PRECISION DISTRIBUTION TECHNOLOGY

Vogelsang precision distributors for accurate liquid manure spreading

VOGELSANG – LEADING IN TECHNOLOGY
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 DMX**
  - Maximum precision
  - Flexible spreading capacity
  - Constant high distribution precision irrespective of the flow rate
  - Easy to maintain

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

- **ExaCut ECO**
  - Fast, simple and straightforward maintenance
  - Longer service life
  - Better distribution precision due to flow optimization
  - Low power requirements
  - Large cross-sections for less pressure loss
  - Resistant to dry running

**Additional equipment**

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

- **Comfort Flow Control**
  - System for deactivating individually defined hose groups
  - Suitable for part-width section cut-offs and tramline switching
FLEXIBLE AND PRECISE SPREADING CAPACITY

The DosiMat DMX Precision Distributor

With spreading technology, users not only have to consider the economic efficiency of a machine, but are now also confronted with the stricter legal requirements of the German fertilizer regulations. The new design of the DosiMat DMX precision distributor allows both. There is also a flow-optimized rotor, which provides outstanding distribution precision. Irrespective of whether the DosiMat DMX is distributing small or large spreading capacities, the precision distributor can be used flexibly without reconstruction measures, and shreds and distributes the liquid manure precisely at all times. The DosiMat DMX’s easy-to-service design proves just as practical. There are fewer hex-head screw plugs, the housing can be opened quickly and the rotor is easier to access.
DosiMat DMX

- Suitable for variable spreading capacities
- High distribution precision regardless of the spreading capacity
- Up to 15 kg less weight thanks to the use of new materials
- Patented membrane for uniform airflow
- Easy to maintain: easy access to all relevant elements when the cover is open
- Optimized cutting performance thanks to new blade contour and torsionally stiff housing
- Adapted rotor contour for the most variable spreading capacity combined with the highest distribution accuracy
PERMISSION TO PUMP UP THE VOLUME

Perfectly built for more flexibility at a steady performance

Advantages of the DosiMat DMX

Plastic housing cover
- Dimensionally stable and slightly curved for more air volume and improved distribution precision
- Reduces the weight of the DosiMat DMX by up to 15 kg

Ventilation
- Automatic regulation of the airflow thanks to a patented membrane
- Ensures uniform flow of the liquid manure into the discharge hoses

Bar or star rotors
- Processing of various spreading capacities without reconstruction measures
- Higher maximum spreading capacity compared with similar models
- Constant high distribution precision irrespective of the flow rate

Cutting blade
- Reliable shredding and homogenization of the liquid manure thanks to optimized cutting contours

Sealing package
- Prevents mixing of hydraulic oil and the medium
- Simple identification of leaks via leakage checks

Ease of service
- Easy-to-service design for simple maintenance of all relevant elements

SPECIFICATIONS

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<tbody>
<tr>
<td>Number of outlets</td>
<td>8 – 60</td>
</tr>
<tr>
<td>Hose diameter</td>
<td>DN 40/DN 50/DN 60</td>
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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 the rotor technology. 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 ECQ**, a further development of the ECL, also works using rotor technology. It also has new features that put it in the top spot in the market: Unbeatable distribution accuracy and maintainability accompanied by an increase in service life and lower power requirements.
Liquid manure
and cut fibrous matter
Separated heavy material
Heavy material separator
Ventilation
Hydraulic motor
Liquid manure inlet
Vertical rotor with cutting blade
Cutting ring
Liquid manure outlet
Internal view of the ExaCut ECL
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 18 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

SPECIFICATIONS

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<th>Number of outlets</th>
<th>18/20/24/30/40/48</th>
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ExaCut Vario: The ExaCut ECL with the adjustable cutting ring

In the special “Vario” version of the ExaCut ECL, a setscrew can be used to adjust the size of the openings in the cutting ring to different liquid manure types and quantities simply and easily. Unnecessary cutting ring 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...
PRECISION DISTRIBUTOR
ExaCut ECL
Optimal cutting results, maximum reliability

- Accurate distribution (according to DLG test criteria)
  Optimal distribution accuracy for even supply of nutrient

