

Steketee

WEEDING TECHNOLOGY





About Steketee

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

We currently operate a 15,000-square-meter production facility in which our committed and professional staff works with the latest metalworking machinery and the best computer programs.

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

As a producer of agricultural and horticultural machines, we believe innovation and the 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 is why we are open to any suggestions or challenges you might have for us. Please let us know, so we can collaborate on a solution.



Basic-Element



4-row, on bed system



We start with a universal Steketee Basic-Element, which can be attached anywhere along a toolbar. For depth adjustment, the element is equipped with a wheel with a pneumatic tire, size 260 x 85 mm. The working depth of the attached weeding blades 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 blades and implements can be attached to the Basic-Element. The robust construction of the element, with parallel guide-links and iglidur® bearings, ensures 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 a maximum height of 100 cm.



Here you can see the Basic-Element with a blade holder for 3 fixed blades. Protective discs are attached to the sides of the blade. These protect the crop against the loosened earth.



Another option is to use a fixed blade in tandem with 2 side blades instead of protective discs. This provides for very effective weed management.



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



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



This is an example of L-blades mounted in Vibro blade holders. In order to create a bigger flow, this holder is longer. The separate sliding parts afford greater flexibility in row-width adjustment.

Many more configurations are available. See pages 10–11 for more options.

12-row, front-mounted





Combi-Element in corn, mounted on toolbar type C



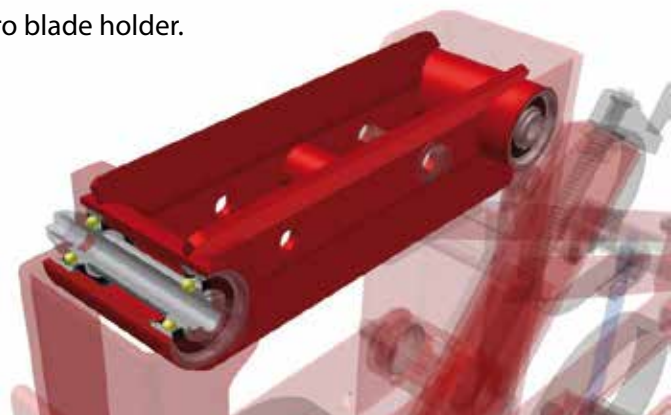
As the name suggests, this hoeing element is a combination of the smaller Basic-Element and the larger TRS-Element. The combi is particularly suitable for row distances from 20 to 80 cm, under light to medium-heavy conditions. The crop passage is always 70 cm high. All elements are made with a parallelogram equipped with maintenance-free ball bearings, guaranteeing a long life span and high precision. The FARMFLEX wheel combined with the depth spindle with a trapezoidal thread ensures optimum depth adjustment, which can be read off the scale. The supplied lifting tool and the intelligent locking system make it easier to lift out the elements manually. Optionally, this element can be equipped with a hydraulic lift and/or push system. This allows 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 blade holder.



Short version with protective 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 protective discs.

Lifting tool





For crops with a larger row distance, we recommend the TRS-Element. This large hoeing element is specially designed for the most demanding conditions. Therefore, the working depth is controlled by a FARMFLEX wheel, size 300 × 100 mm, the blades are mounted in a very strong bar section and the element is suitable for use with large S-tines. Of course, all standard Steketee tools, such as 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 blade holder. The middle weeder is placed in the middle of the element. The other A-blades can be adjusted by means of the sliding parts.



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

TRS-Element



TRR-Element equipped with 5 spring tines with duckfeet, size 155 mm, with we have a weed harrow behind the element.



The rotor weeder can also be attached to the rear of the TRR-Element. The rotor weeder is designed to work aggressively in the row. It is also suitable for stony conditions and heavy soils.



Version with fixed A-blades and finger weeders to remove weeds in the row.



