

Assistance system for detecting animals  
SENSOSAFE

 **PÖTTINGER**

# For the welfare of wildlife and livestock



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Get started on mowing your grassland crop straight away with no worries. Harvest the highest quality forage using innovative technology from PÖTTINGER. SENSOSAFE is an automated sensor-based assistance system that detects animals and enables you to identify fawns and other wild animals hiding in the field. Wildlife is protected and your forage stays clean, all this with the highest level of efficiency and convenience.

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All information on technical data, dimensions, weights, output, etc. and the images shown, are approximate and are not binding. The machines shown do not feature country-specific equipment and may include equipment that is not supplied as standard, or is not available in all regions. Your PÖTTINGER dealership would be pleased to provide you with more information.

# Protects wildlife and livestock



## Wildlife in the crop

The timing of the first cut in grassland farming coincides with the fawning season of roe deer and other wild animals. Due to their natural reflex to seek cover, fawns do not run away from danger. This instinctive behaviour makes it especially difficult to spot animals hiding in the grass. It happens over and over again that animals are seriously injured or even killed during mowing. Estimates point to around 100,000 fawns being mown down every year in Germany alone. This must be avoided at all costs.

## Livestock also endangered

If the carcass of a wild animal ends up in the clamp, it will decompose and contaminate the forage. Under anaerobic conditions, bacteria of the species *Clostridium botulinum* produce the neurotoxin botulinum.

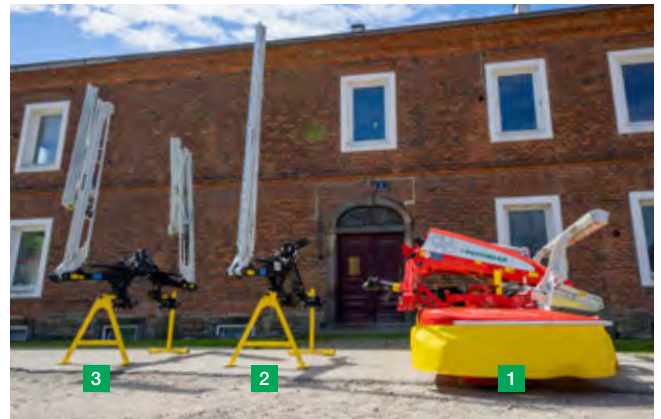
Feeding silage contaminated in this way can expose cattle, sheep, horses and poultry to botulism. This disease usually causes death within 1 to 3 days due to respiratory paralysis.

## Forage quality is the key to your success

Healthy, high yield livestock provide the basis for the economic success of your farm. The quality of your forage plays a central role in achieving this.

That is why it is worth improving the quality of the forage as far as possible at every stage of the process. This begins with mowing a clean, high-quality basic ration, as a result you benefit from:

- Healthy cattle
- Reduced veterinary costs
- Consistent milk yield
- High product quality (milk quality, meat quality, etc. )



## For the welfare of wildlife and livestock

At PÖTTINGER we have taken up these challenges and developed an automatic assistance system for detecting animals.

### SENSOSAFE

A sensor bar mounted in front of the mower helps you identify wild animals in the crop. This saves them from getting caught by the mower and prevents carcasses contaminating your forage. As a result this avoids the risk of your cattle contracting life threatening diseases such as botulism. This system helps you protect wildlife and your livestock at the same time.

SENSOSAFE is available in three different versions.

- SENSOSAFE as an option on the ALPHA MOTION front mower
- SENSOSAFE 300 as a standalone system for mowers up to approx. 3 m
- SENSOSAFE 1000 as a standalone system for mower combinations up to 10 m

## Good experience with SENSOSAFE

Thomas Neudorfer is a farmer and contractor in the Mühlviertel region of Upper Austria. He has been using SENSOSAFE on an ALPHA MOTION front mower and SENSOSAFE 300 as prototypes since spring 2020 and they have reliably detected innumerable hares, pheasants and fawns.

"If my customers are happy, then I'm happy. That is why I am always open to new technologies that help me to improve the quality of the service I offer. SENSOSAFE gives me three benefits that I can pass on directly to my customers. Firstly, I prevent unnecessary animal suffering. Secondly, I prevent animal carcasses from contaminating the silage. And thirdly, I can start mowing at the drop of a hat without having to search the fields first."

