

**Steketee**

**Your specialist in soil treatment and weed control!**

# **Innovators in precision weed control**

Because of the large variety of crops, growth stages and row distances, choosing the right machine to take care of your crop rows is no easy matter.

Quite often you will find that the standard solutions offered by other manufacturers do not meet your requirements.

**When there is a weed - Steketee is what you need!**





**Your specialist in soil treatment and weed control!**

# **Steketee Machines**

**Professional custom-made solutions!**





# About Steketee

Steketee Machine Factory was established in 1969, focusing on development of weeding machines and soil cultivation machines. Right from the early days, the Steketee products were characterised by innovation. Today, this is still our key word.

We currently overlook a 15,000 m<sup>2</sup> production facility in which our committed and professional staff works with the latest metal working machinery and the best computer programs.

Our machines daily find their way to arable farmers and horticulturalists worldwide via our dealer network.

As producer of agricultural and horticultural machines we believe innovation and continuous improvement of our machines is highly important.

Although we have lots of experience in this area, the best ideas still emerge from practical use. That's why we are open to any suggestion or challenges you might have for us. Please let us know, so we can collaborate on a solution.



# Basic element



We start with a universal Steketee basic element. This basic element can be attached anywhere on a toolbar. For depth adjustment, the element is provided with a wheel with a pneumatic tyre, size 260x85. The working depth of the attached weeding knives or tines is easily adjusted by means of a crank. The penetration depth can be adjusted by increasing or decreasing the spring pressure on the element. Many different weeding knives and implements can be attached to the basic element. The robust construction of the element with parallel guide-links, provided with Iglidur bearings, ensures a smooth operation without play, and a very long life.

The elements can be disconnected separately by lifting them and securing them with a hook.



In the standard design the free height under the toolbar is 50 cm. In special cases this can be increased with a raised front piece up to maximum heights of 100 cm



Here you can see the basic element with a knife holder for 3 fixed knives. Protective discs are attached to the sides of the knife. These protect the crop against the loosened earth.





Another option is to use a fixed knife in tandem with 2 side knives instead of protective discs. This allows for very effective weed management.



Quite a different way of weeding is weeding with S-shaped tines. A Steketee weeding knife is attached to the tines. This weeding knife has a special shape, which allows loosening the weeds even when working in shallow earth.



A combination of a fixed knife and S-shaped tines. Protective shields are attached to the side of the element. They protect the plant along its entire length against the loosened earth.



This is an example of the L-blades mounted in vibro knife holders. In order to create a bigger flow this holder is longer. The separate sliding parts gives a bigger flexibility in row width adjustment.

Many more configurations are available see page 10-11 for more options.

## 12 Row Front Mounted







**Combi element in Mais mounted on toolbar type C**



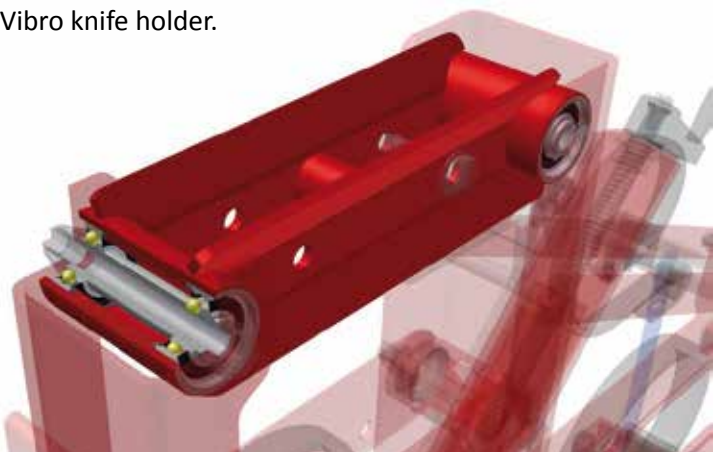
As the name suggests, this hoeing element is a combination of the smaller basic element and the larger TRS element. This element is particularly suitable for row distances from 20 to 80 cm, under light to medium-heavy conditions. The crop passage is always 70 cm high. All elements are made with a parallelogram provided with maintenance free ball bearings, guaranteeing a long life span and high precision. The FarmFlex wheel combined with the depth spindle provided with trapezium thread will ensure optimum depth adjustment. This depth adjustment can be read off the scale. The supplied lifting tool and the intelligent locking system will make it easier to lift out the elements manually. Optionally, this element can be equipped with a hydraulic lift and/or push system. This will allow you to operate each element individually via the touch screen while you work. Naturally, it is possible to mount the combi element to all Steketee hoeing beams, in order to create a machine that meets your highest demands. Below you can see a few example configurations.



