



PRECISION THAT PAYS OFF

Spreading technology

Precision distributor, dribble bar application
and mobile irrigation



Optimum spreading is guaranteed



Our experience, your benefit:

Dribble bars – environmentally friendly, low-level spreading system.

Liquid manure as a nutrient source

Liquid manure and digestate are reusable materials. These highly valuable nutrient sources that contain trace elements become more important as the cost of artificial nutrients rise along with the price of crude oil. However, to distribute liquid manure as a natural source of nutrients economically, successfully and properly, the distribution system must be precise, clean and create only minimal odor. The dribble bar systems by Vogelsang satisfy these requirements even under difficult conditions.

Cutting-edge technology and superior quality

Vogelsang distribution systems are being continuously improved and optimized. The practical results reveal that these efforts pay off, which has also been confirmed in a DLG focus test: The intelligent design maximizes the working widths and ensures even fertilization independent of whether conditions. Robust frame designs, intelligent section management, optimized hose arrangement, innovative solutions for self-propelled vehicles, and precise and robust precision distributors have been ensuring the success of farms, contractors and machinery rings for more than 30 years.

Efficient and flexible spreading

We support your highly-effective transport chains and hose systems with linkages up to 36 m long, and up to 24 m long for self-propelled vehicles. Every system allows you to directly spread liquid manure onto growing crops. Vogelsang dribble bars are welcomed by the neighbors, as it cuts the odor created when applying.

Compatible and easily configured

We build dribble bar systems for all drawn and self-propelled tankers, independent of the manufacturer, capacity, type of tires, materials and pump systems. A broad range of products for spreading liquid manure and many attractive options for adapting to specific farm conditions and different approaches can be individually configured. Our agricultural consultants will be glad to help you configure a dribble bar system that is tailored for your farm.

Our dribble bar linkage systems

A system with maximum flexibility: A dribble bar system can be permanently mounted or installed in a removable KAT-3 design. An upper pivot bar is used for adjustment.

Tankers



SwingUp – 7.5 to 18 m



SwingMax – 18 to 33 m



DoubleSwing – 27 to 36 m

Self-propelled vehicles



Compax – 6 to 15 m



SwingDrive – 18 to 24 m

Umbilical Systems



BackPac – 9 to 28 m

Irrigation



SwingFlow – 9 to 24 m



Unique Vogelsang technology

With our dribble bar systems nutrients from liquid manure are put to good use.

Tailored applications and robust designs that are easy to use

Distribution systems demand technological teamwork

The frame, distributor head and hoses are carefully designed and composed for the best spreading performance.

Optimum hose distribution

Hoses on the Vogelsang dribble bar system are all equal lengths. This allowing the liquid manure to spread equally to land, and also allows accurate application when starting on headland or the last tanker load.