Tools and options



A-blade



L-blade



L-blade



Small Vibro holder



Large Vibro holder



Small spring tine with duckfoot



Large spring tine with duckfoot



Finger weeder, Ø 220 mm



Finger weeder, Ø 340 mm



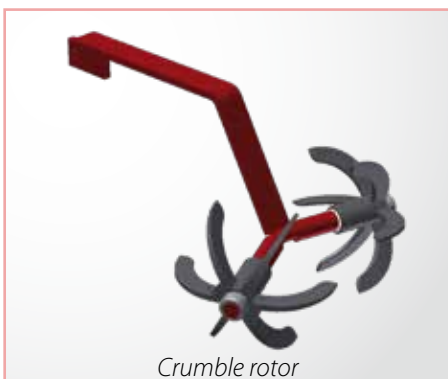
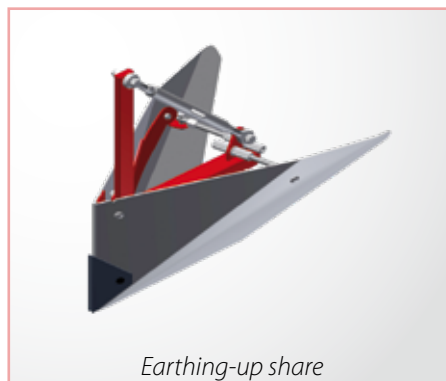
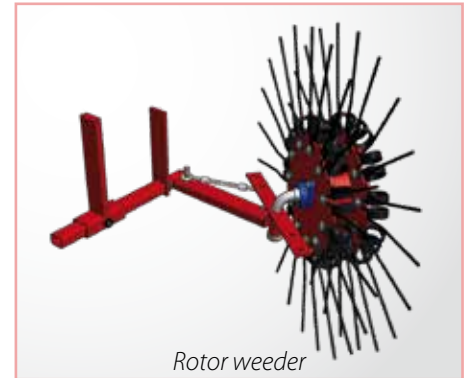
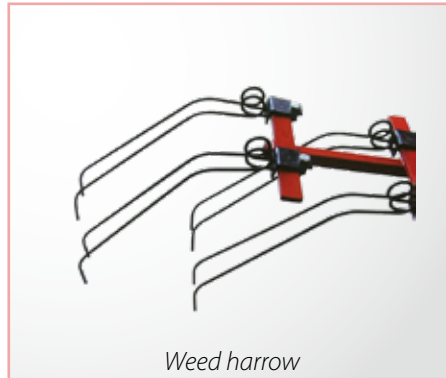
Finger weeder Ø 400 mm



Brush weeder, Ø 220 mm



Brush weeder, Ø 340 mm



The above-mentioned options are just a small selection from our range. We have a solution for every situation. We are open to any suggestions and challenges you might have for us. With to our modern research and development department, we are capable of designing and producing custom-fit machines.

Finger weeder

For intra-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 emerging 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 of 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 the soil between the crop rows 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 easily mounted on another weeder element. The depth and width control can be steplessly adjusted for higher or lower operation intensity. Also, both weeder fixed and hinged mounting are possible with the finger weeder. For 25 to 40 cm row intervals, a smaller rotor can be supplied.

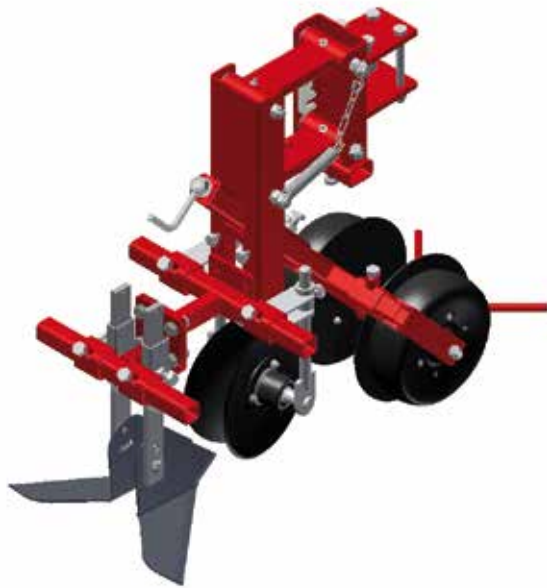
The Steketee finger weeder is suitable for weeding at high speeds. Ball bearings provide stability, rendering a renders a high rotational speed unproblematic. The rubber fingers are available in various lengths. For example, a 340 mm and 400 mm rotor blade diameter can be selected. The versions with brush fingers can only be supplied with a 340 mm rotor blade.