Version with 'L' blades mounted in the Vibro knife holder.



Short version with protecting discs





# Combi element



Hydraulic element  
Combi element with 5 cultivation  
tines

Hydraulic cylinder for lift and push  
adjustment.



Touch screen operation



Short version with 3 fixed blades



Short version with 1 blade and small protecting discs

Lifting tool



Combi element with hydraulic lifting system



For crops with a larger row distance, we recommend the TRS element. This large hoeing element is special designed for the most demanding conditions. Therefore the working depth is controlled by a farmflex wheel 300x100mm, the knives are mounted in a very strong bar section and the element is suitable with big S-tines. Of course all standard Steketee tools like 'A' blades, finger weeders, ridging elements, protection discs etc. can be combined in the TRS element.



Version with 3 'A' blades mounted in a Vibro Knife holder. The middle weeder is in the centre of the element. The other 'A' blades can be adjusted by means of the sliding parts.



Version with 5 Spring tines with duckfeet 155 mm. Protection shields are attached to the side of the element. They protect the plant along its entire length against the loosened earth.



# TRS element

**Steketee**



TRS element equipped with 5 Spring tines with duckfeet 155 mm. Behind this element we have a weed harrow



The rotor weeder also fits behind the TRS element. The rotor weeder is designed to work aggressively in the row. Also suitable for stony conditions and/or heavy soils.



Version with fixed 'A' blades and fingerweeders to remove weeds in the row.





Other options that can be used for weeding are shown below:



*'A' blade with stem*



*'L' blade with stem*



*'L' Blade - Sandy soil*



*Small Vibro knife holder*



*Large Vibro knife holder*



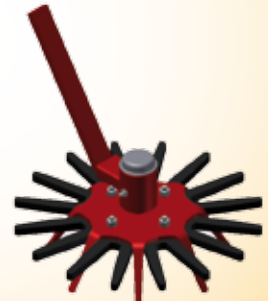
*Small Spring Tine with Duckfoot 155mm*



*Large Spring Tine with Duckfoot 155 mm*



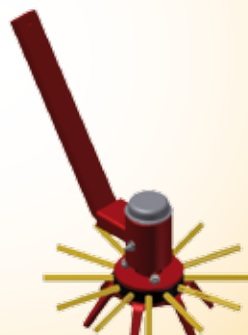
*Fingerweeder Ø 220 mm*



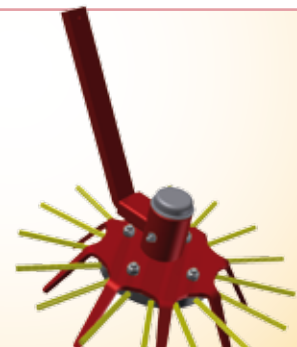
*Fingerweeder Ø 340 mm*



*Fingerweeder Ø 400 mm*



*Brush Fingerweeder Ø 220 mm*

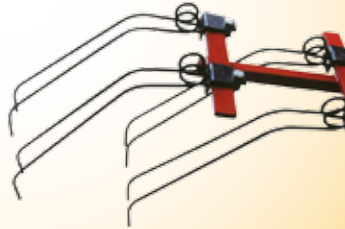


*Brush Fingerweeder Ø 340 mm*

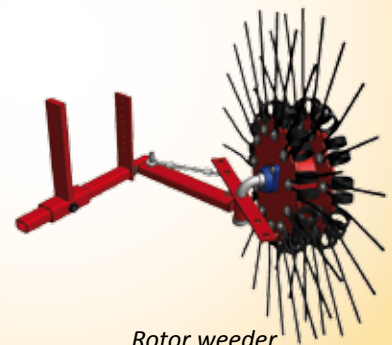




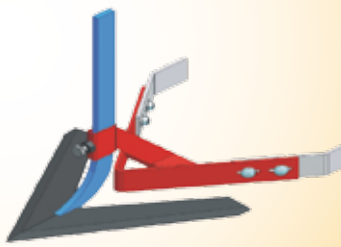
*Torsion weeder*



*Weed harrow*



*Rotor weeder*



*'A' blade mounted earthing-up share*



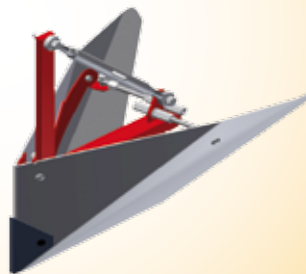
*Earthing-up share*



*Earthing-up share, adjustable  
row distance 50 cm*



*Earthing-up share, adjustable  
row distance 75 cm*



*Earthing-up share*



*Double Spring loaded arm  
with Finger weeder*



*Crumbler rotor*



*Adjustable Crumbler rotor*



*Adjustable share*

Above mentioned options are just a small selection from our collection. We have a solution for every situation. We are open to any suggestions and challenges you might have for us. Due to our modern research and development department we are capable to design & produce custom-fit machines.