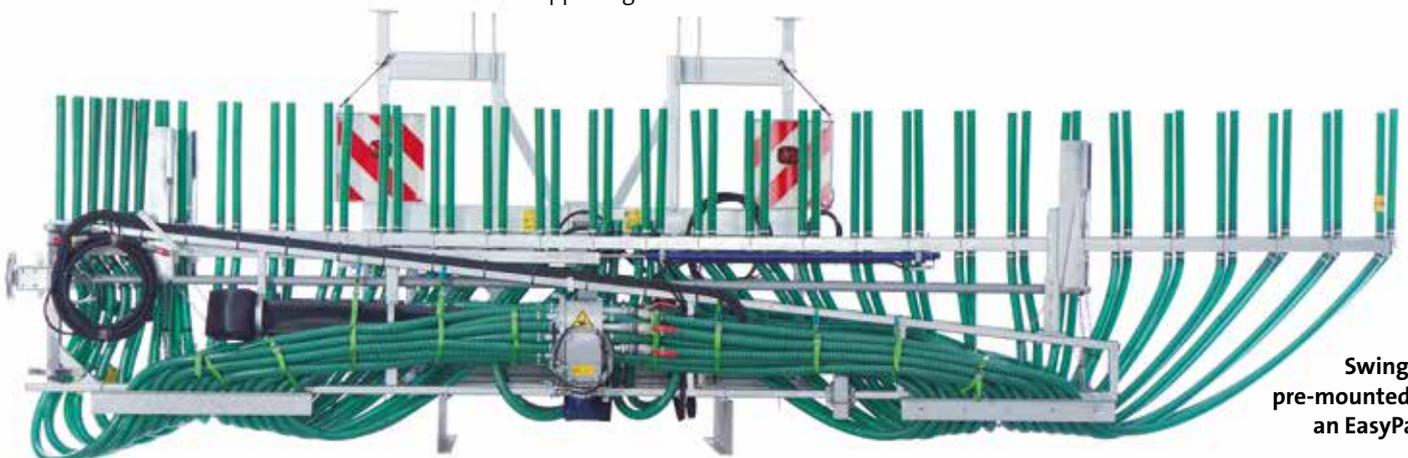
Vogelsang special hose

We know what's important. For this reason, the hose material and composition of the plastic were developed specially for Vogelsang. The production process in which the hoses are not rolled up is unique. The result: The hose sections forming the end hose are always straight and dimensionally accurate. Your advantage: Springs that can wear out are not used, and the hoses never clog and stick. The most important feature: The liquid manure is distributed in the crops close to the earth which helps keep the leaves from being contaminated and scorch by the manure which can suppress growth.

Even distribution

Vogelsang precision distributors evenly and constantly distribute the liquid manure in to the distribution hoses. The supplied quantity of liquid manure needs to be evenly distributed on the ground through the hoses. The fixed arrangement of the end hoses ensures that the hoses remain uniformly spaced as the liquid manure leaves the system. This supplies the plants with evenly distributed nutrients and enables a homogeneous plant growth.

We've thought of everything: Typical Vogelsang



SwingUp pre-mounted as an EasyPack



TeleShift

The side arms on the dribble bar that are extendable with the TeleShift enable large working widths and short transportation lengths. In addition, the TeleShift has a telescoping option that can further reduce the length of the transported system.

TopSwing

With large linkages, the working width can be increased with the practical unfolding mechanism. To be transported, the outer ends are hydraulically folded up 180° and placed on the base linkage. In combination with the TeleShift, this reduces the length of the side arms when transporting the system by up to 4 m. The TopSwing makes it easy to use large linkages connected to small and short tanks.

DropStop

When driving on the road, the hoses of the dribble bar system are folded upwards so that they are in a vertical end position. This reliably prevents spilling and keeps the road clean and safe.

Slope compensation/ oscillation compensation

Flexible drain hoses, the elastic suspension and rotatable position of the supporting frame of the SwingMax systems allow the linkage to be optimally

adapted to any terrain. All rigid elements are kept at a maximum distance from the ground, making it safe to drive over uneven terrain.

EasyPack

We supply EasyPack dribble bar systems completely preinstalled and tested. This makes it easy for you to quickly install your Vogelsang dribble bar system on the farm. The system can also be directly installed on your vehicle in the plant.





The heart of every distribution system

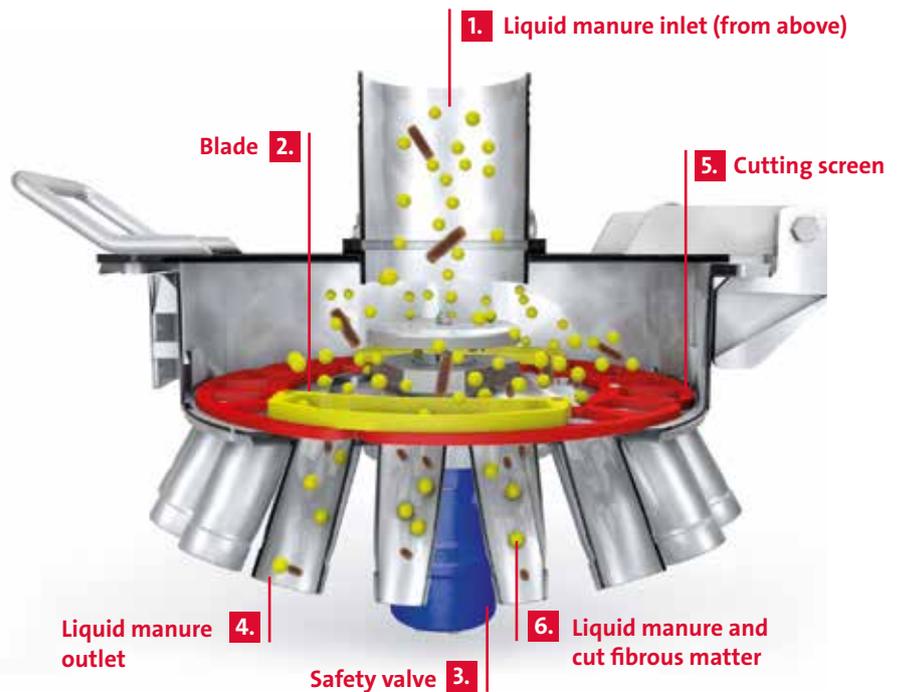
Vogelsang precision distributors

DosiMat and ExaCut: Precision and reliability for every distribution system

Liquid manure, a valuable commodity, must be spread evenly and reliably. Vogelsang precision distributors do what their name says. Uniformity with a distribution coefficient below 5 percent can be achieved, making spreading a reliable process.

DosiMat LVX

With this hydraulically operated cutting and dosing system, the liquid manure flows from above into the distributor where it is distributed evenly to the outlets by the rotor and blades inside. Fibers and foreign materials are reliably cut into pieces. This design enables highly accurate lateral distribution. The DosiMat LVX is equipped with a dual sealing system and a feature allowing visual inspection of leakage which helps ensure readiness for use and operational safety.



DosiMat-LVX layout (only blades shown in yellow, rotor removed)



ExaCut

When it comes to space requirements, the ExaCut is unbeatable. The world's smallest precision distributor is distinguished by its high-performance as a central or decentralized distributor. It cuts and distributes in one step. The ExaCut is

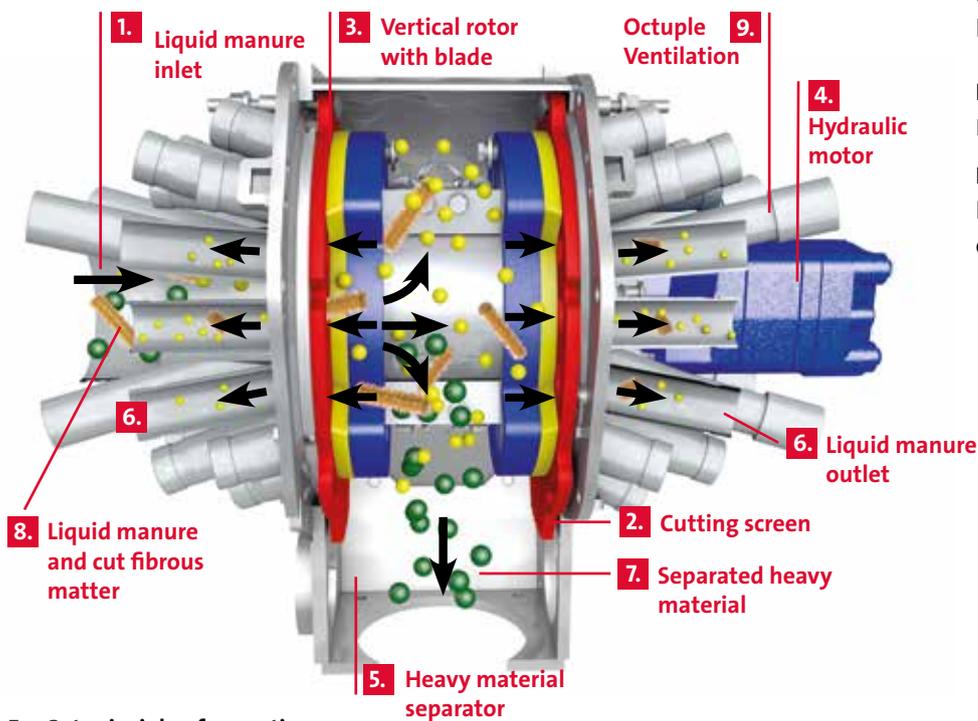
equipped with a heavy material separator. Foreign objects and extraneous materials can be easily removed. This saves time during spreading when every minute counts.

