PRECISION DISTRIBUTION TECHNOLOGY

Vogelsang precision distributors for accurate liquid manure spreading
As a pioneer in agricultural technology, Vogelsang remains one of the leading mechanical engineering companies in this sector. Farmers and contractors worldwide rely on the innovative design and high quality standards of our spreading technology.

Based on our diverse experience and continuous development work, we build highly functional components and entire systems that facilitate reliable and efficient distribution of the nutrients.

Both the production and material quality of our precision distributors and optional equipment are testimony to our responsible actions for the benefit of our customers. Their adaptability and versatility boost yields in addition to fostering sustainability, and allow agricultural operations to react effectively to current circumstances or legal requirements.
Liquid manure – a valuable material
Liquid manure and digestates are reusable materials. They are a natural source of plant nutrients that can be precisely spread onto the soil, meaning the need for inorganic fertilizers is greatly reduced. This technology for targeted and precise spreading of liquid manure on arable land or growing crops is not only state of the art, it also prevents the loss of nutrients and is better for the environment than splash spreading systems.

Highest precision
The main requirement for the optimal use of liquid manure is even spreading. Vogelsang precision distributors cut and distribute liquid manure with extreme precision and an excellent variation coefficient of less than 5 percent. This makes the spreading process reliable and safe.

Compatible and universal
The versatile Vogelsang precision distributors can be used in all types of spreading systems, including dribble bar and trailing shoe systems, injection systems, cultivators and short disk harrows.
Overview of Vogelsang distribution technology

**Precision distributors**

**Dosimat LVX**
- Maximum precision
- Flexibly configurable
- High level of operational safety
- Easy maintenance

**ExaCut ECL**
- Self-sharpening cutting blades
- Compact housing
- Very smooth running
- Heavy material separator

**ExaCut ETX**
- Very good cutting performance
- Low wear
- Low power requirements
- Large range of spreading capacities

**Additional equipment**

**SynCult**
- Complete set for equipping soil cultivation units for efficient liquid manure spreading
- Quick-and-easy installation

**Flow Performance Monitor**
- System for flow control and fault reporting
- Facilitates trouble-free spreading of liquid manure

**Comfort Flow Control**
- System for deactivating individually defined hose groups
- Suitable for part-width section cut-offs and tramline switching
The DosiMat LVX is the perforated disk distributor by Vogelsang. Liquid manure flows into the DosiMat from above and is distributed evenly by the rotor. Fibrous matter and foreign objects are shredded reliably by the cutting blades. DosiMat LVX offers unbeatable precision with the utmost flexibility and ease of maintenance.
Internal view of DosiMat LVX (with rotor removed)

Liquid manure outlet

Cutting ring

Cutting blades

Safety valve

Liquid manure inlet (from above)

(Only cutting blades shown in yellow, rotor removed)

Liquid manure outlet

Cutting ring

Cutting blades

Liquid manure inlet

Liquid manure and cut fibrous matter
Unmatched precision
Precise spreading is essential if liquid manure is to be used as a recyclable material. With a lateral distribution accuracy of less than 5 percent, the DosiMat LVX sets standards.

Perfect maceration
The cutting blades in the rotor of the DosiMat LVX reliably and safely macerate fibrous matter to ensure the even flow of liquid manure. Service time has been increased by up to 50 percent thanks to the 3-D laser-cut blade geometry in the DosiMat LVX and the use of extremely durable steel.

Easy maintenance
The cutting blades can be changed in just a few steps. Simply unscrew the central rotor screw and remove the spring pins. Replacement cutting blades and cutting rings can be acquired quickly and easily from the Vogelsang spare parts service.

DosiMat LVX varieties
With over 145 possible configurations, there is a DosiMat LVX for every application. The following features can be combined:
• Distributor size and number of hose outlets (5 to 60)
• Star rotor
• Straight rotor in 3 different widths
• Hose diameter from DN 40 to DN 60

Advantages of the DosiMat LVX
• Maximum precision:
  Lateral distribution accuracy under 5 percent
• Flexibly configurable:
  Over 90 different configurations
• High level of operational safety:
  Special sealing package protects the hydraulic circuit against the liquid manure
• Easy maintenance:
  Simple leakage control and quick rotor replacement

SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>5 – 60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of outlets</td>
<td></td>
</tr>
<tr>
<td>Hose diameter</td>
<td>DN 40/DN 50/DN 60</td>
</tr>
</tbody>
</table>
COMPACT HOUSING WITH MAXIMUM DISTRIBUTION ACCURACY

ExaCut for optimum cutting results with maximum reliability

The ExaCut is the compact precision distributor by Vogelsang. Two different models of this distributor are available:

The ExaCut ECL distributes the liquid manure centrically with a turbulent flow. The high speed of the rotor distributes the liquid manure to the individual Outlets. ExaCut ECL optimizes variety and a flexible range of applications.

The ExaCut ETX distributes the liquid manure eccentrically with a directed flow. The installed counterweight in the rotor ensures highly smooth running. The ExaCut ETX optimizes the cutting effect with low-wear operation.
Internal view of the ExaCut ECL

- Liquid manure inlet
- Vertical rotor with cutting blade
- Cutting screen
- Ventilation
- Hydraulic motor
- Liquid manure outlet
- Liquid manure and cut fibrous matter
- Separated heavy material
- Heavy material separator
COMPACT AND RELIABLE

The ExaCut ECL for efficient cutting and distribution

Distribution technology with rotors
The Vogelsang ExaCut ECL, equipped with a vertical rotor with cutting blades, cuts and distributes precisely in a single process. Thanks to the compact design, this precision distributor can be used as a central or decentralized distributor in the booms of the spreading system. That means working widths of up to 36 meters and systems with up to 120 outlets are now possible. Also, all ExaCut ECL units are equipped with a heavy material separator, to make removing stones or metal parts easy.

Inlet adapter
Many variants are available for the liquid manure inlet on the ExaCut ECL. This allows the ExaCut to be customized to the spreading machine.

ExaCut ECL versatility
ExaCut ECL is available in numerous configurations:
• 14 models with 20 to 60 outlets
• Hose diameters from DN 40 to DN 60, depending on the model
• Cutting rings and rotors are configured according to the application

ExaCut Vario:
The ExaCut ECL with the adjustable cutting screen
In the special “Vario” version of the ExaCut ECL, a setscrew can be used to adjust the size of the openings in the cutting screen to different liquid manure types and quantities simply and easily.

Unnecessary cutting screen changes are avoided. This saves time and allows different types and quantities of liquid manure to be spread by a single system.

The ExaCut Vario is available with 30 to 60 outlets.

Advantages of the ExaCut ECL
• Self-sharpening cutting blades
• Compact housing
• Very smooth running
• Heavy material separator
• Wide variety – flexible use
• Special sealing package protects the hydraulic circuit against the liquid manure

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Number of outlets</th>
<th>20 / 24 / 30 / 40 / 48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hose diameter</td>
<td>DN 40 / DN 50 / DN 60</td>
</tr>
</tbody>
</table>
Internal view of the ExaCut ETX
OPTIMAL DISTRIBUTION ACCURACY

The ExaCut ETX with eccentric technology and optimized flow guidance system with minimum operating costs

Precision distributor with eccentric cutting principle
In the ExaCut ETX, the cutting blade moves eccentrically on the cutting screen. This cutting principle is characterized by particularly low power requirements, significantly extending the service life. In addition, this precision distributor operates with a guided flow made possible by an oscillator and a flow linkage. This guided flow allows different liquid manure quantities to be spread with just one screen. The constant ventilation and the routing of the cutting blade ensure even distribution.

Smooth and kind to your system
While conventional eccentric-based precision distributors are inherently unsteady, the ExaCut ETX features a sophisticated system of counterweights for alignment. This system ensures that the machine runs with minimal vibration. The result for users: far lower wear on vehicles and spreading systems (e.g., dribble hose or cultivator).

High serviceability
The three eccentric adjusters in the ExaCut ETX ensure that the cutting blade is pressed continuously against the cutting screen. If necessary, the adjusters can be replaced in no time, minimizing downtime. The ETX is also equipped with a heavy material separator for easy removal of stones, etc.

Advantages of the ExaCut ETX

• Very good cutting performance
• Low wear
• Low power requirements
• Large range of spreading capacities
• Counterweights for very smooth running
• High serviceability
• Optimal economy for liquid manure spreading
• Special sealing package protects the hydraulic circuit against the liquid manure

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Number of outlets</th>
<th>30 / 40 / 48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hose diameter</td>
<td>DN 40</td>
</tr>
</tbody>
</table>
DIRECT LIQUID MANURE INCORPORATION FOR EFFICIENT NUTRIENT USE

The SynCult retrofitting set for tillage equipment

Incorporating liquid manure and digestates directly into the soil using tillage equipment saves you time and money and reduces the number of crossings. Direct liquid manure incorporation prevents nutrient losses.

Our SynCult is an upgrade kit consisting of an adapter frame, a liquid manure precision distributor, discharge hoses and appropriate brackets. The fastening points for the precision distributor and the liquid manure outlet are predetermined, guaranteeing good work results and a long lifetime. As the SynCult was developed in partnership with tillage equipment manufacturers, the guarantee on the tillage equipment remains fully valid even after installation of the SynCult.

Current manufacturing partners for SynCult are Amazone, Horsch, Köckerling, Pöttinger, Farmet and Väderstad. We also offer you individual kits for retrofitting your tillage equipment.

SynCult design

Effectively equipped
- Includes hot-dip galvanized DosiMat LVX, ExaCut ECL or ExaCut ETX precision distributor
- Distributor is fastened to the tillage unit with a specific hot-dip galvanized adapter
- Includes complete set of hoses – optimal hose layout guarantees trouble-free liquid manure spreading
- When the device is folded for transport the hoses are not bent
- The liquid manure is deposited by the liquid manure outlet pipe directly in front of the disk so that few emissions are produced during liquid manure spreading
- Various working widths possible
- Stainless steel liquid manure outlet
- Hoses in DN 50 diameter
- Comfort Flow Control [CFC] available
- Flow Performance Monitor [FPM] available

Quick and simple to install
- Assembly instructions including hose layout diagram
- Trouble-free attachment of the liquid manure attachment to tillage units
- Set mounting points with complete fastening material
- No welding work is required
- The manufacturer guarantee remains valid in full
Advantages of the SynCult

• Full manufacturer guarantee of the tillage equipment
• Safe hose layout, including in transport position
• Quick-and-easy installation
• Individual adjustment to the tillage equipment
CFC deactivated:
Free flow without edges on which fibrous matter could accumulate

CFC activated:
The outlet is securely closed.

ExaCut with Comfort Flow Control
GREATER CONVENIENCE, MORE OPTIONS

Comfort Flow Control for optimal flow control and use of specific hose groups

Comfort Flow Control (CFC®)
To spread liquid manure individually via specific sections of a dribble bar linkage, an easy-to-operate flow control system is required. The Vogelsang Comfort Flow Control (CFC) offers a surprisingly simple solution for part-width section cut-offs, tramline switching or switching off selected hose groups on the spreading system.

Practical, flexible and precise
The way the patented CFC works is uniquely simple and clever: It primarily consists of a type of balloon and small compressed-air line. It is correspondingly economical and robust. CFC is installed in the hose outlets of the spreader device immediately downstream of the respective distributor. Then each individual hose or the individual hose groups can be activated and deactivated electro-pneumatically from the cab at the touch of a button.

Advantages of the Comfort Flow Control
• Easy to install
• Quick operation by pressing a button in the cab
• Reliable hose switch-off for partial width sections, tramlines, switch-off of individual groups
• Hose switch-off customized to individual requirements
• Economical spreading for all field shapes
• Can be retrofitted to any system
KEEP THINGS RUNNING SMOOTHLY

The Flow Performance Monitor (FPM) for even liquid manure spreading

Liquid manure spreading methods are changing; liquid manure is applied into the soil increasingly directly using Strip Till machines or soil cultivation devices. In these methods, the driver cannot see from the cabin whether the liquid manure is spread evenly and there is a free flow in the hoses. The Vogelsang sensor Flow Performance Monitor (FPM) is installed compactly between the distribution head hose and it can easily be retrofitted in existing distribution systems. The FPM is ISOBUS-compatible and is therefore particularly easy to integrate in ISOBUS-capable machines.

FPM detects clogging, and displays it to the driver on their ISOBUS terminal in the cabin.

---

**Legend:**

1. **Anemometry sensor**
   The anemometry sensor monitors the air flow in a hose. The measured signals are transmitted to the FPM transceiver.

2. **FPM transceiver**
   The FPM transceiver receives the signals from the FPM sensor and transmits them to the Performance Control Unit.

3. **Performance Control Unit**
   The PCU is the job computer and the central element of the Flow Performance Monitor. It evaluates the received measurement signals. If a blockage is detected, the message is sent to the terminal. Furthermore, it implements user input.
Advantages of the Flow Performance Monitor

• Even fertilization thanks to reliable flow monitoring
• No yield losses caused by malfunctions in the liquid dispersal system
• Easy to retrofit to existing spreading systems
WHEN IT COMES TO SERVICE, WE LEAVE NOTHING TO CHANCE

Comprehensive services for smooth operation and a long lifetime

Support and supply from A to Z
Because we are aware that close customer proximity is essential for our mutual success, we design our services to best meet your needs. In Germany and in countries where we have subsidiaries, Vogelsang service centers and contractual partners generate an active dialog with our customers and provide reliable support.

This means you always get the precise support you need in every phase of our partnership. Our highly qualified staff make it possible – experts such as consultants and technicians who know your Vogelsang machines inside and out.

We think ahead
Thinking ahead in your best interest begins with our extensive and detailed product documentation. Spare parts are available within a short time due to our high degree of vertical integration in production. In addition, you will always find an authorized service partner in your area who can help with repairs and wear part replacement. The Vogelsang ServicePack completes the offer. Whether you need start-up, on-site training, training at the Vogelsang facility, or full service support with a maintenance contract and a wear parts service package – we offer a support program tailored specifically to your needs.

Since its establishment in 1929, Vogelsang has become an internationally recognized mechanical engineering company with numerous branches, sales centers and subsidiaries.
Maintenance means downtime, as well as expenditure for personnel and spare parts. We have therefore developed a concept to limit service and repair times to a minimum: LifeGuard – to guarantee a maximum lifetime for our products.

The lifetime of a Vogelsang machine is determined by specific LifeGuard factors. We take these factors into consideration and offer you corresponding features to maximize productivity and the lifetime.

Many years of experience by biogas plant operators have shown that, when used in combination with our control technology (Performance Control Units), LifeGuard can produce optimal results while ensuring a long and trouble-free lifetime for your machine.
What we offer
We provide solutions in the following sectors:
AGRICULTURE, BIOMASS, INDUSTRY,
TRANSPORTATION, WASTE WATER

Our broad range of products and services
• Consulting and service
• Data management and control technology
• Disintegration technology
• Individually tailored solutions for special applications
• Pumps and pump systems
• Solid matter feeders
• Solids reduction, separators and mixers
• Spreading technology
• Supply, disposal and cleaning