# Finger weeder

## For inter-row weed control

- Easily mountable
- Easily replaceable
- Adjustable in length
- Adjustable in width
- Adjustable in height

The Steketee finger weeder is specially designed to control small and just emerged weeds in the crop row. In-crop mechanical weeding (by means of weeder blades, cultivation tines, ridger blades, etc) is a long standing practice. But a much higher percentage of the land can be mechanically cleaned from weeds with the finger weeder in combination with a weeder element.



The finger weeder consists of a turning disc with flexible fingers on it. These flexible fingers turn in between the crop row and destroy smaller weeds. It is also possible to replace the disc with flexible fingers with a disc with brush fingers.

The finger weeder is specially made for mounting on the Steketee weeding element but can also be mounted on another weeder element without effort. The depth and width control can be infinitely adjusted for a higher or lower operation intensity. Also, both mounting the finger weeder fixed and hinged are possible. For 25 to 40 cm row intervals a smaller rotor can be supplied.

The Steketee finger weeder is suitable for weeding with high speeds. The stable bearing by means of ball bearings renders a high rotational speed unproblematic. The rubber fingers are available in various diameters. For example, a 340 mm and 400 mm rotor blade diameter can be selected. The versions with brush fingers can only be supplied with a 340 mm diameter.

A smaller rotor can be selected for smaller row distance. This can be supplied with rubber finger discs with a 220 mm diameter. Optionally to be supplied with brush fingers.



Patent nr. EP 111 6427 B1



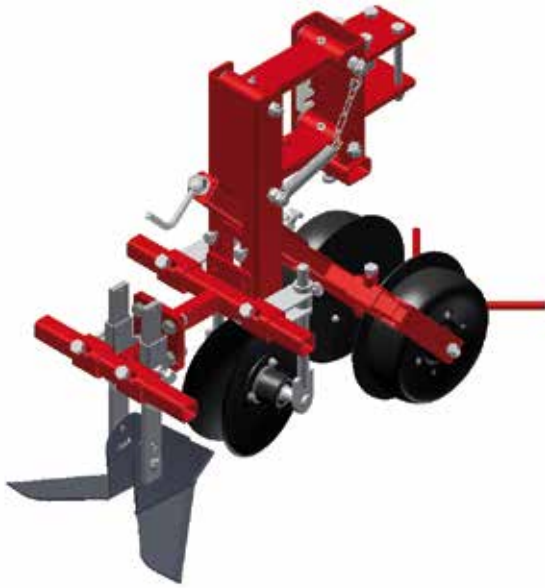


# Disc weeding machine

## Disc Weeding Machine

The Steketee Disc weeding machine is the ideal machine for all crops grown on ridges between furrows. The Disc weeding machine consists of the basic element with a knife holder. The knife holder holds a weeding knife. The knife holder also has an infinitely adjustable set of discs. The knife cuts the weeds at the bottom of the crop row. The discs remove the weeds on the sides of the ridges. the height and the angle of these hollow discs are infinitely adjustable.