- Self-sharpening cutting unit
  Consistent level of sharpness over the entire life cycle due to easy change of direction

- Ventilation
  Performance-oriented air outlet for high distribution accuracy

- Two-piece cutting elements
  Minimal material usage thanks to modular design for maximum cost-effectiveness

- Maximum flexibility
  Universal application customization: Adjustment of the throughput volume, outlet numbers, hose diameter and inlet variants
COORDINATED CUTTING UNIT
The core piece of the ExaCut

**Compact housing**
with low weight

**Service friendly**
Easy change of parts within a short time and without disassembling

**Eccentric adjuster**
Optimal contact pressure for efficient cutting performance and best material utilization

**Rotor technology**
for smooth running

**Coordinated geometry of cutting ring and knife**
Proven scissor effect: Perfected cutting angles for maximum cutting performance

**Combination of material pairing**
Matched degrees of hardness for cutting ring and knife provide durability

**Heavy material separator**
Separation of foreign matter to protect the entire application unit

**ProtectionPack**
Special sealing package to protect the hydraulic circuit and provide maximum operational safety

**Premium brand manufacturer**
for drive technology
MORE STAYING POWER, LESS WORK

Expect the best:
The new ExaCut ECQ distributor from Vogelsang
Just like the stock market, agriculture figures are important. The new ExaCut ECQ is shaking up the distributor market – where growth has been focused exclusively on precision with a totally different kind of innovation. It uses 50% less power and can be used for 50% longer than comparable distributors. The totally revised design also reduces the time required for maintenance work. Thanks to the ExaCut ECQ’s completely new service concept, wear parts are much more easily accessible – even the eccentric adjuster can be clamped without any maintenance at all.

**Maintenance is faster, easier and less complicated than ever before!**

As with all Vogelsang machines, the design of the distributor pays considerable attention to ensuring the easiest possible maintenance. A new feature as part of the ExaCut ECQ QuickService principle is the large maintenance port. This provides direct access to all relevant internal parts. Neither the distributor, as a whole, nor the cover needs to be dismounted – not even to clamp the eccentric adjuster.

**Service life has been extended by up to 50%**

The optimized ExaCut rotor technology with tri-lobe design reduces the speed and the internal pressure in the distributor, reducing the strain on the cutting blades. This has enabled the service life to be extended by 50%, while simultaneously improving cutting performance and average distribution.

**The nutrients are distributed even more precisely**

Flow simulations and tests led to a modification of the rotor and housing. Larger cross-sections and new flow guide plates calm the flow and ensure unprecedented distribution precision.

**Power requirements reduced by up to 50%**

The new rotor design and reduced speeds naturally use less energy and oil. A smaller contact surface results in less friction resistance and reduces the hydraulic pressure. The new design also has a positive impact on the pump’s power consumption. The more open design with larger cross-sections creates an easier liquid manure inflow and thus prevents unnecessary pressure loss.

### Advantages of the ExaCut ECQ

**Faster, easier and less complicated maintenance than ever before!**

Vogelsang’s well-known QuickService principle:
- Easy maintenance of the distributor thanks to removal of the cutting blade and rotor unit through the generously dimensioned maintenance port
- No need to dismount the precision distributor or the cover
- Eccentric adjuster clamping without disassembly or special tools

**Nutrients are distributed even more precisely**

Better distribution precision due to flow optimization:
- Rotor and housing optimized based on simulation and tests
- Flow guide plates for better distribution precision
- Flow calming due to generous cross-sections

**Service life extended by up to 100%**

Optimized ExaCut rotor technology:
- Tri-lobe rotor design allows reduced speed with the same cutting performance and spreading swath
- Longer cutter service life
- Reduced effect of the internal distributor pressure on blade wear: 50% less force due to internal pressure

**Resistant to dry running**
- low frictional heat-up even with dry running
- very little wear

**Power requirements reduced by up to 50%**

New technology saves fuel and oil:
- Lower speeds result in reduced oil requirement without impairing cutting performance
- Reduced areas exposed to internal pressure reduce frictional resistance and thus hydraulic pressure

**Large cross-sections for less pressure loss**

Open design improves pump performance:
- Wider inlets and orifice diameters reduce pressure loss
- The pressure at the feeder pump drops
- Power consumption and wear on the pump are reduced

### SPECIFICATIONS

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<tr>
<td>Hose diameter</td>
<td>DN 40, DN 50</td>
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<tr>
<td>Side inlet diameter</td>
<td>DN 150/DN 125/DN 100</td>
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<tr>
<td>Inlet positioning</td>
<td>Side/top</td>
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</table>
THE ExaCut ECQ PRECISION DISTRIBUTOR

Exactly what a precision distributor should look like

**Number 1 for maintenance**
Simple and completed in an unparalleled time of up to 20 minutes, without disassembly of the precision distributor

**Self-sharpening cutter**
Rotation direction changes maintain a constant degree of sharpness over the entire lifetime

**Generous cross sections for maximum effectiveness**
Reduced pressure losses, reduced power consumption for the components in the liquid manure system, spreading capacity increased (by almost 30%)
Up to 100% longer service life

Number 1 in distribution precision
Thanks to a coefficient of variation of 1.4%*

* DLG test report 7030

Resistant to dry running
Low wear and low frictional heat-up

Up to 50% less power requirement

Optimized eccentric adjuster
Efficient cutting and automatic adjustment combined with a new, user-friendly concept

Sealing package between the housing and the hydraulic motor for maximum operational safety
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 and Köckerling.

Advantages of the SynCult
• Direct incorporation of liquid manure for optimum use of nutrients
• Hassle-free compliance with training periods
• Combines several work steps in one to save on time and costs
• Ingenious upgrade concept, including assembly instructions
• Quick and easy installation
• Full guarantee on the tillage unit

Equipment and options
• Working widths of 4 – 12 meters [*depending on the manufacturer]
• DosiMat DMX precision distributor for working widths of up to 7 meters, ExaCut precision distributor for working widths of 8 meters and above
• The distributor is fasted to the tillage unit using a specially designed, hot-dip galvanized adapter
• Hose diameter DN50
Comfort Flow Control

CFC deactivated:
Free flow without edges on which fibrous matter could accumulate.

CFC activated:
The outlet is securely closed.

Optimized bending behavior prevents constriction during flexing.

Very simple assembly.

Fast opening and closing through a larger air duct.

High weather resistance thanks to the EPDM rubber used.
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

Switching off the tramline
Efficient and effective spreading technology from Vogelsang

Both the treatment of liquid manure and spreading technology makes the precision distributor ideal for successful cultivation. Vogelsang offers intelligently designed dribble bar systems with different working widths for every type of vehicle, in order to distribute valuable liquid manure in an economic and environmentally friendly way. The dribble bar and trailing shoe system both meet the current stricter fertilizer regulations for close to the soil, strip spreading of organic fertilizer. Depending on the area of application and soil characteristics, the use of an XTill from Vogelsang is recommended. Work processes such as plowing, tilling or seed bed conditioning can easily be combined with liquid manure incorporation, in particular for row crops.
Dribble bar systems for tankers

SwingMax
• Working widths from 21 to 33 m

SwingMax36
• Working width 36 m

SwingUp Slide
• Working widths from 21 to 30 m

Compax
• Working widths from 12 to 18 m

BackPac
• Working widths from 21 to 30 m

Dribble bar systems for self-propelled vehicles

Dribble bar systems for the umbilical application system

SwingUp
• Working widths from 7.5 to 18 m

SwingMax Slide
• Working widths from 21 to 30 m

BlackBird®
• Working widths from 12 to 18 m

Trailing shoe systems for tankers

SwingUp Slide
• Working widths from 12 to 18 m

Strip tillage technology

XTill® VarioCrop
• Variable adjustable for all row crops
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.

Since its establishment in 1929, Vogelsang has become an internationally recognized mechanical engineering company with numerous branches, sales centers and subsidiaries.
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.
What we offer
We provide solutions in the following sectors:
AGRICULTURAL TECHNOLOGY, BIOGAS, INDUSTRY, TRANSPORTATION, WASTEWATER

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