







BOGBALLE A/S. Who we are?

In 1934 the founder of BOGBALLE, Anders Peter Laursen, started the production of equipment for poultry breeding in the village of Bogballe. Times changed and in the beginning of 1950's, focus was moved to the production of the first of our well-known blue fertiliser spreaders. Today BOGBALLE A/S is owned by the 4th generation, who have continued to maintain the original family traditions and philosophy.

Design, optimum functionality and ease of use have been developed and evolved over many years of practical experience and in co-operation with farmers all over the world.

We have high tech production, development and test facilities at our disposal as well as one of Europe's largest and most advanced test halls.

- 2: The factory
- 3: Test hall - Programming of robot – Powder painting





M-line. A wide product range.

No matter the task, there is always an M-line spreader to fulfil your needs. BOGBALLE is famous for developing simple solutions to complex matters. Good examples are the unique Trend system with integrated normal and headland spreading, the weighing technique with fully automatic calibration on-the-move and now the “On-line” settings of the CALIBRATOR ZURF.

M-line spreaders are fitted with hopper widths of 240 or 290 cm and contents from 1.250 to 4.050 litres. We are powder painting with the sturdy “Flexi Coat” finish after a thorough 7-step cleaning of each component. The spreading system and the hopper base are made of stainless steel.

The application quantity is remote controlled either by hydraulic, cable or CALIBRATOR.

Integrated normal and border spreading is standard on all models. **Spreading vanes** in manganese steel – 2 to 3 times longer durability when compared to stainless steel. **Maintenance free and water resistant** slip clutch. **3-point linkage** for normal and late application. **Stepless scale** and pointer position placed to be clearly visible from driver’s seat. **Integrated hopper screens**. **Flexi Coat powder paint**, 30 times more durable than traditional wet paint. **Quantity settings** can be set to $\pm 40\%$ and can be optimised accordingly. **Stainless steel hopper base** with additional powder paint protection. **Maintenance free transmission** with reversible direction of rotation. **One set of discs** can be used for all working widths.

- 4: M2W base 1.800 litres
- 5: M2W base 2.350 litres - M3 plus 3.300 litres - M2W plus 2.550 litres





Quadro. Four benefits in one system.

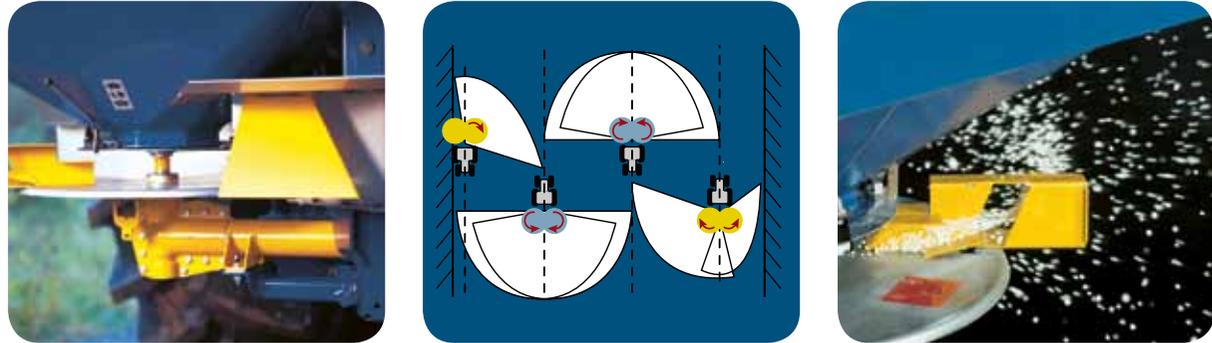
M-line spreaders are fitted with the Quadro system, which carries out four useful functions: Trend normal and Trend headland spreading, manual calibration and hopper emptying. All four functions can be selected without tools.

The calibration procedure can be carried out in less than 2 minutes, simply by locking one of the spreading discs. The calibration itself only takes 30 seconds. A simple calculation based on the calibration quantity shows the flow factor, after which the quantity is easily and precisely set via one single lever.

Hopper emptying uses the same principle as calibration.

- 6: Quadro calibration
- 7: Locking of spreading disc - Flow Factor calculation – Quantity setting





Quadro. Four benefits in one system.