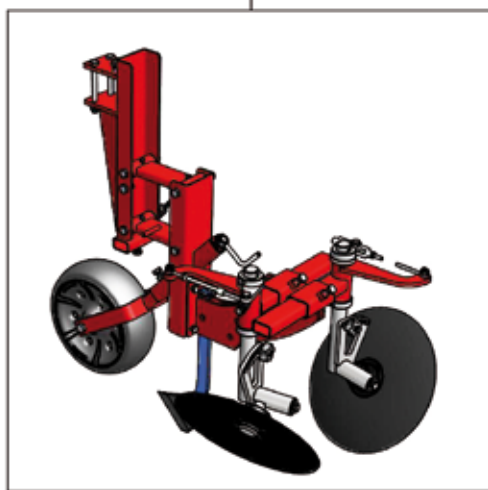
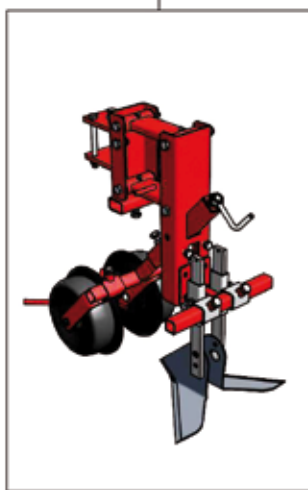
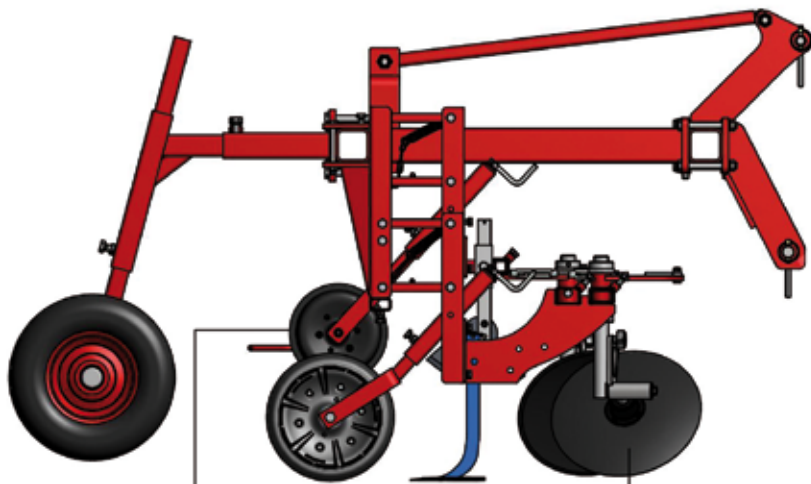
Accurate weeding on raised narrow beds with depth wheels fitted with protection discs and L-Blades to hoe tightly to the crop.



Element for weeding on the ridge



Element for weeding bottom and side





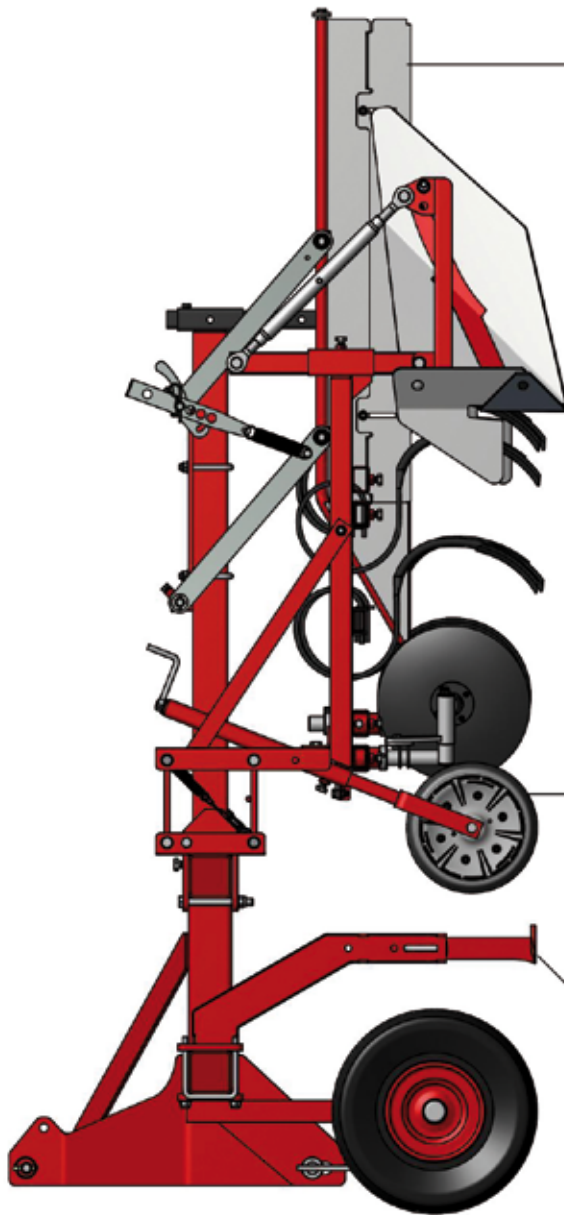
# Ridger

The Ridger is used to free crop from weed and rebuild the bed. The ridger machine will allow you to treat all crops on beds. It is fairly easy to set up the machine. Each ridging tool is mounted to a basic element and the amount of soil can be adapted by means of a spindle. Tractor tracks or connecting rows are no longer a problem.