Range of precision distributors

Dribble bars, cultivators or dribble shoes: More than 100 possible configurations of the DosiMat and ExaCut can be used for nearly every requirement and spreading system. Our agricultural consultants are glad to assist you with selecting your precision distributor.

DosiMat: 5 to 60 hose outlets, diameter DN 40/50/60

ExaCut (in conjunction with the dribble bar): 24/30/40/48 outlets for a hose diameter of DN 40/50



ExaCut principle of operation

Section management

With section switching and Comfort Flow Control® (CFC), Vogelsang offers perfect section management for dribble bar systems.

Spread liquid manure at precisely the right place

Section switching

The right or left side arm can be turned off. This can be done pneumatically, hydraulically or manually. In addition, an individual pneumatic or manual shutoff can be installed for individual hoses.

Comfort Flow Control (CFC)

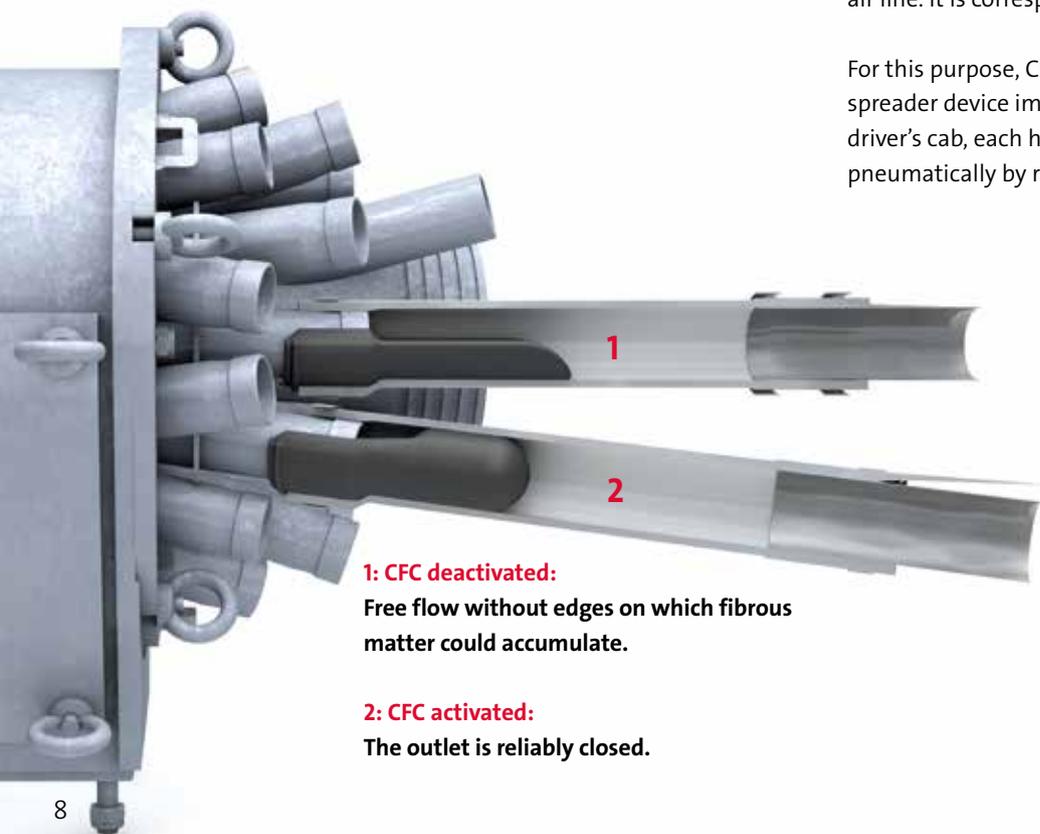
Comfort Flow Control (CFC) – the universal solution for sectional switching, tramline switching, and/or closing off selected hose groups on the dribble bar system.

The way the patented CFC works is uniquely simple and clever: It primarily consists of a type of balloon and a small compressed air line. It is correspondingly economical and robust.

For this purpose, CFC is installed in the hose outlets of the spreader device immediately after the distributor. From the driver's cab, each hose or group of hoses can be turned off pneumatically by remote controls.

In addition, the CFC can be used for a compact and reliable DropStop for cultivators, harrows, cutting tools and injectors.

Everything under control directly from the cab – it does not get any easier, more flexible or precise.

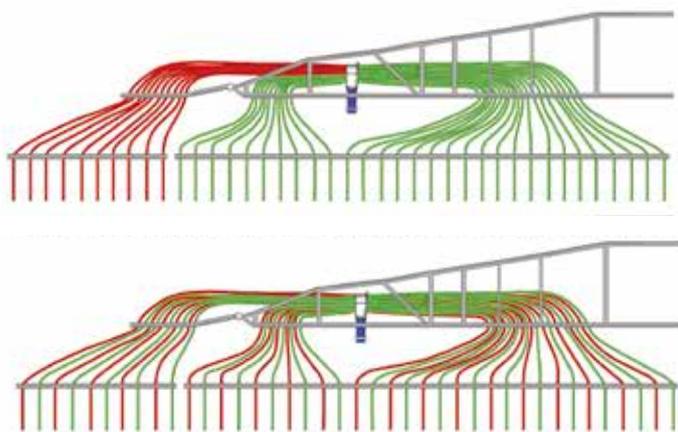
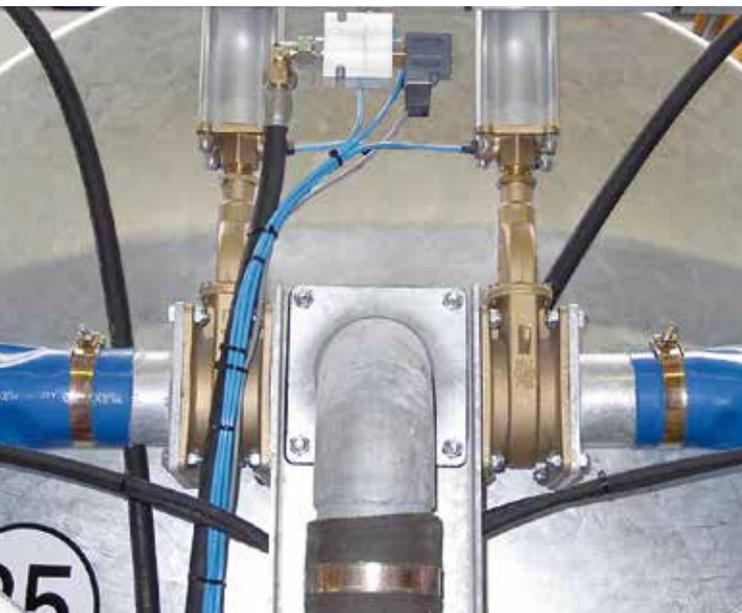


1: CFC deactivated:

Free flow without edges on which fibrous matter could accumulate.

2: CFC activated:

The outlet is reliably closed.



“With the CNC system, I can provide exactly what every customer, field and application requires: The hoses can be turned off immediately with the press of a button.”

Robert Leiber, Röper & Steenken contractors GmbH & Co. KG, Twistringen

Reduce the working width with the CFC
(The hoses are lifted for illustration)

CFC features and benefits at a glance

- Reliable hose close-off for section switching, tramlines, close-off of individual groups
- Hose close-off customized to the field and the spreading system
- Quick operation by pressing a button and/or fully automated control from the cab
- Easy to retrofit on existing dribble bar systems



SwingUp – Maximum performance and flexibility

With compact dimensions and advanced engineering, SwingUp is flexible and can be used everywhere. Small or long fields: SwingUp can handle every situation.

SwingUp is available in working widths of 7.5 to 18 m. We developed this dribble bar system for universal use. Weighing only 1 ton with 12 m of working width, it is particularly light and only requires a slight amount of pull. It is perfectly suitable for compact setups on small or long fields. SwingUp also means superior distribution precision. This is enabled by the ExaCut distributor, the flexible hoses that adapt to the shape of the ground, and the rigid end hoses that precisely deposit the liquid manure on the ground and not on the plants.

Light design – powerful performance



The SwingUp is particularly easy to install and can be easily and quickly mounted on existing tanks. In general, the standard onboard hydraulic system of the tractor is sufficient for controlling all of the functions. This helps keep costs down. Just ask and we will be glad to set up the perfect SwingUp system for your situation.

SwingUp features

- Highly precise distribution with the double symmetrical hoses
- DropStop
- Narrow transportation width
- Transported above the fender
- Remotely unlock able side arms

- Permanently installed on a tank or with a four-point design
- EasyPack pre-installation
- TeleShift at the rear to reduce the length of the towed system and linkage while driving on the road

SwingUp options

- CFC® Comfort Flow Control
- Mounted hoses in DN 50
- Sectional shutoff
- Hydraulic unlocking of the side arms

Working widths

- 7.5/9/12/13.5/14/15/16/18 meters

“With the SwingUp system including section switching, we are able to satisfy the exacting demands of our customers.

Whatever the crops and weather, the spreading is perfect with minimum odor. This is a fact for which both the farmers and their neighbors are thankful.”

Christof Schürmann, agricultural contractor, Börger



SwingMax3 – our premium dribble bar



Maximum effectiveness

Large working widths mean that the dribble bar linkage is subject to very high dynamic loads. The design of the SwingMax3 can handle them all. The special double frame design can take the toughest loads, for trouble-free and economic operation. We made sure to keep down the weight of the linkage despite the great working width in order to not strain the tractor and trailer.

The ingenious interplay between the hydraulic and mechanical components and sequential controls in the SwingMax3 allow the system to be quickly and reliably unfolded and closed. We made sure to keep the folding motion smooth to minimize the strain arising from the movement of the linkage.

The heart of the SwingMax3 are the ExaCut distributors located centrally in the side arms that can be configured according to the customer's specifications. The location of the distributors allow them to be easily and quickly accessed for service purposes at any time.



Perfect: An efficient, economical and environmentally friendly dribble bar system that can be used for a range of applications in working widths from 18 to 33 m.



“In our contracting business, reliability and precision are what counts for the customer, especially with wide working widths. With the SwingMax linkage, I can achieve excellent and economical results.”

Henning Kanjahn, Kanjahn Contractors, Neuenkirchen

The superior engineering of the SwingMax3 satisfies the demands of contractors and large farms. The SwingMax3 offers profitability through maximum efficiency.

SwingMax3 features

- Highly precise distribution with the dual symmetrical hoses
- DropStop
- Transported above the fender

- Remote unlocking and folding of the side arms
- Oscillation compensation, passive
- TeleShift
- TopSwing
- Mounted in a four-point design
- Compact installation on the vehicle including tandem tanks
- EasyPack preinstallation
- The rear TeleShift system prevents overhang in transport position

SwingMax3 options

- CFC®
- Sectional shutoff
- End hoses in DN 50
- DoubleFold
- Oscillation compensation, active

Working widths

- 18/21/24/27/28/30/33 meters

DoubleSwing makes it possible: Remain in the tramlines with a 36 m working width

DoubleSwing is a unique approach designed especially for large working widths that does not require a substantial tanker or that you work in long fields.

The principle is simple but extremely effective: In the first pass, the DoubleSwing is completely unfolded and the manure is spread for example in the outer section from 1 to 9 m or 27 to 36 m.



The inside 18 m are then fertilized in the second pass on the tramline while the DoubleSwing is folded up. The DoubleSwing method allows you to use the normal tramline width. This means that you do not have to drive in the crop which reduces the yield as is necessary with working widths less than 36 m. The public streets also remains clean since you always drive in the manure-free tramlines.

In addition, the DoubleSwing system allows you to use smaller tanks with larger working widths. In addition, there is less pressure on the soil, and the reduced pull allows you to use smaller tractors for spreading.