The Trend spreading system utilises the best from the In-Centre and the Off-Centre spreading systems.

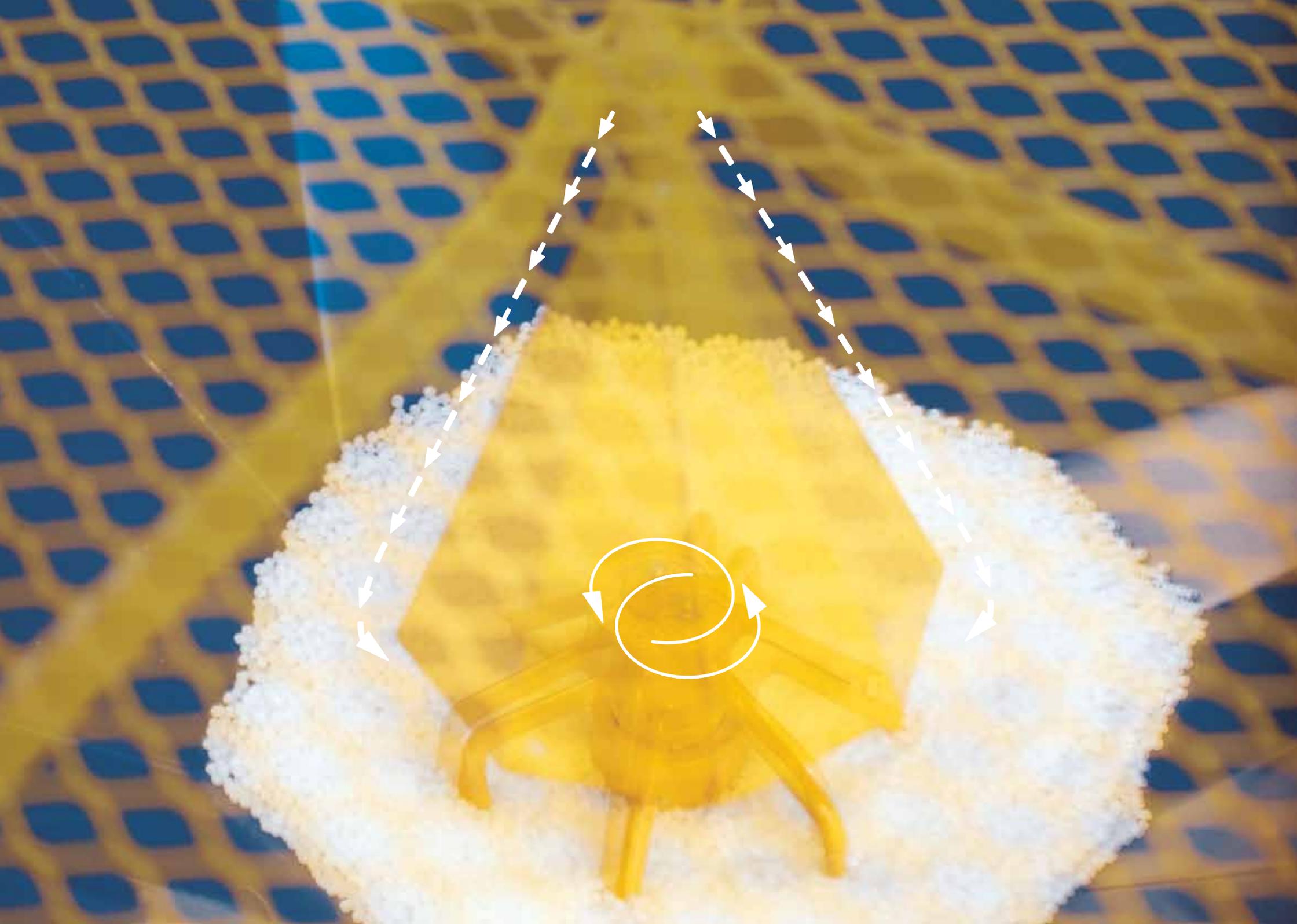
The In-Centre system is used for normal in-field spreading; spreading discs are rotating towards each other and distribute the fertiliser in 4 applications. In this way we achieve a “4-double overlap” which results in a perfect spread pattern with practical in-field tolerance.