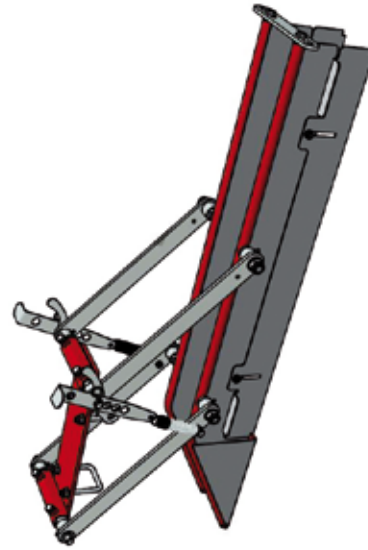
The machine can be made with subsoilers at the front of the ridger. The subsoilers can be attached as an option for better drainage. For the sides of the beds, there are cultivation tines on the elements to loosen the soil. The ridging body is the last component to be mounted. The Ridger can be the second work pass behind the disc hoeing machine. The ridger has stainless steel ridging bodies and spindle adjustment in order to change the angle.

Stainless steel will ensure less soil caking and will provide a good guidance. Through adjustment of the ridger you can control the compactness of a bed, so you can choose between a taut bed or a more airy bed. The specially developed ridger machine prevents the soil from getting clogged and ensures air in the soil. It is also possible to supplement the soil evenly against the haulm guides. The haulm guides will ensure that no soil ends up on the plants at the early stage of the plants. In the case of larger crops (carrots, chicory and potatoes), the haulm guides will pick up the haulm, so that no soil ends up on the haulm, which will prevent possible diseases (fungus). An advantage in the case of carrots is that the haulm guide has a slide that is height adjustable. This will allow you to throw more or less soil over the heads and will prevent green heads.

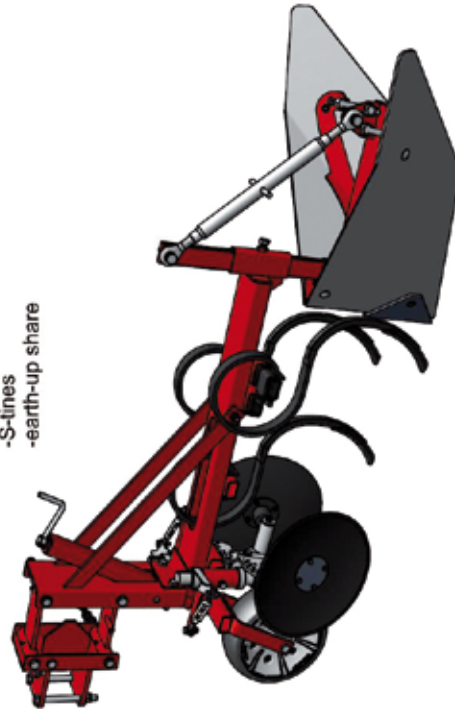




Leaf protector mounted in parallelogram  
(width adjustable)



Standard TRS element with:  
-disc weeder  
-S-lines  
-earth-up share



subsoilers (optional)





# Comfort Ridger

The Comfort ridger is build for maximum comfort when it comes to precision adjustments. It is available in various versions.

Each machine is provided with a spindle and a pin/hole adjustment and can therefore be used for all crops.

The Comfort ridger has a fixed frame on which all components are mounted and can be mutually exchanged. A standard machine consists of subsoilers for hoeing the bottom, a disc set for the side of the bed, cultivation tines for loosening soil, the ridging disc to partly construct the bed and crumble clods. At the back of the machine there is the ridging body, with angle adjustment, to create a fully intact bed. The machine contains leaf protectors covering the whole length of the machine. The width of these protector can be adapted by means of a spindle adjustment using a ratchet, and the height is also easy to adjust.