A smaller rotor can be selected for smaller row distances. This can be supplied with rubber finger discs with a 220 mm diameter, or optionally with brush fingers.





Disc weeding machine



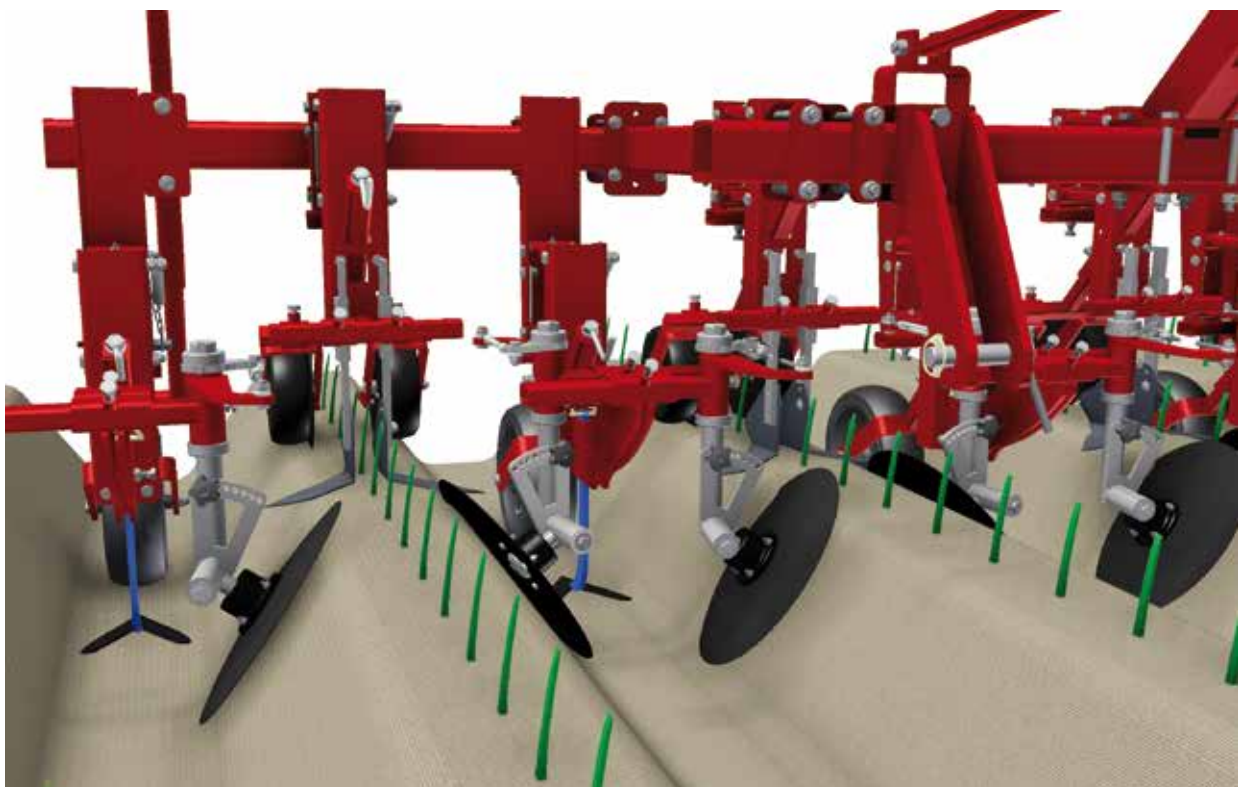
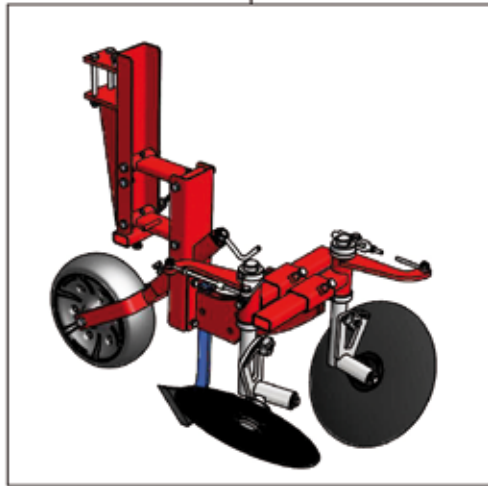
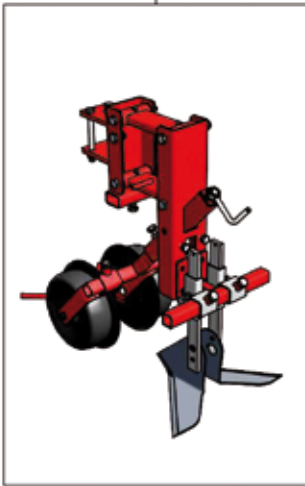
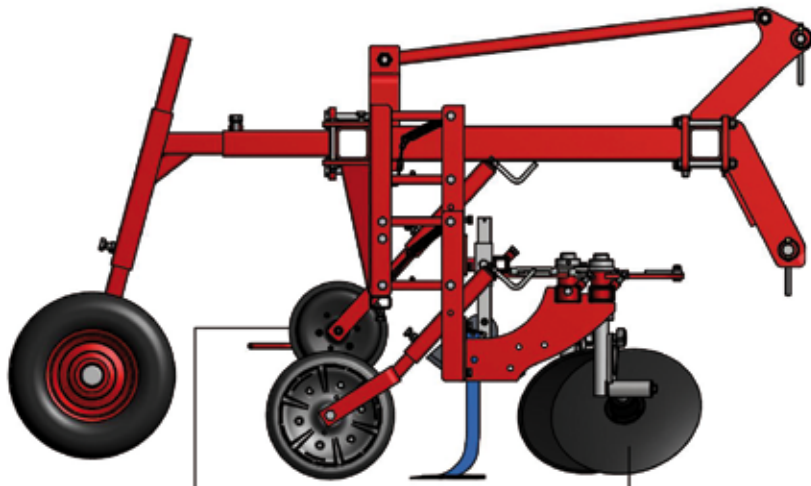
The Steketee disc weeding machine is the ideal machine for all crops grown on ridges between furrows. The disc weeding machine consists of the Basic-Element equipped with a blade holder. The knife holder holds a weeding blade. The blade holder also has an infinitely adjustable set of discs. The blade 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 steplessly adjustable.