The Off-Centre system is used for spreading on the headlands; spreading discs are rotating away from each other and distribute the fertiliser in two individual spread patterns respectively to right and left side. This system ensures a perfect fertiliser application to the border as well as in the field.

To meet the need for headland spreading from border into the field, we offer a system which can shut one side of the spreader. The system is ideal when spreading in grassland and along streams and ditches.

The spreading system fulfils the European environmental standard EN 13739-1.

- 8: Normal spreading
- 9: From border spreading - Trend principle sketch – To border spreading





Useful functions. Benefits for everyone.

Set the working width by use of the integrated degree meter. This method is simply the best and most precise way to set the working width, due to the fact that no further adjustments are needed.

Our agitator is rotating with an eccentric movement from 12-60 rpm depending on the fertiliser density and flow characteristics. Spreading light and porous fertilisers, the agitator is automatically rotating slower and treats the material more gently.

The integrated pressure equalising cone ensures an even material flow to the outlets and prevents crushing of fertiliser, as the agitator is protected from direct pressure from the hopper load above.

The centrally controlled regulating system automatically adjusts the fertiliser dropping point on the spreading discs. The spreader is fitted with double shutters, which have different opening speeds. In this way the regulating system is maintaining the perfect drop point and spread pattern irrespective of changes in quantity or forward speed.

A revolving hopper base with reduction outlet for spreading of slug pellets, oil seeds or similar fine granular material is built in as standard in the regulating system.

- 10: Agitator and pressure equalising cone
- 11: Setting of working width – Double shutters – Reduction outlet





M-Trail. Carry more.

M-Trail makes it possible to use a small tractor with a large spreader. The range of trailer chassis consists of two variants, one for the M2 and one for the M3. Common for both variants is adjustable wheel track width. Naturally the spreader can also be used for late application on the 3-point linkage.

- 12: M3-Trail med M3 plus 3.300 litres
- 13: Variants of M2-Trail and M3-Trail









BXL 1300. Easy lifting.

Place big bags directly in the field where they are needed and achieve an increase in spreading capacity of 3-5 ha/h. Our Big Bag Lifter BXL 1300 is mounted in the spreader's 3-point linkage. The extending lift arm can pick up bag directly from the ground or from a trailer. With fully extended lift arm the Big Bag lifter can lift 1.300 kg.

The hydraulic cylinders are fitted with anti drop valves for optimum safety during work. BXL 1300 fits M-line spreaders with a capacity up to 3.300 litres.

- 16: BXL 1300 with extended arm
- 17: Filling in with BXL 1300

CALIBRATOR ZURF **boqbulle**



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CALIBRATOR ZURF. Super intelligent.

To achieve efficient, precise and intelligent field work, CALIBRATOR ZURF is the right solution for rate control. 100% ground speed relation increases spreading capacity as the driving speed can be optimised to suit field conditions.

In addition to this a number of possibilities are available. Prepare a complete field work plan on the farm PC using the ZURFcom programme and simply transfer the information on the USB stick. ZURFcom also offers the opportunity of downloading spread charts directly from our fertiliser database to CALIBRATOR ZURF. After completing field work, individual field records can be stored on the USB stick for transfer to farm record documentation and traceability.

Before field work begins, a quick and simple calibration is carried out in only 30 seconds. Alternatively the calibration value from the spread chart can be directly keyed in. By pressing the +/- keys while spreading, the spreader adjusts the rate up or down in percentage steps.

Further information can be found in our CALIBRATOR leaflet.

Shift between normal and headland spreading from the driver's seat (standard on W-model). **Built-in control and alarm system** to prevent operation failure. Integrated operator's manual. Possibility for **software update from internet** via USB stick. **Variable rate spreading** via \pm keys in steps from 1-25%. **Fully automatic calibration** (M2W or M3W). **Communication** to GPS and application systems via serial communication. **User-friendly menu structure** with main menus and drop down menus. **Field recording** of an unlimited number of fields.

- 18: CALIBRATOR ZURF
- 19: USB stick - USB communication – Key in the calibration value



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INPUT



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Weighing Technique. Weighty arguments.