## The benefits of the Comfort Ridger

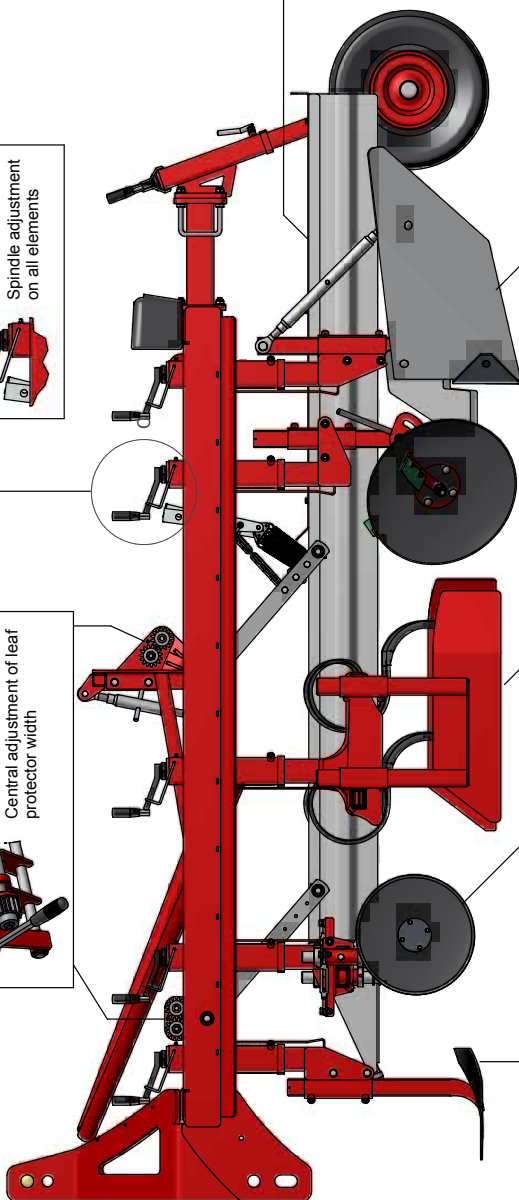
1. Sufficient space in the machine will prevent it from filling up with soil or weed.
2. Thanks to the simple and intelligent adjustments, it is easy to switch between various crops.
3. Due to the modular structure, it is easy to create a machine that fits your requirements.
4. Due to its own weight, it is able to create a good bed on heavy soils as well.
5. Also a good result in tractor tracks or connecting rows, thanks to the spindle adjustment.
6. The ability to ridge late in the season, ensures a strong crop and prevents diseases.
7. The height adjustment of the leaf protectors allows you to control the soil flow very accurately (in the case of carrots you will prevent green heads), which will be beneficial to the crop.
8. The machine has a high ground clearance, so that large crops are not a problem.



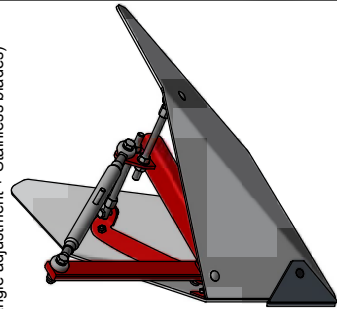
Loofgeleider in parallellogram  
(breedteverstelling + werkhoekeverstelling)  
Leaf protector mounted in parallellogram  
(width + angle adjustable)

Spindelverstelling  
op alle elementen  
Spindle adjustment  
on all elements

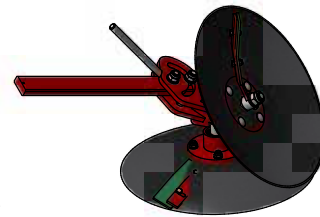
Centrale breedteverstelling  
van loofgeleiders  
Central adjustment of leaf  
protector width



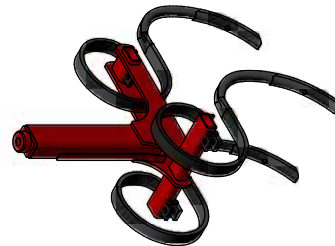
Aanaardschaar  
(hoekinstelling + RVS platen)  
Earth up share  
(angle adjustment + Stainless blades)



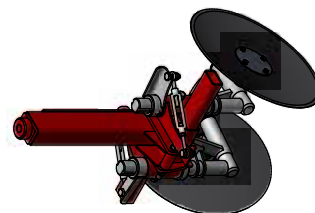
Aanaardschijven  
Earth up discs



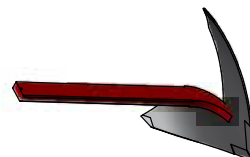
trilanden + zijplaten  
springlines + sideplates



Schijvenschoffels  
Hoing discs unit



Schoffelm  
A-blade





# Multi Sprayer MS1

The hooded sprayer is used to apply chemicals to, for example, sugar beets, chicory and carrots.

There are 3 types of hooded sprayers.

The first type is the MS1. In this case the crop is covered by a U-element. Spraying then takes place between the U-elements. This type is mainly used for crops with smaller row distances or with crops that are grown on ridges.

Front mounted with 80x80mm toolbar, number of rows according to customers needs.





# Multi Sprayer MS2

**Steketee**

The second type is the MS2. In this case a hood is placed between the rows and spraying takes place in the hood. The hood is attached to the basic element. The same basic element can thus be used for weeding and for spraying between the crops.



## Results with Under-leaf sprayer in Maïs:



Untreated



Results after 1 week



## Hooded sprayer

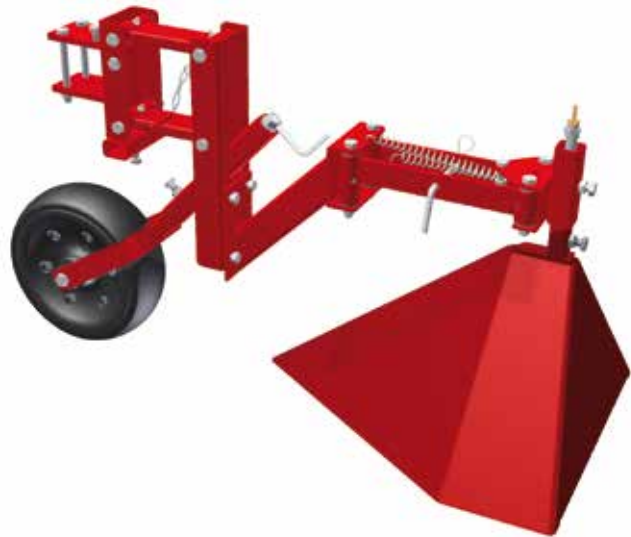
Using the Steketee base TRS element that can be made with increased under clearance if required, along with the MS2 adjustable hoods gives an accurate band spraying system with crop protection.



# Under Leaf Sprayer

The third type is a under-leaf sprayer. It consists of a torpedo-shaped hood, with free lateral movement.

The hood is guided by the crop. It enables more rows to be sprayed than have been sown or planted. This hood can also be attached to the basic element.










# Band Sprayer









The inter-row sprayer is used to spray chemicals on the rows instead of in-between them. This leads to savings of up to 70% compared with conventional spraying. The spraying nozzles are guided by a skid on both sides of the row.





# Toolbars

		Group A	Group B
<i>Bar section</i>	square tube 80x80mm	x	x
	square tube 100x100mm		x
	Steketee profile bar	x	x
	Application	light duty	medium/heavy duty
	Working width	1,5-3mtr	1,5-4mtr
<i>Mouting</i>	Front		
	Back		
	Steering system		
<i>Hoe element</i>	Basic element	x	x
	Combi element	x	x
	TRS element		x
<i>Options</i>	(GPS) steering discs		
	Extension hitch, to use a cultivator in combination with an other machine. (e.g. a weed harrow)		

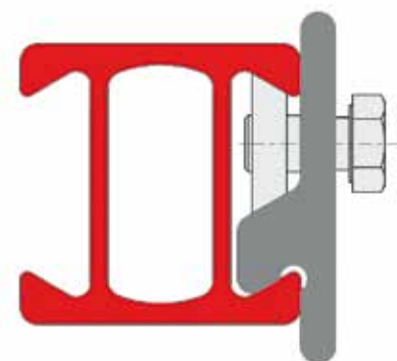
Group C	Group D
	x
	x
x	x
medium duty	heavy duty
4-6mtr	6-12mtr
	
	
	
x	x
x	x
	x
	
	

Due to different row widths and crops we produce toolbars according to customer specifications. Of course, we use standard components as much as possible. Below follows an overview of the parts that can be used to build a toolbar.

When the weeder toolbar is mounted on the tractor front, the toolbar is fitted with 2 or more depth wheels. When toolbar is mounted on the tractor rear it is advisable to use 1 or 2 discs. This can also be done in combination with depth wheels.

## Toolbar

All toolbars are available as the unique Steketee profile system. This system consists of a steel bar with a negative angle clamping profile where all elements can be mounted with just one bolt. The wedge plate inside the profile ensures the clamping force and will guarantee great stability. Since the clamping elements can be mounted on both sides of the bar, the flexibility is almost endless.





# Steering system

In order to allow accurate hoeing, all Steketee machines can be made with a steering system. These steering systems can be subdivided into the following categories:

- Manual steering system
- Electro-hydraulic manual steering system
- GPS steering discs
- IC light camera steering system

## Manual steering system

The manual steering system is mainly characterised by the fact that it works independently from the tractor. The 2 height-adjustable steering wheels are operated by means of a closed hydraulic system. The machine's light construction will make it highly suitable for lighter tractors. Electro-hydraulic manual steering system For larger working widths and more demanding conditions, the electro-hydraulic manual steering system is used.

This system has the following structure:

- A front frame that is mounted behind the tractor.
- A horizontal parallelogram with hydraulic steering cylinder
- Rear frame with the hoeing elements attached to it. Using the tractor's hydraulics, the joystick will provide easy and accurate steering.

## GPS steering discs

If a more restricted steering correction is demanded, e.g. in case of combined tractor/tool GPS steering, steering discs will be sufficient. These steering discs can be mounted behind any Steketee hoeing machine.





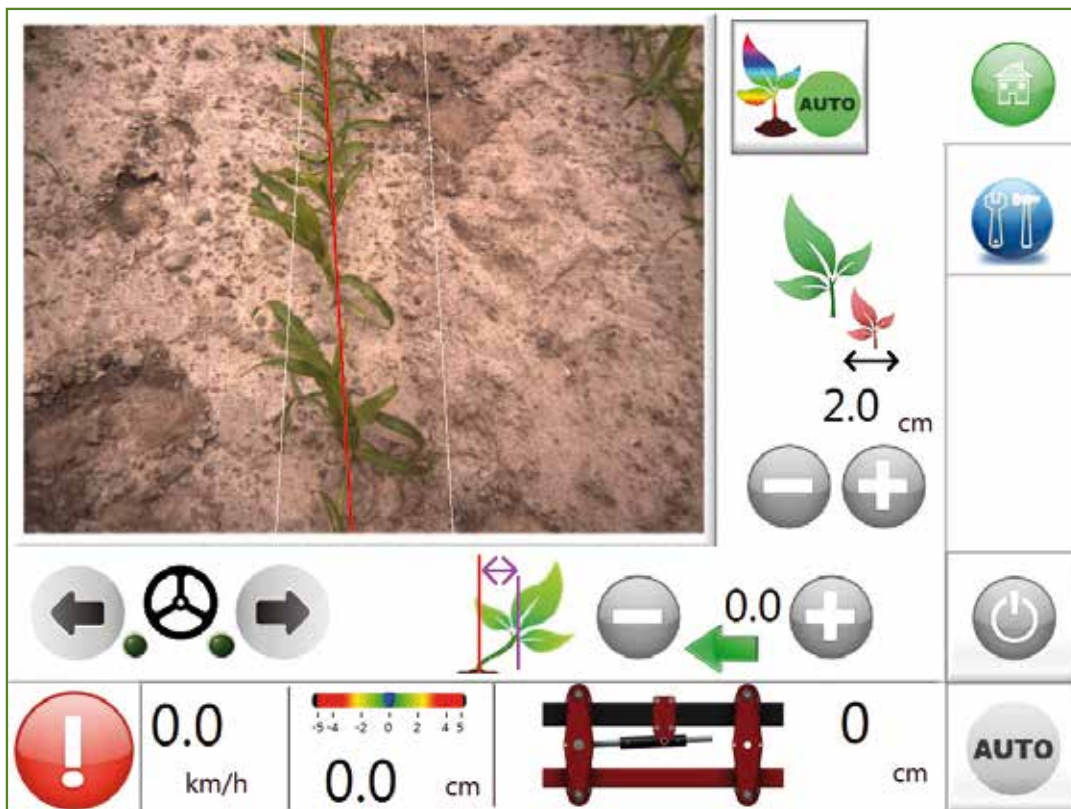
## Camera IC light

The Steketee IC light steering system will make it simple, economical and effective to accurately steer different machines in row cultures. Row sprayers, hoeing machines, etc., can be accurately steered with an accuracy of a few centimetres at speeds of 3-20 km/hour.

The colour camera on this machine will automatically recognise the crop row and will steer the machine between the crop rows, independently from the tractor.

Benefits of Steketee's independent steering system are:

- High accuracy
- Large capacity
- Automatic colour recognition
- Intuitive touch screen operation
- Real-time display of the camera image
- Simple to use
- Possible to steer on one or multiple rows
- Suitable in flat, bed and ridge cultures.



The IC light can be extended with LED lighting. This will enable you to work in the dark as well. Steketee Remote Service is also one of the possibilities. This option will allow the IC light computer to connect to the internet. Via this secured connection, Steketee will be able to help users remotely and to perform updates.





# IC Weeder and IC Scout

The IC is Steketee's automatic hoeing machine that uses camera images to calculate the positions of cultivated crops and is able to hoe around them accurately and quickly. The IC is able to hoe all green crops that are planted in a row. For other crops, such as red lettuce, we are able to supply extension programmes.

In order to provide accurate quality inter-row and inter-plant cultivations a wide variety of hoeing blades and tines are available such as cultivating tines, torsion weeders, finger weeders, harrow weeders, etc. In addition, it is possible to apply row spraying or even crop specific spraying.

As an added benefit the digital recordings made whilst hoeing can be utilized to count the crops, measure the green surface of the crops or establish the discolouration of the crops.



*IC Weeder*



*IC Scout for research purposes*



Your Dealer:



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**Your specialist in soil treatment and weed control!**