Thomas Neudorfer  
Farmer and Contractor  
Peilstein | Austria

# Reliability



## Ingenious technology

Whether morning, afternoon, evening or night, SENSOSAFE works reliably around the clock.

Intense sunlight or high temperatures are not a problem for working with SENSOSAFE. The same goes for cloudy weather or darkness.

SENSOSAFE is the first system of its kind in the world that uses the interaction between optical sensors and an integrated light source. This system operates independently of daylight and temperature. Unlike thermal imaging cameras, you can rely on SENSOSAFE to work reliably in any operating conditions.

## The hardware

A bar with optical sensors scans the area in front of the mowers during the mowing process.

An LED integrated into each sensor emits light in the near-infrared spectral range. The light, which is not visible to humans, is reflected by the vegetation back to the sensor. However, the brown fur of fawns and other animals reflects light with a different intensity than plants. The sensors detect this and send an electrical signal to the control unit in the tractor cab.



## The software

SENSOSAFE is operated using the SELECT CONTROL terminal.

If an animal is detected, the control terminal gives the driver both a visual and acoustic warning. The driver then has plenty of time to stop the tractor or raise the mower. The SENSOSAFE on the ALPHA MOTION raises the front mower automatically.

## Straightforward operation

The triggering sensitivity can be fine-tuned. This means the triggering threshold can be optimally adapted to each crop.

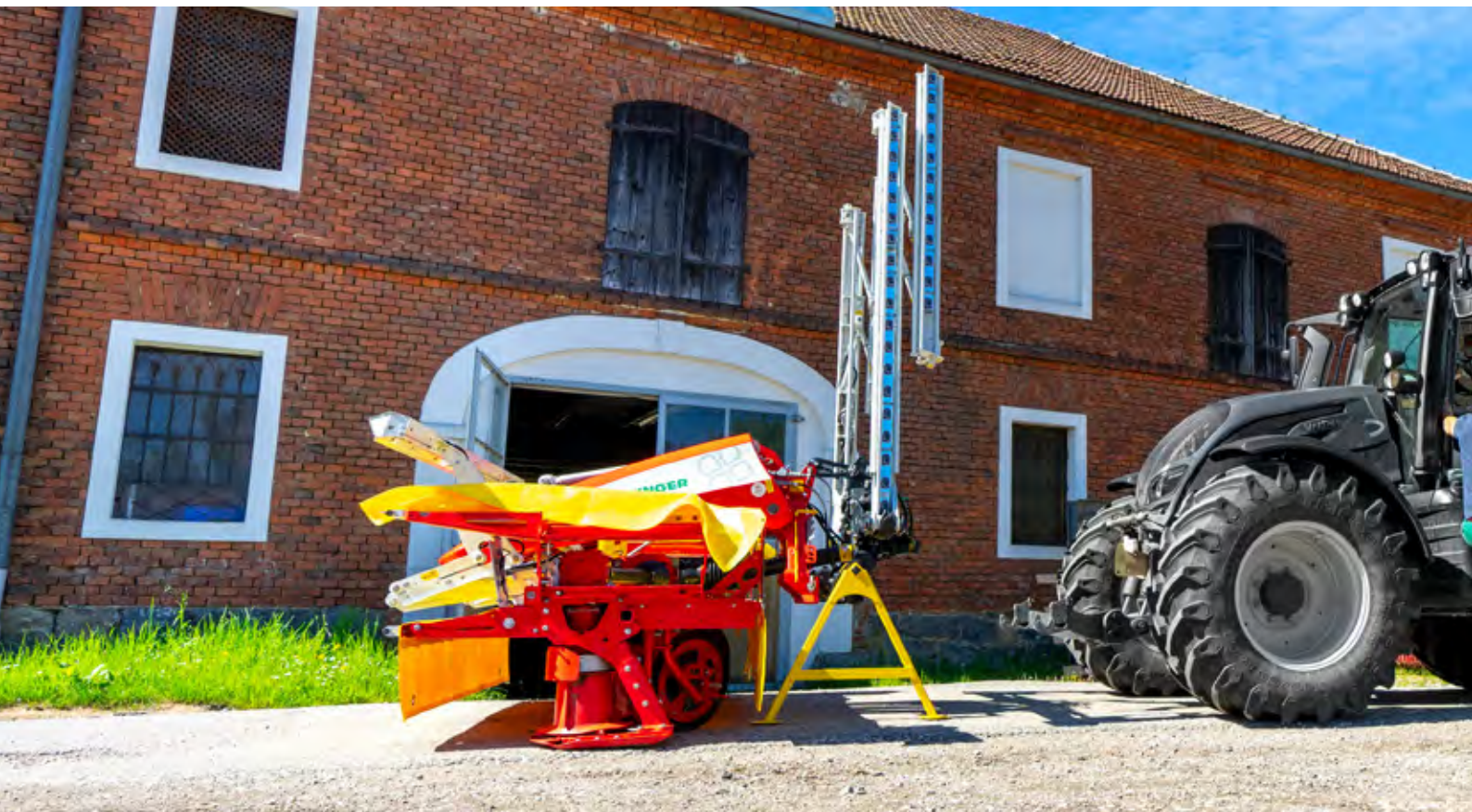
Folding into the working or transport position is also operated using the SELECT CONTROL terminal.

## "SENSOSAFE can be used around the clock"

"We have been testing the new SENSOSAFE system from PÖTTINGER for 9 days so far. The tests have all gone very well, with several other smaller animals also being detected in addition to fawns. The SENSOSAFE system can be used at any time of day or night."

Bavarian State Institute for Agriculture |Germany  
Field tested spring 2020

# Efficiency and convenience



## How good are you at multitasking?

With SENSOSAFE you complete two tasks in one: Mowing and detecting wildlife. That's multitasking. That is efficiency.

## Simply hitch up and off you go

Harvesting windows are short and time is precious. With SENSOSAFE you can focus on the essentials: harvesting the forage.

No additional time or personnel needed for searching the fields before mowing. The time-consuming organisation of people, dogs, drones and other systems for detecting wildlife is a thing of the past. What's more, you don't need special training or a permit to operate the SENSOSAFE system.

## Simple to set up

The tractor specifications are easily fulfilled. Front linkage combined, a front double-acting spool valve and a 12 V power supply for the SELECT CONTROL terminal is all that's required to use SENSOSAFE.

## Ready for immediate use

The mower and SENSOSAFE are ready to go in no time at all; hitch up, connect the data transmission cable and off you go.

SENSOSAFE 300 and 1000 can remain attached to the front mower when unhitched. Next time, you can get started immediately.





## "Easy to use and very reliable in detecting animals"

"On the pilot farms at INNOVATION FARM Wieselburg, the performance of SENSOSAFE has completely convinced us of its reliability. An average triggering probability of 92% was recorded across all test variants. In normal conditions, reliable detection is possible at any (technically reasonable) driving speed. In extreme conditions (crop height of 60 cm or more), mowing speed needs to be limited to around 10 kph to reliably detect and rescue animals."

INNOVATION FARM Wieselburg | Austria  
Field tested spring 2020

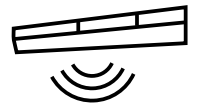
## "Full flexibility for our customers"

"As contractors, we always want to provide our customers with the best service. In the case of grassland harvesting this means bringing in the forage cleanly and tidily, and being ready to mow the crop at a moment's notice in changeable weather conditions. Personally, I think it is also important for me to set the best example in our region in terms of protecting fawns, pheasants and hares. SENSOSAFE is the optimal solution for us when mowing. Not only can we save the lives of wild animals, at the same time we prevent the farmer from obtaining contaminated forage. We also have the advantage of being able to start mowing immediately at any time. Our customers don't have to worry about finding fawns and other animals in the field before we arrive."

Philip Uthmann  
Managing Director Uthmann Voges GbR, pre-series customer  
Ennigerloh | Germany

# Sensor systems





# Mowers raised



## SENSOSAFE

The sensor bar is mounted directly on the front mower. If the sensors detect an animal, the mower's hydraulics system automatically raises the front mower. In addition, it sends a signal to the tractor cab so that the driver can stop the tractor.

### Automatic lifting

The mower is lifted automatically using the mower's own hydraulics, independently of the tractor's hydraulic system. Thanks to the hydraulic accumulator integrated into the mower unit, this works in a flash. In less than half a second the cutter bar has reached its full clearance height.

- Sensor reaction time: 0.04 seconds
- Mower lifting time: 0.3 - 0.5 seconds

After tripping, simply reactivate the spool valve to refill the hydraulic accumulator ready for action.

Choose a driving speed so the driver still has time to stop the tractor in time to avoid running over the detected animal. Realistically, driving speeds of up to approx. 10 kph are possible.



### Transport

The sensor bar folds into a compact and safe storage position over the headstock during transport. No extra spool valve is needed for the folding process. Simply preselect the fold for transport setting on the SELECT CONTROL terminal.

SENSOSAFE is available as an option for NOVACAT ALPHA MOTION MASTER and PRO mowers.



# SENSOSAFE | SENSOSAFE 300



## SENSOSAFE 300

We developed SENSOSAFE 300 for mowers up to approx. 3 metres wide. The sensor bar is fitted to a mounting frame and utilises the tractor's hydraulics. The sensors send a signal to the SELECT CONTROL terminal tractor cab if anything is detected. The system signals the driver both visually and acoustically.

### Use on rear mowers

When used with a rear mower, SENSOSAFE is mounted on the front linkage. The large distance between the sensor bar in the front and the mower unit at the rear is sufficient for any realistic driving speed during mowing. This gives the driver plenty of time to stop the tractor and raise the mower.



### Use on front mowers

When used with a front mower, the system scans the next pass. This means the SENSOSAFE sensor bar can be mounted either on the front or rear linkage. This application also allows higher driving speeds.

An optional ballast weight is available for using the SENSOSAFE 300 at the back or at the front when operating without a front mower. If the tractor linkage has a freedom of movement, this can prevent vibrations on the sensor bar.



### Transport

The sensor bar folds vertically into a safe storage position during transport. When used together with the SENSOSAFE on the ALPHA MOTION, no additional spool valve is required for folding. Simply preselect the fold for transport setting on the SELECT CONTROL control terminal.

SENSOSAFE 300 is manufacturer-independent and can be used with your existing mower.

# Mowers raised



## SENSOSAFE 1000

SENSOSAFE 1000 is designed for mower combinations between 8 and 10 metres wide.

The sensor bar is fitted to a mounting frame on the front linkage. The sensors send a signal to the tractor cab if anything is detected. The large distance between the sensor bar on the front linkage and the mower unit to the rear gives the driver enough time to stop or raise the mower. When used with the SENSOSAFE on the ALPHA MOTION, driving speeds of approx. 10 kph are feasible.



## Hydraulic working width adjustment

The working width can be hydraulically adjusted on your mower combination between 8 and 10 m.

## Transport

Both sensor bars fold vertically into a safe storage position during transport. The working width is retracted hydraulically to reduce transport height.

When used together with the SENSOSAFE on the ALPHA MOTION, no additional spool valve is required for folding. Simply preselect the fold for transport setting on the SELECT CONTROL control terminal.

This solution is manufacturer-independent and can be used with your existing mower combination.





## Points to always bear in mind

To protect wildlife, it's the sum of all the measures implemented that counts. In addition to the use of innovative technology for wildlife detection, appropriate driving strategies are also important. The aim is to allow animals to run clear.

The driving strategy needs to be customised according to the shape of the field. It is worth starting to mow the field the day before to scare wildlife away.



## Mowing from the inside out

Avoid cornering wildlife in the middle and mow the field from the inside out. This allows animals to flee to neighbouring cover.

## Mowing from one side to the other

If the field is next to a road, start mowing next to the road and gradually work away from it. This prevents the animals from fleeing towards the traffic. If the field is next to woods, start mowing on the other side of the field and gradually work towards the trees.



## Fawn detected - what next?

If you detect a fawn during mowing, there are two ways to protect it.

Either you can bring it to safety outside the danger zone. Or you can continue mowing and skip the area where the fawn is hiding.

In both cases it is worth protecting the animal with a crate. That will prevent the fawn from running back into the danger zone. It is crucial to avoid direct body contact so as not to transfer human scent to the animal.

If you decide to carry the fawn to safety, use tufts of grass as a scent barrier between your hands and the fawn.

# Technical data







Sensor systems	Working width	Transport height	Transport width	Weight
SENSOSAFE	3.00 m / 3.50 m	–	–	145 kg / 150 kg
SENSOSAFE 300	3.00 m	3.95 m	1.26 m from the centre	145 kg
SENSOSAFE 1000	8.00 m – 10.00 m	3.40 m	2.50 m	250 kg



## MyPÖTTINGER – it's easy. Anytime. Anywhere.

### Benefit from numerous advantages

MyPÖTTINGER is our customer portal that provides you with key information about your PÖTTINGER machines.

Get specific information and useful tips on your PÖTTINGER machines in "My machines". And find out more about the PÖTTINGER product range.

### My machines

Add your PÖTTINGER machinery to "My machines" and assign a name. You will receive valuable information such as: useful tips on your machine, operating instructions, spare parts lists, maintenance information, as well as all the technical details and documentation.

### Info on the product range

MyPÖTTINGER provides you with machine-specific information for all machines built starting 1997.

Scan the QR code on the machine's data plate with a smartphone or tablet or go to [www.mypoettinger.com](http://www.mypoettinger.com) and enter the machine number from the comfort of your own home. You will immediately receive all the information on your machine, such as: instruction manuals, equipment options information, brochures, photos and videos.



CLASSIC

**DURASTAR**

**DURASTAR PLUS**

## Rely on the original

PÖTTINGER Original Parts meet the highest demands in terms of functionality, reliability and performance. These are characteristics that PÖTTINGER is committed to delivering.

That is why we manufacture PÖTTINGER Original Parts from the highest quality materials. We ideally match each individual spare part and wear part to your machinery's overall system. This is because different soil and operating conditions often need to be taken into consideration.

We have been listening to our customers and now offer three different lines - CLASSIC, DURASTAR and DURASTAR PLUS - to make sure you have the right part to meet every requirement. Original parts are worth every cent, because know-how cannot be copied.

## Your advantages

- Immediate and long-term availability.
- Maximum durability thanks to innovative production processes and the use of the highest quality materials.
- Avoidance of malfunctions due to a perfect fit.
- The best working results thanks to optimum match to the overall system of the machine.
- Save time and costs thanks to longer replacement intervals on wear parts.
- Comprehensive quality testing.
- Ongoing advancement through research and development.
- Worldwide spare parts supply.
- Attractive, competitive prices for all spare parts.

## Wear parts

The CLASSIC line is for standard duty applications. With these ORIGINAL INSIDE parts we have defined the benchmark for quality, best price/performance ratio and reliability.

DURASTAR is the innovation on the wear components market - durable, high quality, productive and reliable.

Are you used to putting your machines to work in the most extreme conditions? Then the DURASTAR PLUS line is the right choice for you.



## More Success with PÖTTINGER

- A family-owned company since 1871  
your reliable partner
- Specialist for arable and grassland
- Future-safe innovation for outstanding working results
- Roots in Austria - at home throughout the world

## Rely on SENSOSAFE

- Avoid killing animals
- Ensure the health of your livestock
- Stress-free mowing
- Save resources

## Ask for more information:

### **PÖTTINGER Landtechnik GmbH**

Industriegelände 1  
4710 Grieskirchen  
Austria  
Phone +43 7248 600-0  
info@poettinger.at  
www.poettinger.at

### **Alois PÖTTINGER UK Ltd.**

15 St Marks Road, Corby  
Northamptonshire,  
NN18 8AN  
United Kingdom  
Phone + 44 1536 272 220  
info@pottinger.uk  
www.pottinger.uk

### **POETTINGER Canada Inc.**

460 Rue Robinson Sud  
Granby, QC, J2G 7N6  
Canada  
Phone +1 450 372 5595  
Fax +1 866 417 1683  
info@poettinger.ca  
www.poettinger.ca

### **POETTINGER US, Inc.**

393 Pilot Drive  
Valparaiso, IN 46383  
USA  
Phone +1 219 510 5534  
Fax + 1 219 707 5412  
info@poettinger.us  
www.poettinger.us

### **PÖTTINGER Australia PTY LTD**

11 Efficient Drive  
Truganina VIC 3029  
Australia  
Phone +61 3 8353 2770  
info@poettinger.com.au  
www.poettinger.com.au

### **POETTINGER Ireland Ltd.**

Glenaleamy, Powerstown Road,  
Clonmel, Co. Tipperary  
Ireland  
Phone +353 52 6125766  
info@poettinger.ie  
www.poettinger.ie

### **Importer for New Zealand:**

**Origin Agroup**  
PO Box 673, 57 Hautapu Road  
Cambridge  
New Zealand  
Phone +64 7 823 7582  
info@originagroup.co.nz  
www.originagroup.co.nz

### **Importer for South Africa:** **VALTRAC**

Cnr. Water & Buiten Street  
9585 Parys  
South Africa  
Phone +27 56 817 7338 7308  
wynn@valtrac.co.za  
www.valtrac.co.za