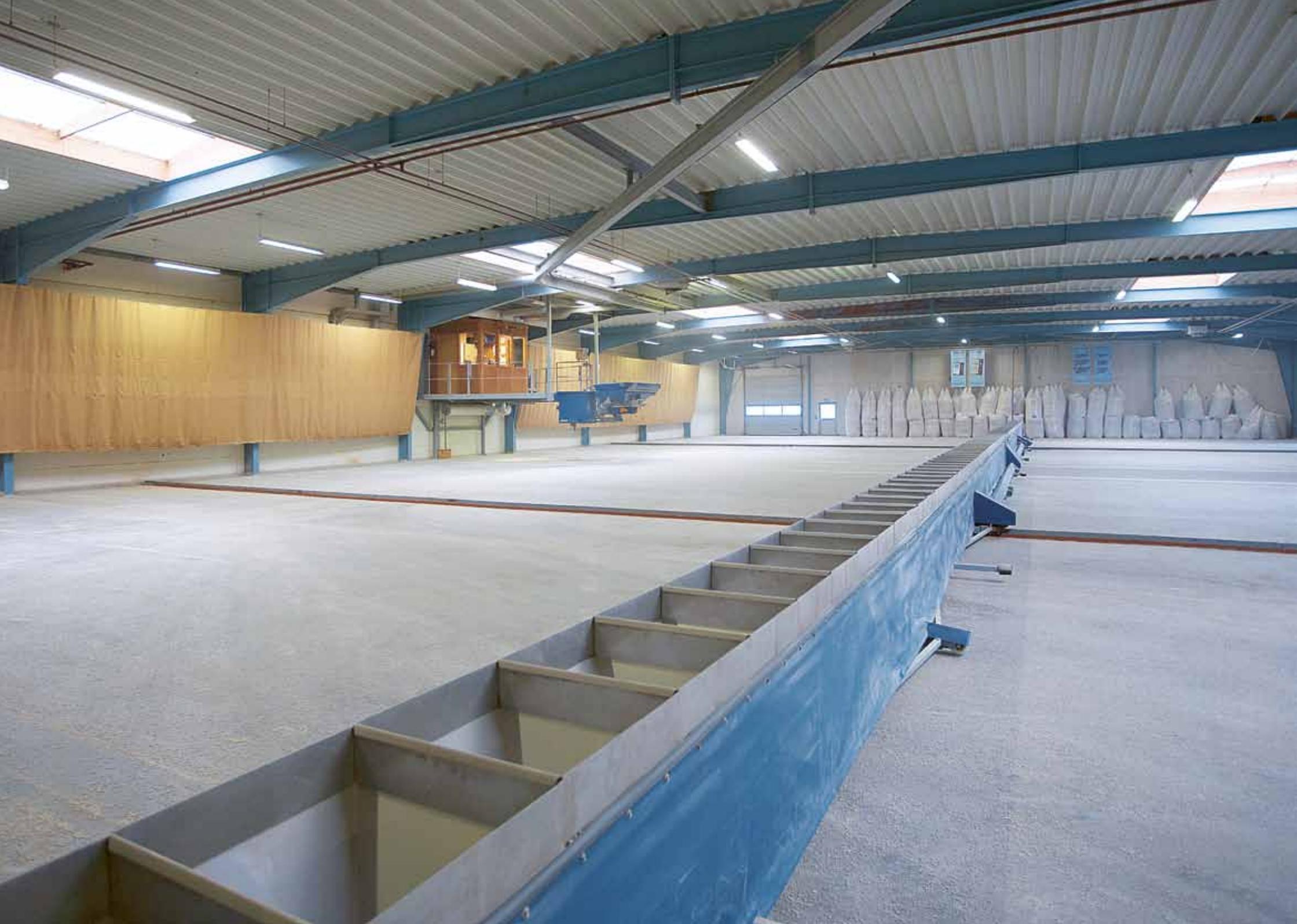
To achieve a precise application rate, a constant check of the fertiliser flow rate is required. As long ago as 1988 we pioneered and introduced the first spreader with weighing technique. That was first step in the right direction to monitor and control the flow. Today the weighing technique can register changes in the flow and on the basis of this information we are able to control the application quantity fully automatically. To control the weighing technique we use CALIBRATOR ZURF, our super intelligent electronic controller.