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

Element for weeding on the ridge



Element for weeding bottom and side



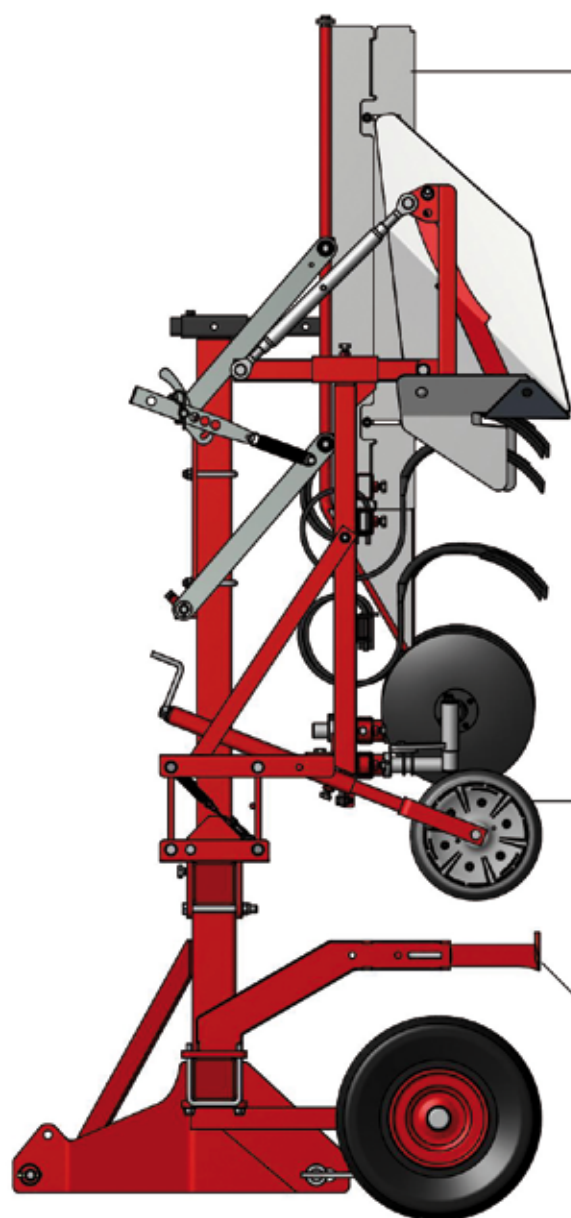
Ridger

The ridger is used to free the crop from weeds and rebuild the bed. The ridger machine allows you to treat all crops grown on beds. It is fairly easy to set up the machine. Each ridging tool is mounted to a Basic-Element, and the soil amount can be adjusted by means of a spindle. Tractor tracks and connecting rows are no longer a problem.

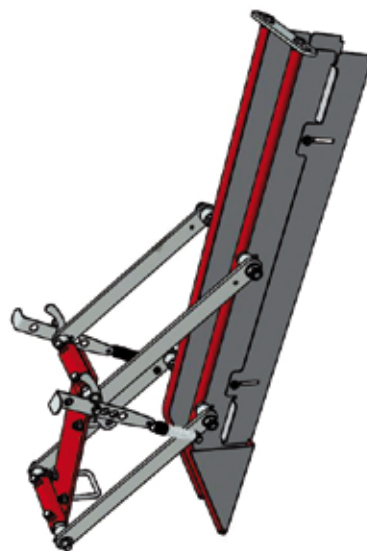
The machine can be made with subsoilers at the front of the ridger. The subsoilers can be attached as an option for better drainage. For the sides of the beds, there are cultivation tines on the elements to loosen the soil. The ridging body is the last component to be mounted. The ridger can be the second 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 ensures less soil caking and provides good guidance. By adjusting of the ridger, you can control the compactness of a bed, allowing you to choose between a taut or more airy bed. The specially developed ridger machine prevents the soil from getting clogged and ensures that the soil can breathe. It is also possible to supplement the soil evenly against the haulm guides. The haulm guides ensure that no soil ends up on the plants in their early growing stage. In the case of larger crops (carrots, chicory or potatoes), the haulm guides lift up the haulm so that no soil ends up on it, which prevents possible diseases (fungus). An advantage in the case of carrots is that the haulm guide has a height-adjustable slide. This allows you to throw more or less soil over the carrot heads and thus prevent green heads.

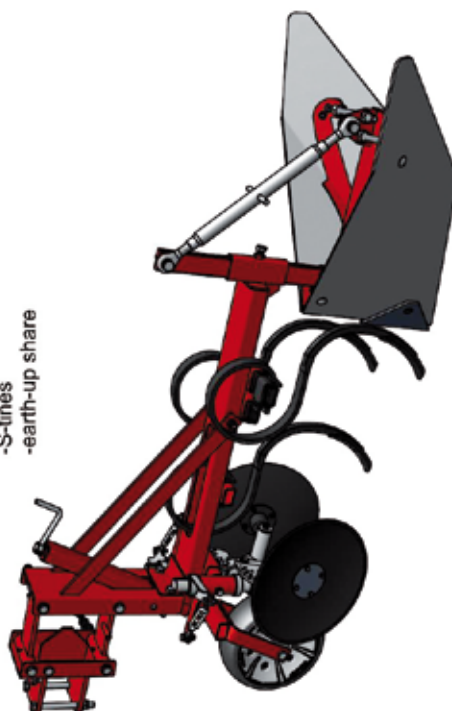




Leaf protector mounted in parallelogram
(width adjustable)



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



subsoilers (optional)



Comfort Ridger

The Comfort Ridger is built for maximum convenience when it comes to precision adjustments. It is available in various versions.

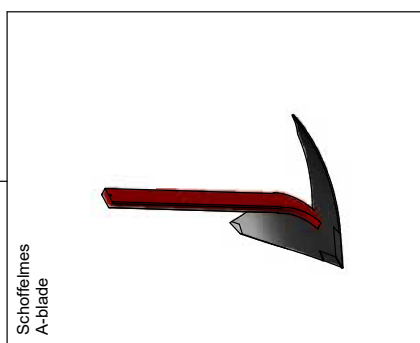
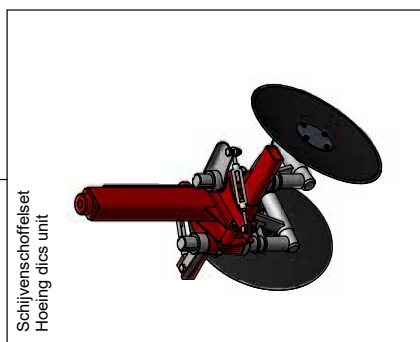
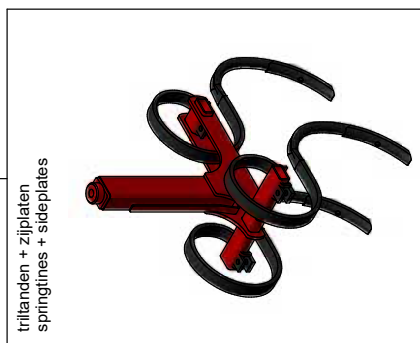
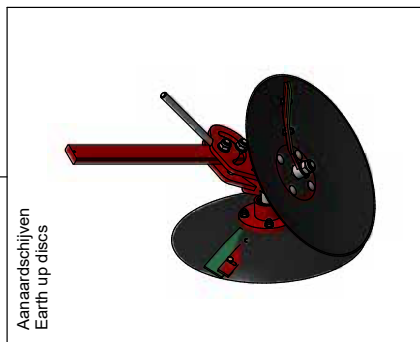
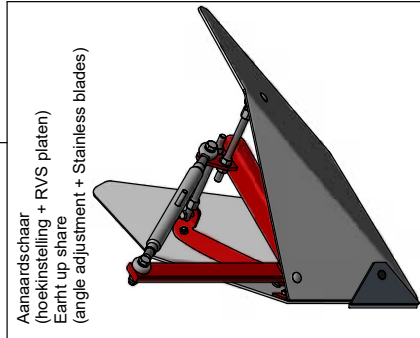
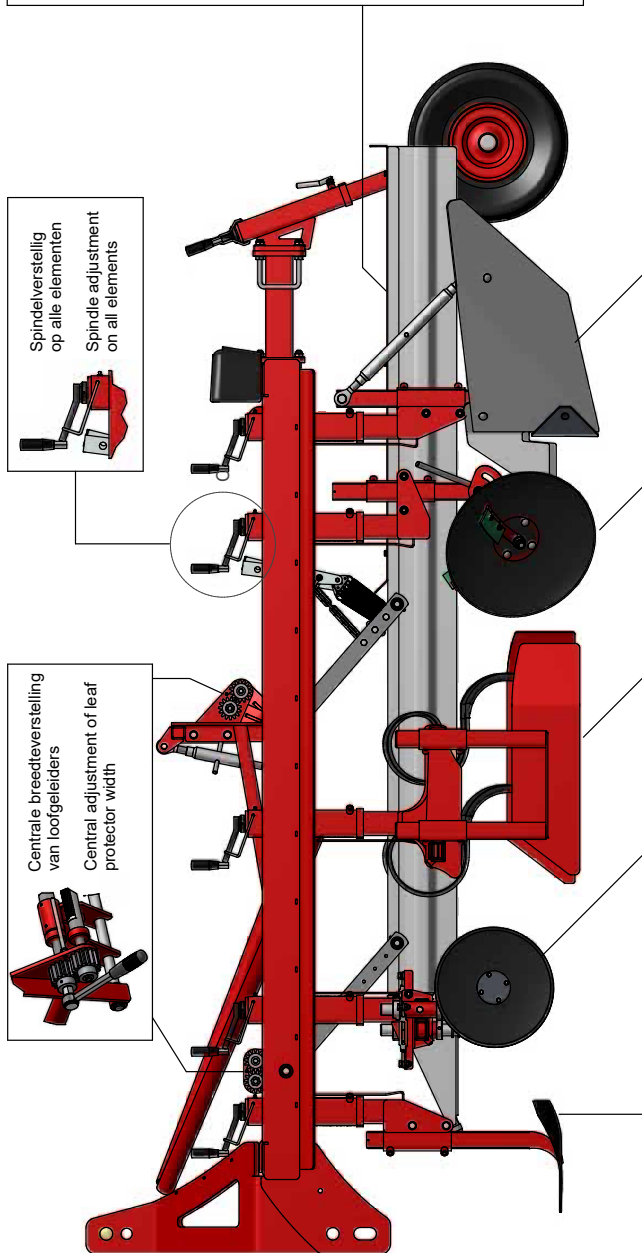
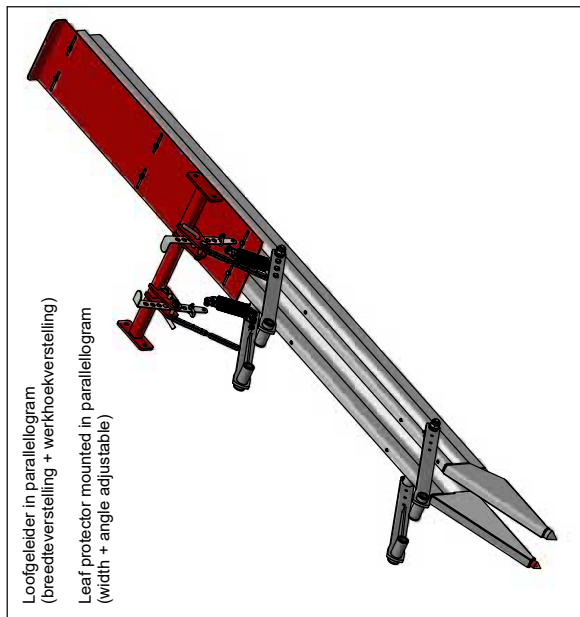
Each machine is provided with a spindle and a pin/hole adjustment and can therefore be used for all crops.

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 the soil and 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. Leaf protectors run the full length of the machine. The width of these protectors 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. The machine has sufficient space to prevent it from filling up with soil or weeds.
2. Thanks to the simple and intelligent adjustments, it is easy to switch between various crops.
3. Its modular structure makes it easy to create a machine that fits your requirements.
4. Due to its own weight, it is able to assemble a good bed even on heavy soils.
5. It also achieves good results 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, this prevents green heads), which is beneficial to the crop.
8. The machine has a high ground clearance, so large crops aren't a problem.





Tunnel 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, U-elements cover the crop rows and spraying is carried out between the U-elements. This type is mainly used for crops with smaller row distances or crops that are grown on ridges.

Front-mounted on an 80 × 80 mm toolbar, with the number of rows according to the customer's needs.



Hood sprayer MS2

The second type is the MS2. In this case, a hood is placed between the rows and spraying takes place under 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 corn:



Untreated



After one week of treatment

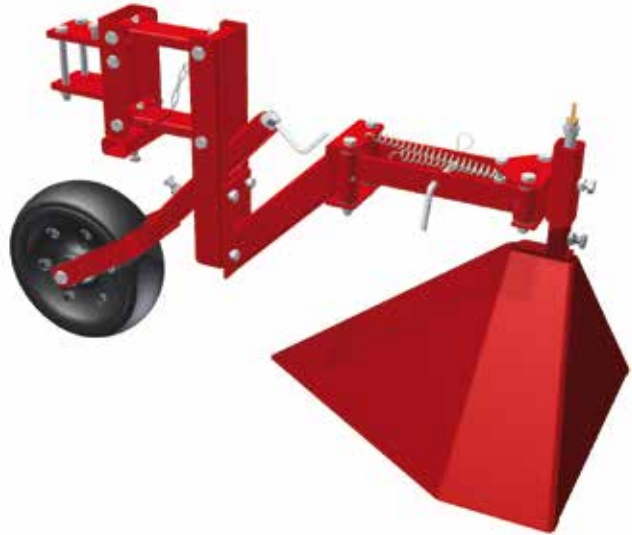


An accurate band-spraying system with crop protection can be achieved using the Steketee basic TRS-Element, which can be made with increased under-clearance if required, along with the MS2 adjustable hoods.

Under-leaf sprayer

The third type is the under-leaf sprayer. It consists of a torpedo-shaped hood that has 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 band sprayer is used to spray chemicals on the rows instead of between them. This leads to savings of up to 70% compared with conventional spraying. The spraying nozzles are guided by skids that straddle the row.



Main 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)		

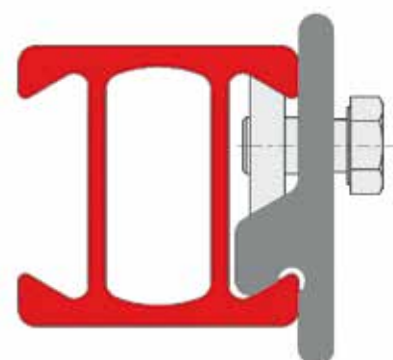
Group C	Group D
	x
	x
x	x
medium duty	heavy duty
4-6mtr	6-12mtr
	
	
	
x	x
x	x
	x
	
	

In order to accommodate different row widths and crops, we produce toolbars according to customer specifications. Of course, we use standard components as much as possible. Below, you will find 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 the 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.

Profile toolbar

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



Steering systems

To allow accurate hoeing, all Steketee machines can be built with a steering system. The steering systems can be divided 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 characterized by the fact that it works independently of the tractor. The 2 height-adjustable steering wheels are operated by means of a closed hydraulic system. The light construction of the machine makes it highly suitable for lighter tractors. 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 a hydraulic steering cylinder
- A rear frame with the hoeing elements attached to it; the joystick provides easy, accurate steering using the tractor's hydraulics.

GPS steering discs

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



IC-Light camera

The Steketee IC-Light steering system makes it simple and economical to accurately steer different machines in row crops. Row sprayers, hoeing machines, etc. can be steered with a tolerance of just a few centimeters at speeds of 3 - 20 km/h.

The color camera on this machine automatically recognizes the crop rows and steers the machine between them, independently of the tractor.

Benefits of Steketee's independent steering system are:

- High accuracy
- Large capacity
- Automatic color recognition
- Intuitive touch-screen operation
- Real-time display of the camera image
- Ease of use
- Steering on one or multiple rows
- Suitability with flat, bed and ridge crops



The IC-Light can be augmented with LED lighting, enabling you to work in the dark as well. It also makes Steketee Remote Service possible. This option allows the IC-Light computer to connect to the Internet. Via this secured connection, Steketee is able to help users remotely and to perform updates.

IC-Weeder

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

To provide accurate, quality inter-row and inter-plant cultivation, we offer a wide variety of hoeing blades and tines, 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 while hoeing can be utilized to count the crops, measure their green surface or identify crop discoloration.



IC-Weeder



Machinefabriek Steketee BV
Lieve Vrouwepoldersdijk 1a
3243 LA Stad aan 't Haringvliet
Tel.: +31 187 616 100
verkoop@steketee.com
sales@steketee.com
www.steketee.com



Your dealer: