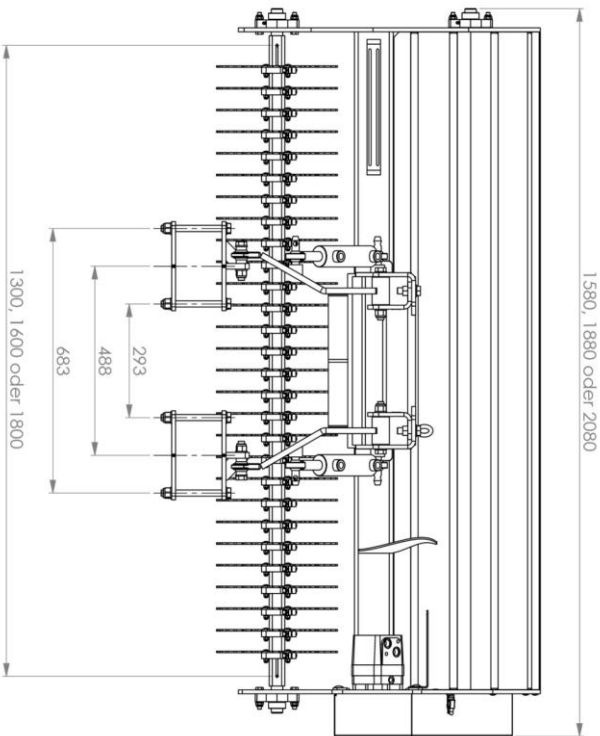
Buy a DULKS Frame for rear or intermediate shaft:



Tractor

ABRAH Beet (dimensions in mm)

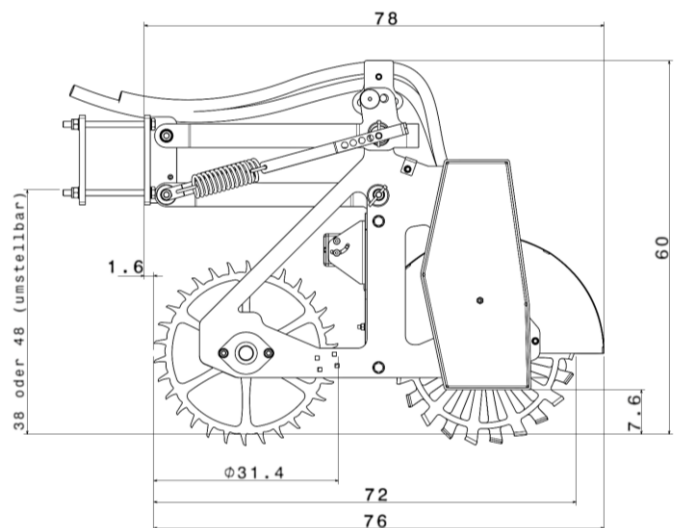
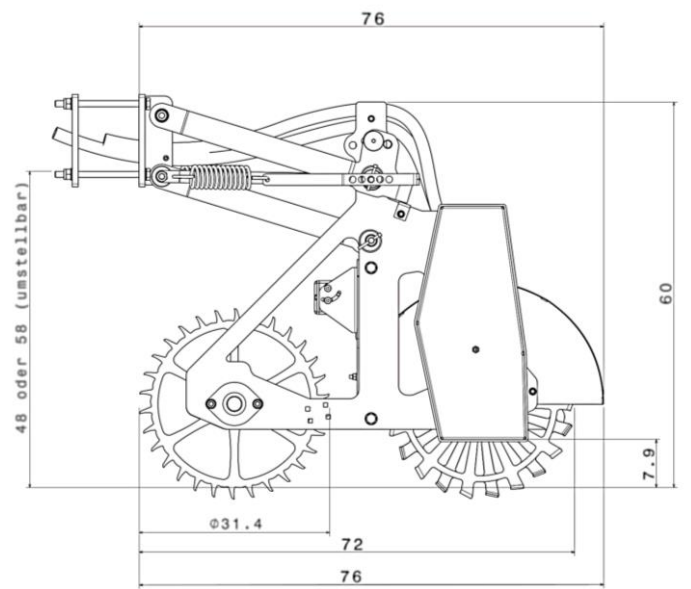
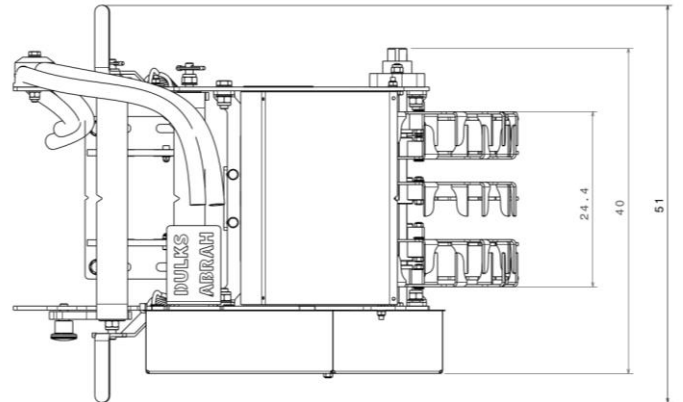
Weight incl. frame 450 kg



Dimensions

ABRAH Damm (dimensions in cm)

Weight incl. clamping 44 kg

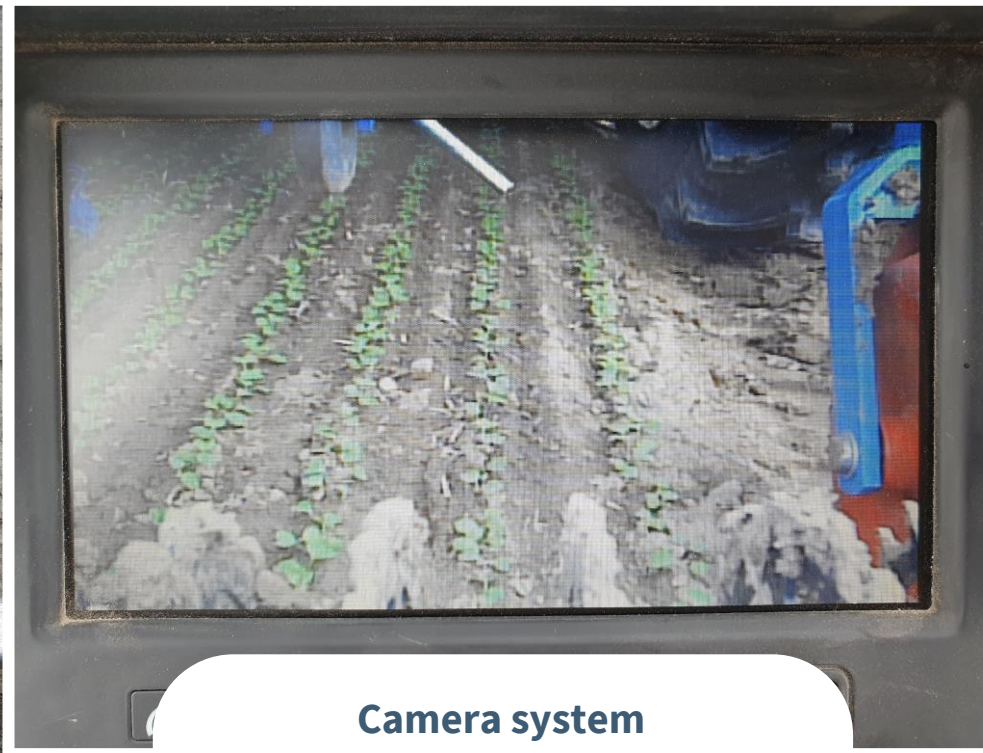


ABRAH - Additional options

Hydraulic steering

The frame from Monosem can be converted from mechanical to hydraulic steering. The steering linkage is steered and the stabilisers pivoted by a hydraulic cylinder.











A hydraulically driven frame is also in development. Watch this space!



Camera system

As a support system for the hydraulic steering there is the additional option of a camera. This transmits a live picture of the tools to the tractor. This means that the alignment of the machine to the row can be corrected from the cab. The camera is ISOBUS-compatible and therefore can be connected to screens already installed. If required, an external screen is also available.

Your configuration from the DULKS modular system

	ABRAH Ridge	ABRAH Bed	ABRAH Strip Till
Soil type			
Stones	Frequency _____ Size _____ - _____ cm diameter		
Crops			
Weeds	_____ % Root-stock weeds _____ % Seedling weeds _____ % Weed grasses	<input type="checkbox"/> Seed leaf <input type="checkbox"/> Foilage Leaf	
Row spacing 	<input type="checkbox"/> _____ cm		Second row spacing, possibility with exchange shaft _____ cm
Bed width		_____ cm	
Single rows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Twin rows	<input type="checkbox"/>	<input type="checkbox"/>	
Triple rows	<input type="checkbox"/>	<input type="checkbox"/>	
Distance	Ridge spacing: _____ cm 	If twin or triple rows: Group distance _____ cm 	
Row width 	_____ cm (normal 4 cm)		
Number	Ridges _____	Rows _____	Rows _____
Track width			
Frame available	<input type="checkbox"/>    <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>  <input type="checkbox"/>	<input type="checkbox"/>   <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Frame height	<input type="checkbox"/> limited (e.g. mid-mounted structure in Fendt GT)		
DULKS frame	<input type="checkbox"/> Rear-mounted electro-hydraulic steering <input type="checkbox"/> Rear-mounted manual steering (only up to a track width of 1.9 m) <input type="checkbox"/> Mid-mounted with wheel guide		



Up to 70% cost savings as compared with competitors' products.



First mechanical hoeing between double and triple rows.



Reduction of the untouched area to as little as 4 cm. Reaches significantly more weeds than other hoeing technology.



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