DoubleSwing features

- Highly precise distribution with the dual-symmetrical hose arrangement, each with an ExaCut precision distributor
- DropStop
- Transported above the fender
- Oscillation compensation
- TeleShift
- Mounted in a four-point design
- Complete installation in the Vogelsang factory

DoubleSwing options

- CFC®
- Sectional shutoff
- End hoses in DN 50

Working widths

- 27/30/36 meters

Easy on the soil with working widths of 36 m

“On a lot of farms, an effort is made to use the tramlines as much as possible. With the DoubleSwing system, the user always remains in the standard tramline for the other machines. This is good for the ground and helps maximize yield. The ability to use small tractor/tank combinations with a high degree of effectiveness makes the DoubleSwing system particularly attractive.”

David Berding, Agricultural Sales, Vogelsang



Compax2 – Liquid manure spreading with self-propelled vehicles



The Compax2 is the optimum way to connect our innovative dribble bar linkage with the advantages of self-propelled vehicles: Efficient, cost-effective spreading with precise distribution.

The Compax2 dribble bar linkage towed by self-propelled vehicles is an excellent way to spread liquid manure and to be easy on the soil. The dimensions of the unfolded Compax2 were adapted for spreading manure with a self-propelled vehicle: The Compax2 folds up completely behind the vehicle so that the driver's vision is not blocked and the width of the vehicle is not enlarged.

Overall, the Compax2 was designed to accommodate the special requirements of self-propelled vehicles that are used in season around-the-clock. The liquid dispersal system, hoses and ExaCut distributor are designed to spread large amounts at a maximum speed.



Basic solution for self-propelled vehicles

Compax2 features

- Highly precise distribution with dual symmetrical hoses
- Transport position behind the self-propelled vehicle
- DropStop with the CFC hose shut-off
- Remote unlocking and folding of the side arms
- Oscillation compensation, passive
- Hoses in DN 50
- Two decentralized ExaCut precision distributors offer powerful distribution

- Mounted in a 3-point design

- Transport width: 3 m

Compax2 options

- CFC® for selective hose shut-off
- Sectional shutoff
- Oscillation compensation, active

Working widths

- 6/12/15 meters

“The Compax dribble bar linkage is a perfect match for our self-propelled vehicles. With a transport width of 3 m, the machine is very easy to use. Depending on the length of the field, I can adjust the working width to 9, 12 and 15 m and thereby give my customers very economical and attractive offers.”

Rainer Fischer, Heinrich Fischer GmbH
Contractor, Damme

SwingDrive – For with self-propelled vehicles

Its innovative design allows the SwingDrive to accommodate working widths up to 24 m for self-propelled vehicles.

The SwingDrive design with a trailing linkage is fixed to the self-propelled vehicle with a 3-point attachment. While driving on the road, the side arms rest on the SwingDrive chassis, and the hydraulic upper pivot bar is transported in the floating position. The booms of the SwingDrive automatically extend to move into the working position. At the

same time, the chassis is raised and locked. All movements are automated and are monitored by the onboard computer sensors. The system is operated using the central touch panel in a cab.

The SwingDrive is equipped with an ExaCut precision distributor for each side arm.



Maximum cost-effectiveness for contractors and machine syndicates



maximum efficiency and no additional track

SwingDrive features

- Highly precise distribution with the dual symmetrical hose arrangement
- Transport position following the self-propelled vehicle
- DropStop
- Remote unlocking and folding of the side arms
- Oscillation compensation
- Up to three sections in a single system

- TeleShift
- TopSwing
- Mounted with a KAT-3 linkage

SwingDrive options

- CFC®
- Sectional shutoff

Working widths

- 18/21/24 meters

“SwingDrive means innovative technology and efficiency. Self-propelled vehicles for spreading liquid manure can be used more economically and cover a working width of 24 m in a single pass. The SwingDrive approach maximizes effectiveness and spreads manure precisely in a way that’s easy on the soil. The special SwingDrive chassis does not require an additional track while spreading manure, and offers greater safety on the road.”

Dipl.-Wirtsch.-Ing. (FH) Stefan Bente, Vogelsang



BackPac: Dribble bar linkage for Umbilical Systems

Umbilical systems are preferred on farms with large and compact fields, difficult soil conditions or in regions where they are traditionally used. BackPac is the ideal system for this highly efficient way to spread liquid manure.

Umbilical systems need no additional manure transport vehicles. They are highly efficient especially for larger farms, keeping the transport costs down. Instead of using tankers for transport the manure is pumped directly to the fields through a tubing system. The pipe is connected to the pulling arm on the Vogelsang BackPac which is mounted on



the tractor by three point linkage. The liquid manure is spread directly on the field employing only tractor, BackPac and drag hose without the tanker driving on the field. This minimizes soil compression. Breaks are avoided because tankers do not have to be filled up due to the direct connection to the manure supply. This maintains the best soil conditions and saves time.

To be transported, the BackPac is folded up behind the tractor and does not extend beyond the width of the vehicle. The BackPac comes with a variety of useful functions and can be centrally equipped with a DosiMat LVX or ExaCut, or

alternately with to decentralized DosiMat LVXs or ExaCuts.

BackPac features

- Highly precise distribution with a dual symmetrical hose arrangement
- Transport position following the tractor
- Remote unlocking and folding of the side arms
- Mounted in a 3-point design
- The stable supporting frame can handle strong tension
- Evenly spaced lines of spread manure from the drain hoses promote optimum growth

- No additional accessories required for the tractor
- EasyPack preinstallation

BackPac options

- DropStop with the CFC hose shut-off
- Sectional shutoff
- Oscillation compensation (starting at 18 m)
- The system is folded up semi-hydraulically

Working widths

- 9/12/15/18/21/24/27/28 meters

The effectiveness of direct piping is maximized

“When spreading liquid manure, we seek to maximize efficiency and minimize soil compression on our farm. We therefore chose a liquid manure hose drag system.

Whether spreading manure on crops or a meadow, the Vogelsang BackPac hose linkage allows you to spread manure quickly, precisely and reliably.”

Gerd Wolken, Wolken Wittmund Agricultural Contractor, Wittmund





Economical and flexible irrigation

SwingFlow: Mobile irrigation our robust

Based on our extensive experience with dribble bar systems, we developed an ideal solution for close-to-the-ground irrigation of vegetables, trees, shrubs and other plants.

The water is supplied where it is needed: Right next to the plants. We developed a distribution system with special nozzles. The amount of water to be distributed is controlled by a pump. The

linkage is mounted on the front linkage of the tractor which makes it easy for the driver to see the irrigation system. It can optionally be mounted on the rear of the tractor or tank. Before driving

on the road, it can be compactly folded together and is also hydraulically unfolded in the field from the cab.



on with the benefit of engineering

The outlets are individually adjusted to the row spacing and can be easily changed.

After the plants are planted, and they are irrigated using this system. This protects the soil. In a dry summer, the yield of a lettuce crop can be increased 20% using this method.

In addition to irrigating crops, the system is also designed to irrigate or fertilizer tree nurseries.

SwingFlow features

- Individually adjustable row spacing
- Mounted on the front linkage or rear
- Mechanical folding system for street travel
- Controllable water flow

Working widths

- 12/15/18 meters

“Customized systems are one of our strengths. We can create individual irrigation systems tailored to your needs. Come and talk to us.”

Henning Ahlers,
Agricultural Sales, Vogelsang



Our company

Innovation and progress have been hallmarks of Vogelsang for over 80 years and have made us a leading global plant engineering company. Time and time again we have achieved significant milestones of progress. Today, we develop, manufacture and distribute some of the most innovative and reliable machines and systems for agriculture, municipalities and industry.

With our overseas subsidiaries and service centers, we are world-renowned for advanced engineering and customer-friendly solutions.

Our product range

We offer solutions for the following areas:

- Industrial sector
- Waste water treatment
- Biogas
- Railway waste water disposal
- Agriculture

We offer a broad range of products:

- Rotary lobe pumps
- Maceration technology
- Distributors
- Spreading technology
- Supply and disposal systems
- Complete solutions

We also offer customized solutions for your specialized applications.

How to reach us

Vogelsang is present worldwide. Visit us online for more information about our company and wide range of services: **vogelsang.info**

We are here to assist you and look forward to speaking with you.

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