CALIBRATOR ZURF and the parallel weighing system constantly make intelligent measurements on the move and automatically adjust the shutters. The intelligent software is working non-stop with the weighing signals monitoring the hopper contents and from this information fully automatic calibrations are carried out on-the-move. Even under hilly conditions we are able to weigh the hopper contents correctly – so ensuring a high level of accuracy.

Therefore the amount of fertiliser used is precisely controlled ensuring optimum use of inputs and control of costs.

All spreaders with weighing technique can alternatively be delivered with an ISOBUS controller which fulfils ISO norm 11783. The ISOBUS controller is equipped with a plug for easy connection with the tractors ISOBUS network/terminal.

- 20: Fully Automatic calibration (W) switched on
- 21: Parallel weight frame – Spring plates – ISOBUS controller





Test Hall. Expert know-how.

Since 1984 we have worked all year round in our test hall analysing fertiliser spreading characteristics and making spread charts. The test hall is one of Europe's largest and most advanced with fully automatic weighing of the test trays. The results are registered directly in a database, which is simultaneously the foundation for all spread charts and also for interactive "On-Line" functions to match individual requirements.

All spread charts are available on our homepage where additionally there is a free "Fertiliser Analysis" function. This can be used for finding a spread chart for any fertiliser which has not been tested in our test hall. Using a Fertiliser Test Set, which consists of a grain strength tester and a box for dividing the grain sizes, it is possible to analyse the physical characteristics. The results are directly keyed in on our website bogballe.com and the database will search all tests carried out and immediately suggest a spread chart match.

Additionally it is possible to find a specific setting for spreaders fitted with hydraulic or cable remote using the "Individual Scale Setting" function. This is a versatile tool that specifies settings for the speed, quantity and working width that suits your needs.



Useful options.



CALIBRATOR ZURF



CALIBRATOR ICON



Hopper cover



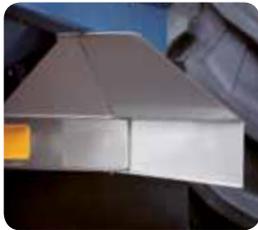
Hydr. remote
for hopper cover



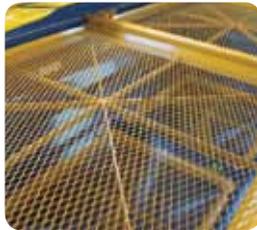
Storage wheels



Ladder, foldable



Extra wide guards



Sieves, top mounted



Reduction gear



Hydraulic motor



Flow control



Reflector board



Connection system +/-40%



Headland spreading
from border



Agitator for grass seed



Module



Test set



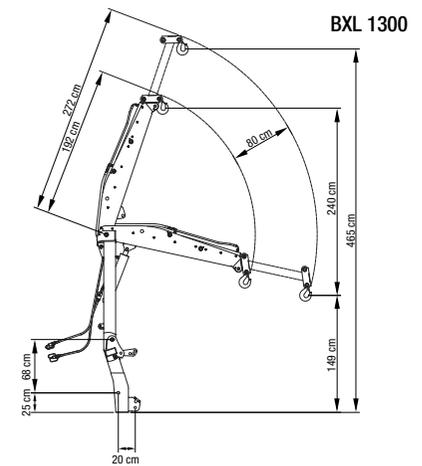
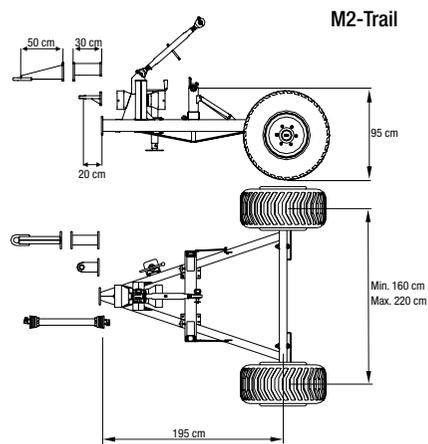
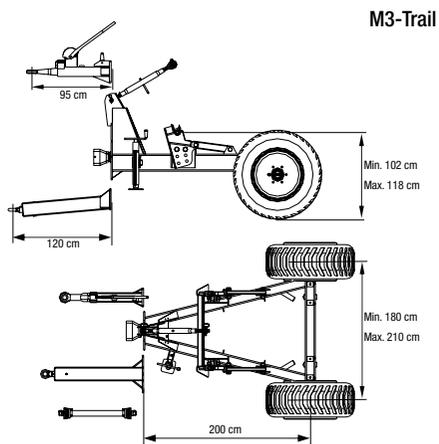
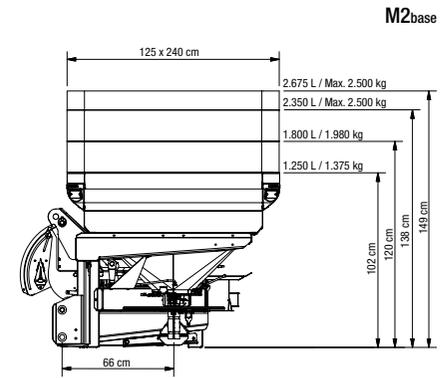
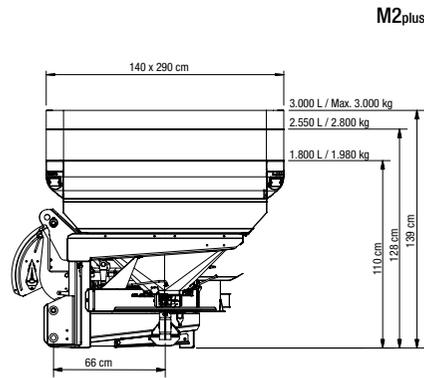
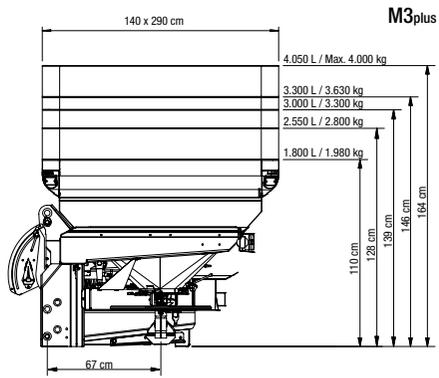
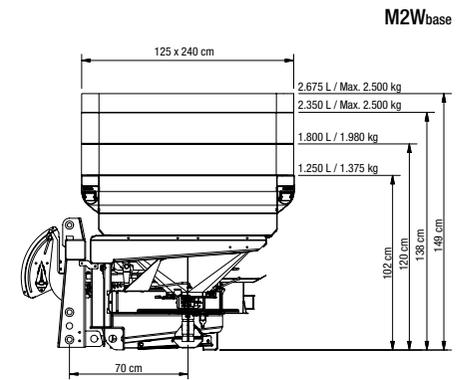
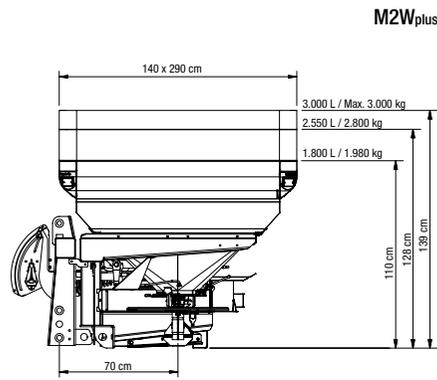
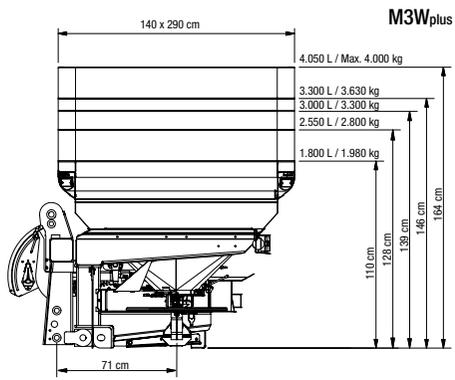
Vaness



7-pin ISO 11786 speed cable



GPS speed sensor



Specifications

	M3W plus	M3W plus	M3 plus	M2W plus	M2W plus	M2 plus	M2W base	M2W base	M2 base
Weight (kg)	660/702/744/786	667/709/751/793	510/552/594/636	534/576/606	541/583/613	450/492/522	490/519/548	497/526/555	406/435/464
Working width (M)	12-42	12-42	12-42	12-42	12-42	12-42	12-42	12-42	12-42
Fully automatic weighing system	■	■	—	■	■	—	■	■	—
Control unit	CALIBRATOR ZURF	ISOBUS	□	CALIBRATOR ZURF	ISOBUS	□	CALIBRATOR ZURF	ISOBUS	□

Options

Manual operation of headland spreading to border	—	—	■	—	—	■	—	—	■
Electrical remote control of headland spreading to border	■	■	□	■	■	□	■	■	□
Quadro calibration/emptying	■	■	■	■	■	■	■	■	■
Pto with overrun	■	■	■	■	■	■	■	■	■
Water resistant slip clutch	■	■	■	■	■	■	■	■	■
Sieves	■	■	■	■	■	■	■	■	■
Late application linkage	■	■	■	■	■	■	■	■	■
Degree meter	■	■	■	■	■	■	■	■	■
Mud guards	■	■	■	■	■	■	■	■	■
Reduction outlet	■	■	■	■	■	■	■	■	■
Rear lights	■	■	■	■	■	■	■	■	■
Safety guard	■	■	■	■	■	■	■	■	■
CALIBRATOR ZURF incl. test set for fertiliser analysis	■	—	□	■	—	□	■	—	□
ISOBUS Controller incl. test set for fertiliser analysis	—	■	—	—	■	—	—	■	—
CALIBRATOR ICON incl. test set for fertiliser analysis	—	—	□	—	—	□	—	—	□
Hydraulic control	—	—	□	—	—	□	—	—	□
Hopper cover, foldable	□	□	□	□	□	□	□	□	□
Hydraulic remote of hopper cover	□	□	□	□	□	□	□	□	□
Storage wheels	□	□	□	□	□	□	□	□	□
Ladder, foldable	■	■	■	□	□	□	□	□	□
Extra wide guards	■	■	■	□	□	□	□	□	□
Sieves, top mounted	□	□	□	□	□	□	—	—	—
Reductions gear 1000/540 and 540/540 incl. storage wheels	□	□	□	□	□	□	□	□	□
Hydraulic motor	□	□	□	□	□	□	□	□	□
Flow control, adjustment of oil flow / rpm	□	□	□	□	□	□	□	□	□
Reflector board	□	□	□	□	□	□	□	□	□
Connection system +/-40%	□	□	□	□	□	□	□	□	□
Pilot counter valve, prevent oil leak off from hydraulic remote	—	—	□	—	—	□	—	—	□
Agitator for grass seed	□	□	□	□	□	□	□	□	□
Test set for fertiliser analysis	■	■	□	■	■	□	■	■	□
Module plus 750 litres	□	□	□	□	□	□	—	—	—
Module plus 450 litres	□	□	□	□	□	□	—	—	—
Module base 550 litres	—	—	—	—	—	—	□	□	□
Module base 325 litres	—	—	—	—	—	—	□	□	□

Possibilities for controlling headland spreading

Elec. remote, to border via CALIBRATOR ZURF / ICON & ISOBUS	■	■	□	■	■	□	■	■	□
Elec. remote, from border via CALIBRATOR ZURF / ICON & ISOBUS	□	□	□	□	□	□	□	□	□
Elec. remote, to/from border via CALIBRATOR ZURF & ISOBUS	□	□	□	□	□	□	□	□	□
Elec. remote, to border and manual to/from border f/ CALIBRATOR ICON	—	—	□	—	—	□	—	—	□
Elec. remote, to border and cable to/from border CALIBRATOR ICON	—	—	□	—	—	□	—	—	□
Cable remote, to border	—	—	□	—	—	□	—	—	□
Cable remote, from border	—	—	□	—	—	□	—	—	□
Cable remote, to/from border	—	—	□	—	—	□	—	—	□
Manual shift to border	—	—	■	—	—	■	—	—	■
Manual shift from border	—	—	□	—	—	□	—	—	□
Manual shift to/from border	—	—	□	—	—	□	—	—	□

- Standard equipment
- Option
- Not available

All BOGBALLE products are subject to continuous development.



Dealer: