

M-line + L-line





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14 hard-hitting benefits (1-7)

1

The perfect spread pattern

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

2

Optimum headland spreading

On headlands we use the Off-Centre system. The only adjustment is a change of disc rotation direction. This system ensures a perfect fertiliser application to the border as well as in the field. The spreading system fulfils the European environmental standard EN 13739-1 and is standard on all spreaders.

3

Thoroughly tested weighing system

Since 1988 the weighing technique has ensured a high level of precision. The weighing technique register changes in the flow and adjusts the shutters automatically on the move. Therefore the amount of fertiliser used is precisely controlled ensuring optimum use of inputs and control of costs.

4

Perfect pass

Thanks to the automatic shutters, the fertiliser is always placed at the right position on the disc. This keeps the spread pattern in perfect shape no matter fertiliser flow, forward speed or working width.

5

One spreading vane

The same vane is used for in-field and headland spreading. Simultaneously the vane also covers more working widths with one and the same setting. To ensure a long lifetime we produce the vanes of manganese steel.

6

Easy setting

One setting and the spreader is ready for work. If you choose a spreader with weighing technique and intelligent control, the only setting that must be done is to set the tilt angle to achieve the required spread width. The risk of incorrect setting is therefore minimal.

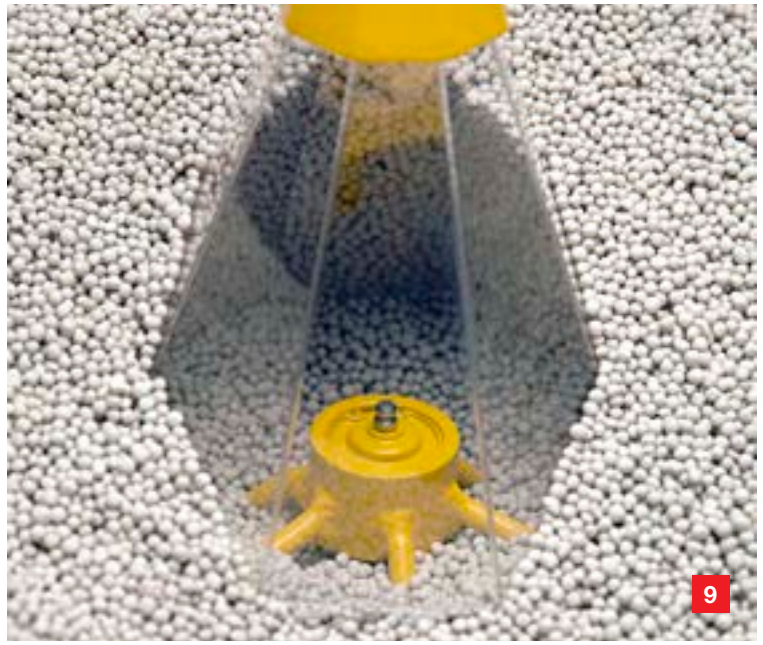
7

Intelligent Control

Our weighing spreaders with integrated Intelligent Control constantly make intelligent measurements on the move - also under hilly conditions. 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. In this way we achieve optimum accuracy and precise quantity.



8



9



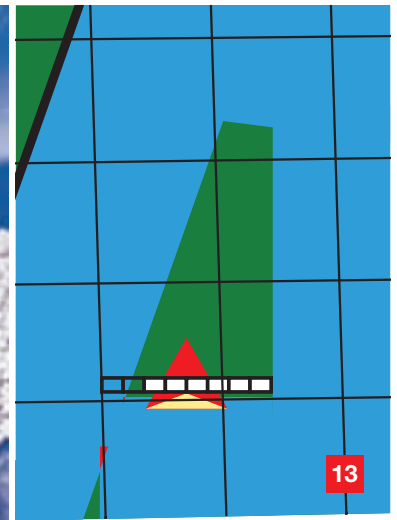
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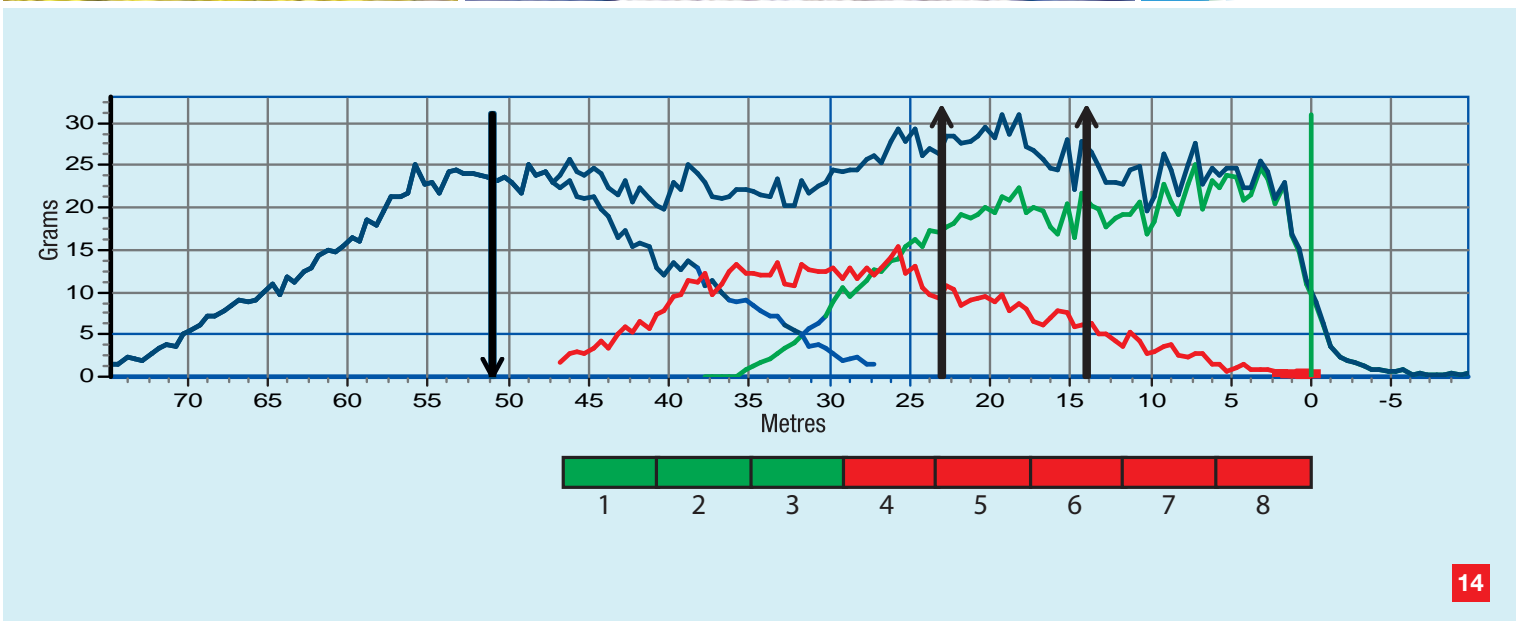
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12



13



14

14 hard-hitting benefits (8-14)

8 **Powder paint - first class protection against corrosion**

After a thorough 7-step cleaning of each component, we are powder painting with the sturdy "Flexi Coat" finish. Spreading discs, guards and hopper base are made of stainless steel. This results in first class protection against corrosion and longer life.

9 **Hopper base with pressure equalising cone**

At full load the fertiliser pressure from the hopper load above is heavy on to the hopper base. At the bottom of the hopper base an 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.

10 **Maintenance-free transmission**

The transmission is a closed system, filled with a special grease with perfect lubrication characteristics at all working temperatures. Beside this the transmission is fitted with an overload clutch that protects against extreme stress.

11 **From oil seed rape to rice**

Utilize the spreaders impressive spreading capabilities for a wide range of crop seed and slug pellets. On www.bogballe.com we offer a wide range of spread charts e.g. for rice.

12 **Gentle agitator**

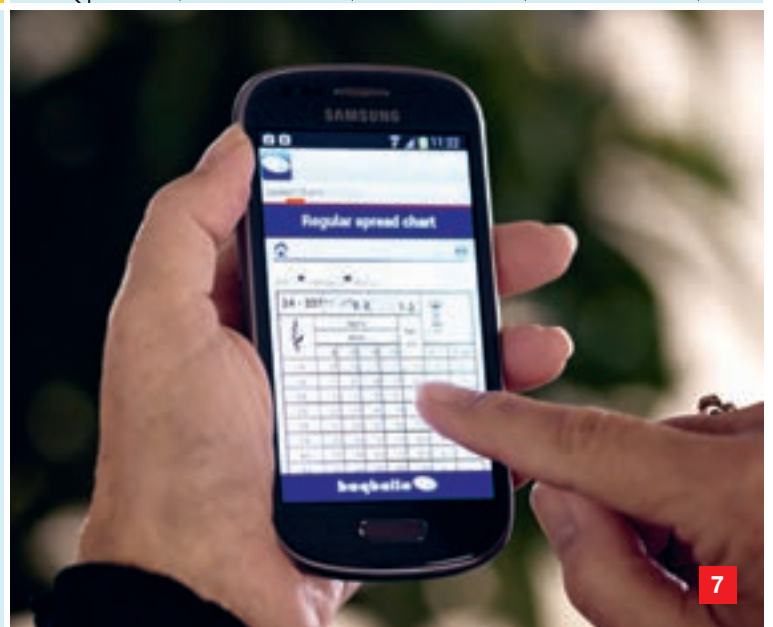
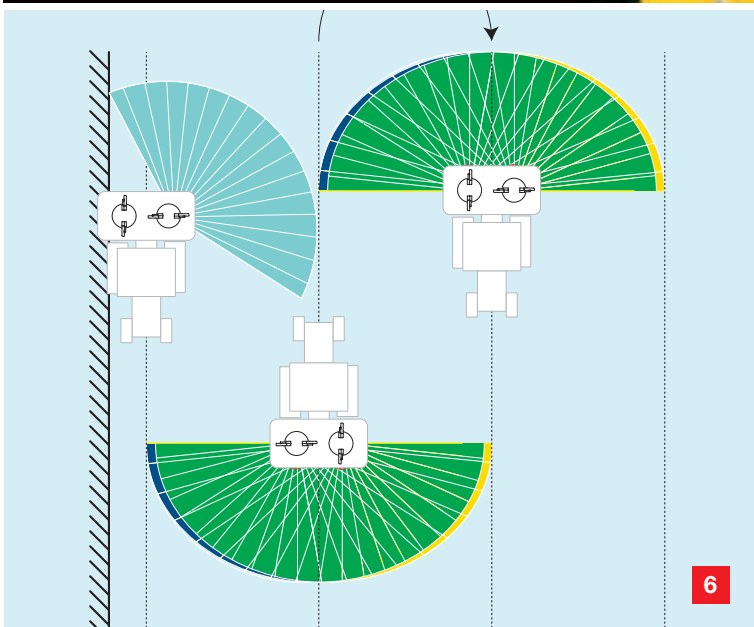
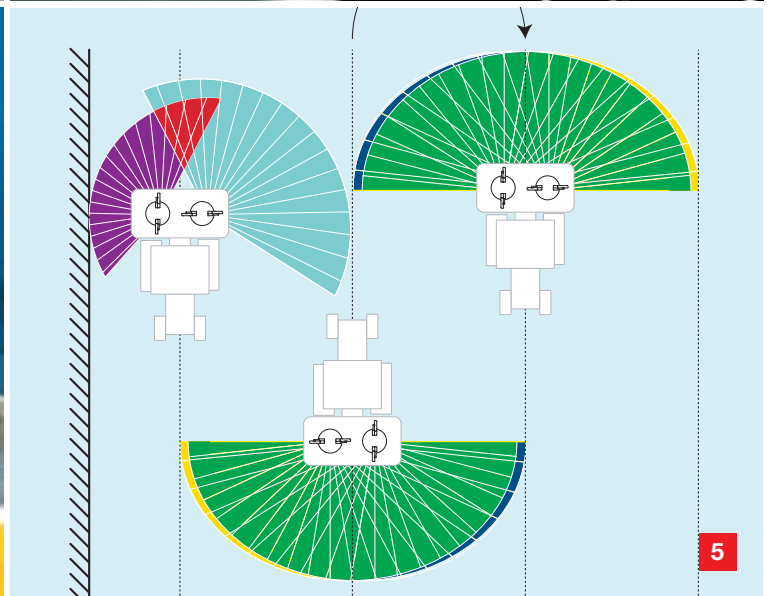
The agitator guides the fertiliser to the outlet in gentle manner. Depending on the fertiliser density and flow characteristics, the agitator rpm is adjusted automatically to keep the fertiliser undamaged.

13 **SC Standard – Intelligent spreading in wedges**

While spreading in wedges the working width is adjusted according to field shape and conditions. Simultaneously the quantity is adjusted to minimize under, and over dosage in the wedge. The adjustment is done on both sides of the spreader at the same time and can be controlled either manually via CALIBRATOR or automatically via GPS.

14 **SC Dynamic – Optimized wedge spreading**

SC Dynamic optimizes the spreading in wedges dynamically by adjusting the spread pattern on left and right side of the spreader either manually via CALIBRATOR ZURF or automatically via GPS. The fertiliser application is fully optimized as the distribution of fertiliser is automatically adjusted. Simultaneously the quantity is adjusted so that it corresponds to the working width. The double-double overlapping advantages from the In-centre system are kept and the system does not require any further adjustments.



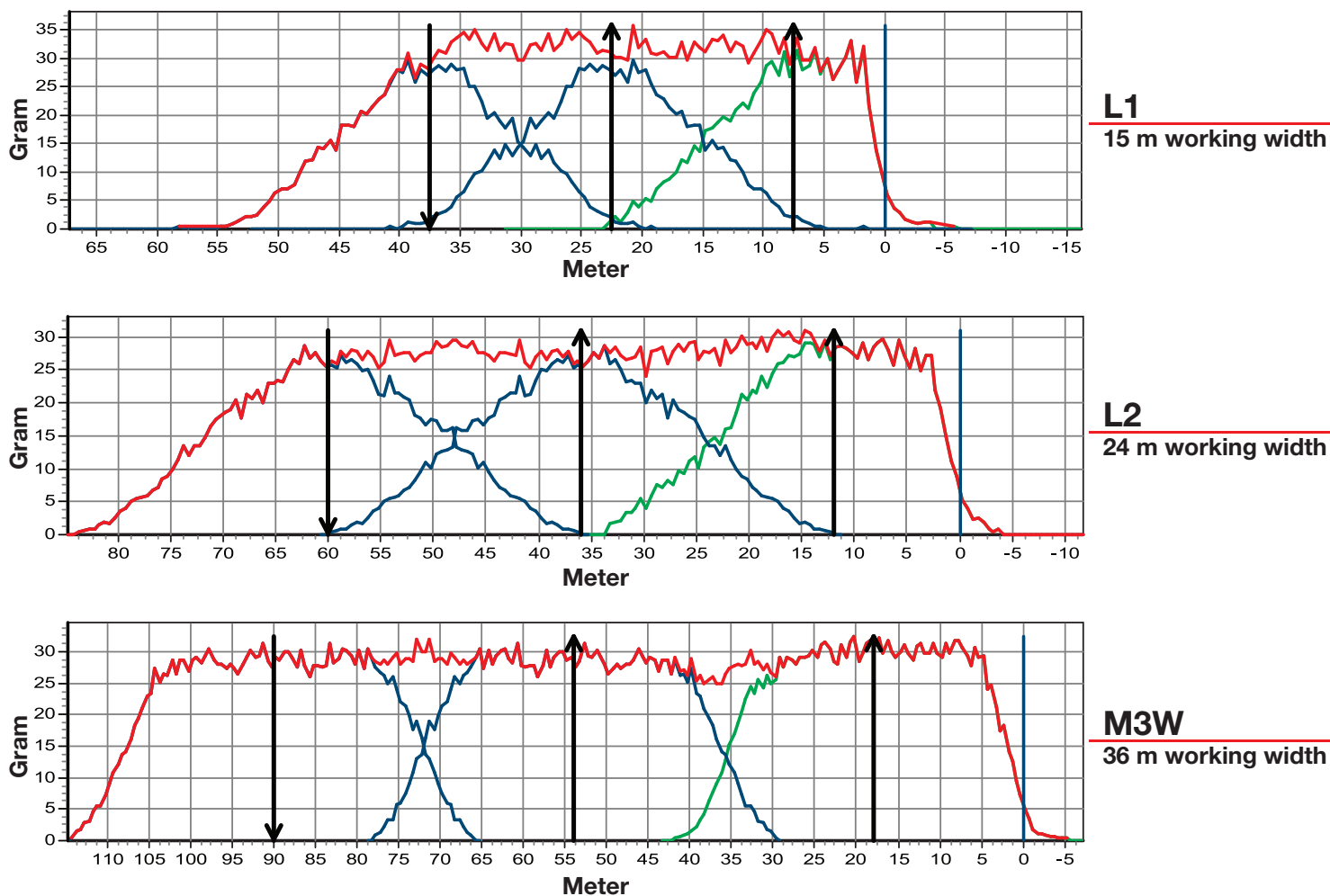
Perfect spread pattern with 4-double overlapping

We achieve the perfect spreading result during normal and headland spreading by utilizing the possibility of rotating the spreading discs to the centre (In-centre) or away from the centre of the spreader (Off-centre).

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.

Normal- and border spread pattern



- 1 BOGBALLE testhall - 2D and 3D test of spread pattern
- 2 Testset for control of fertiliser
- 3 Headland spreading
- 4 Normal spreading
- 5 Spreading system overview - to border
- 6 Spreading system overview - from border
- 7 App for spread charts



3 ways to accurate quantity setting

Weighing technique

Choosing weighing technique, you get fully automatic calibration and 100% ground speed relation. The spreader constantly make intelligent measurements on the move and automatically adjust the shutters according to required quantity and forward speed.

100% ground speed relation

Choosing a spreader with ground speed relation, the quantity is adjusted either by keying in a calibration value directly from the spread chart or by carrying out a calibration directly on the spreader.

Remote or manual control








Choosing a spreader with remote or manual control, the quantity is set by use of the spread chart, by carrying out a calibration directly on the spreader or by use of S-Indicator.

-
- 1 S-Indicator for quantity setting of L-line spreader with remote or manual control
 - 2 Fully automatic calibration switched on for spreader with weighing technique and 100% ground speed relation
 - 3 Calibration kit for use directly on L2 with 100% ground speed relation
 - 4 Calibration kit for use on L1 with 100% ground speed relation
 - 5 Calibration directly on M-line spreader with remote control or 100% ground speed relation

Spreader characteristics

-  Working width in metres
-  Capacity in litres
-  Capacity in kilo

Control units

-  CALIBRATOR ZURF
-  CALIBRATOR ICON
-  ISOBUS Controller
-  CALIBRATOR FREE via iZURF
-  Hydraulic remote
-  Cable remote
-  Manual control

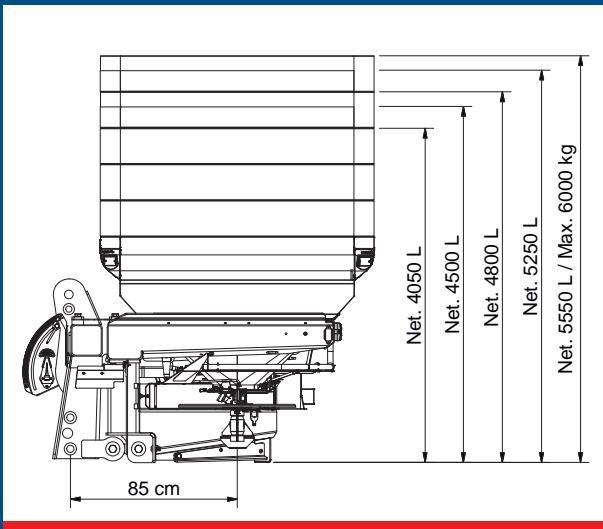
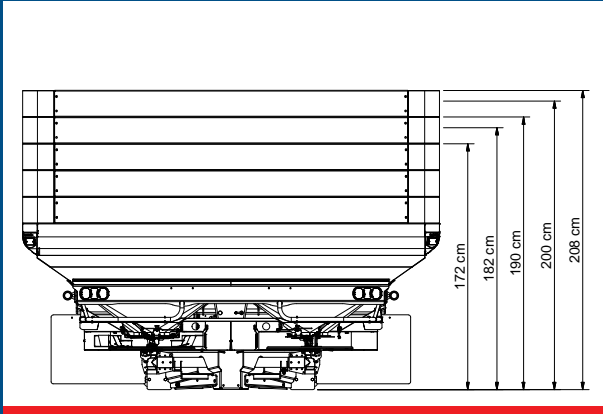
Product range

	M6W plus	M3W plus	M2W plus	M2W base	L2W plus	M3 plus	M2 plus	M2 base	L2 plus	L1 plus	L1 base
Working width ^A											
M Metres	12-42	12-42	12-42	12-42	12-24	12-42	12-42	12-42	12-24	10-18	10-18
Capacity											
L Litres	4.050-5.550	1.800-4.050	1.800-3.000	1.250-2.675	700-2.050	1.800-4.050	1.800-3.000	1.250-2.675	700-2.050	700-1.600	500-1.050
KG Kilo ^B	4.455-6.000	1.980-4.000	1.980-3.000	1.375-2.500	770-2.000	1.980-4.000	1.980-3.000	1.375-2.500	770-2.000	770-1.600	500-1.155
Net weight											
Kilo (min. / max.)	952/1.044	660/793	541/613	490/522	330/426	510/636	450/522	406/464	268/364	210/274	198/246
Control unit											
CALIBRATOR ZURF	●	●	●	●	●	○	○	○	○	-	-
CALIBRATOR ICON	-	-	-	-	-	○	○	○	○	○	○
ISOBUS Controller	●	●	●	●	●	-	-	-	-	-	-
iZURF WIFI module ^C	○	○	○	○	○	○	○	○	○	-	-
Hydraulic	-	-	-	-	-	○	○	○	○	○	○
Cable	-	-	-	-	-	-	-	-	○	○	○
Manual	-	-	-	-	-	-	-	-	○	○	○
Control of spread pattern											
Section Control Dynamic Ready	●	●	●	●	-	●	●	●	-	-	-
Section Control Standard Ready	●	●	●	●	●	●	●	●	●	●	●
External GPS Ready ^D	●	●	●	●	●	●	●	●	●	●	●
Quantity control											
Weighing system	●	●	●	●	●	-	-	-	-	-	-
Manual calibration	-	-	-	-	-	●	●	●	●	●	●
Fully automatic calibration	●	●	●	●	●	-	-	-	-	-	-
Intelligent control	●	●	●	●	●	-	-	-	-	-	-
Speed relation	●	●	●	●	●	○	○	○	○	○	○
Integrated headland spreading											
To border	●	●	●	●	●	●	●	●	●	●	●
From border	○	○	○	○	○	○	○	○	○	●	●
To and from border	○	○	○	○	○	○	○	○	○	○	○
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- Standard
- Depending on model
- Extra
- Not available

A Can depend on fertiliser type
B Density 1,1 kg pr. litre. Axle load on public roads must comply with national restrictions
C Can only be used for spreaders with CALIBRATOR ZURF
D Can only be used for spreaders with CALIBRATOR or ISOBUS Controller

M6W plus



STANDARD

CALIBRATOR ZURF or ISOBUS Controller • Fully automatic calibration • Electrical remote controlled headland spreading to border • Intelligent control • Eccentric agitator • Reduction outlet for slug pellets etc. • LED Rear lights • Section Control Dynamic Ready • Flexi-coat powder paint Extra wide guards • Water resistant slip clutch • Ladder



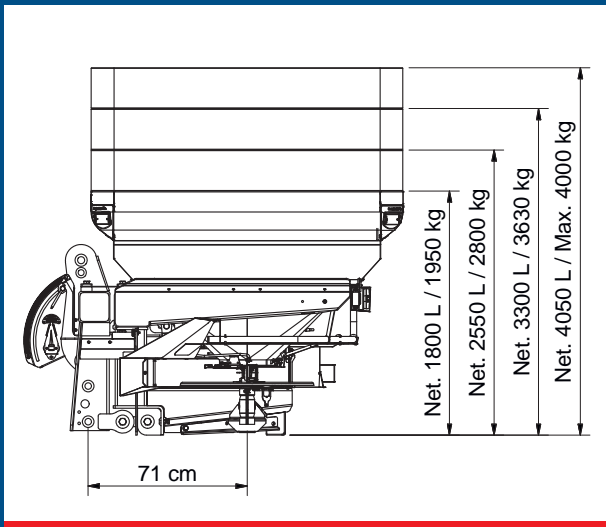
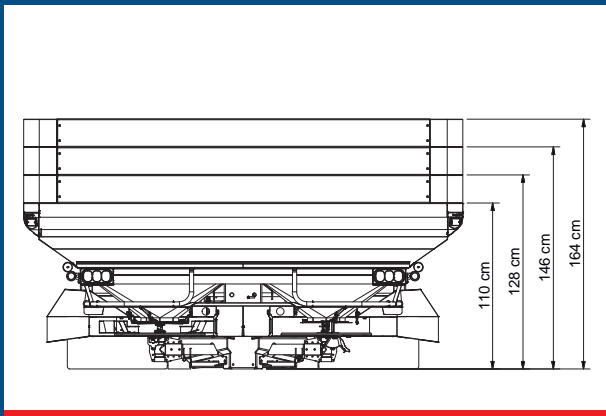
M6W plus

- M** 12-42 m
- L** 4.000-5.550 l
- KG** 6.000 kg

Control units



M3W plus



STANDARD

CALIBRATOR ZURF or ISOBUS Controller • Fully automatic calibration • Electrical remote controlled headland spreading to border • Intelligent control • Eccentric agitator • Reduction outlet for slug pellets etc. • Rear lights • Section Control Dynamic Ready • Flexi-coat powder paint • Extra wide guards • Water resistant slip clutch • Ladder



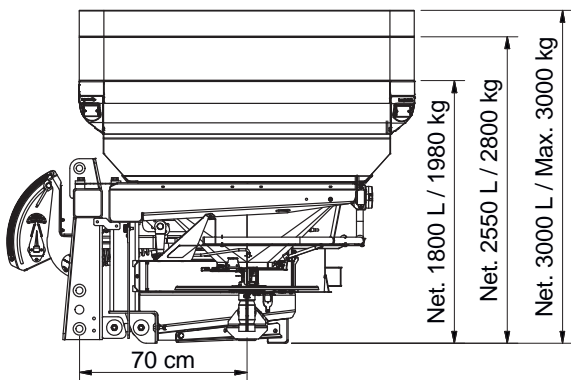
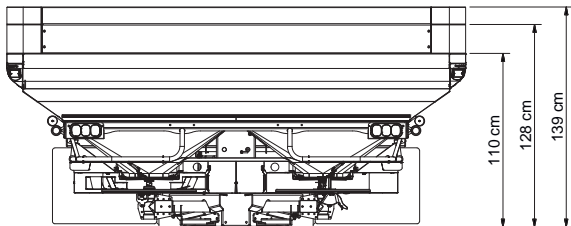
M3W plus

- M** 12-42 m
- L** 1.800-4.050 l
- KG** 4.000 kg

Control units



M2W plus



STANDARD

CALIBRATOR ZURF or ISOBUS Controller • Fully automatic calibration • Electrical remote controlled headland spreading to border • Intelligent control • Eccentric agitator • Reduction outlet for slug pellets etc. • Rear lights • Section Control Dynamic Ready • Flexi-coat powder paint • Water resistant slip clutch



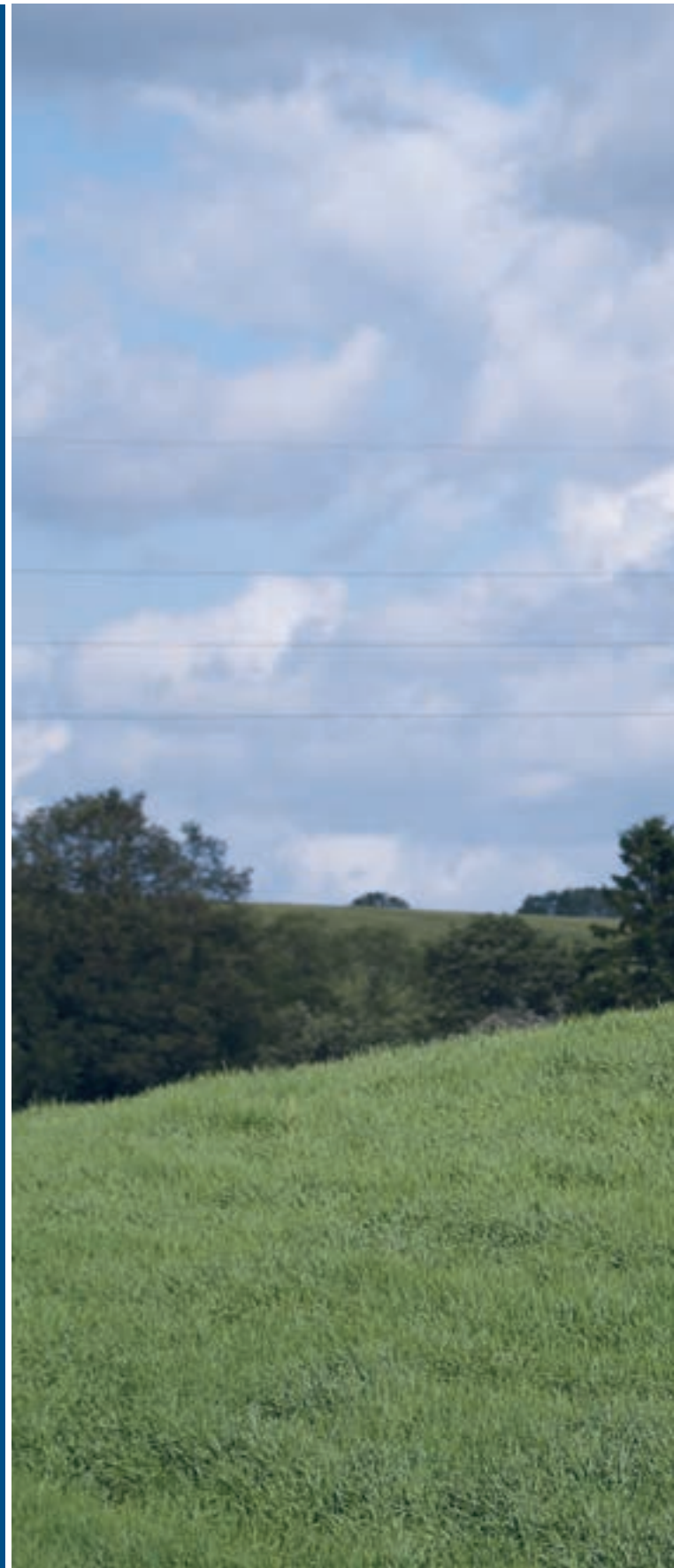
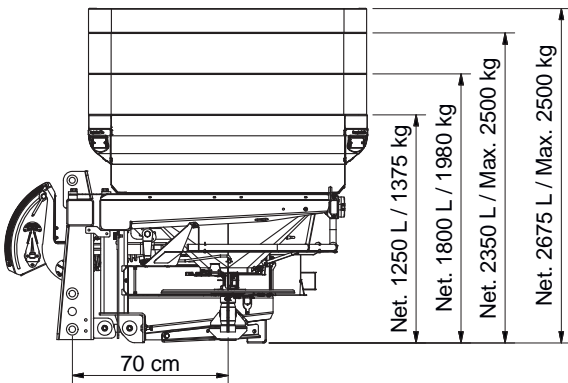
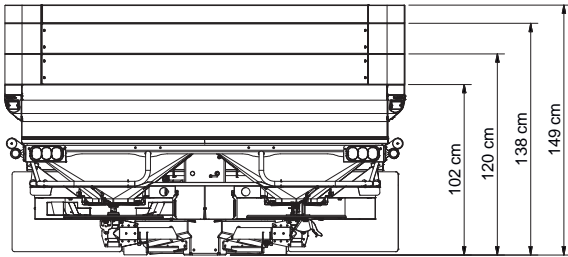
M2W plus

- M** 12-42 m
- L** 1.800-3.000 l
- KG** 3.000 kg

Control units



M2W base



STANDARD

CALIBRATOR ZURF or ISOBUS Controller • Fully automatic calibration • Electrical remote controlled headland spreading to border • Intelligent control • Eccentric agitator • Reduction outlet for slug pellets etc. • Rear lights • Section Control Dynamic Ready • Flexi-coat powder paint • Water resistant slip clutch



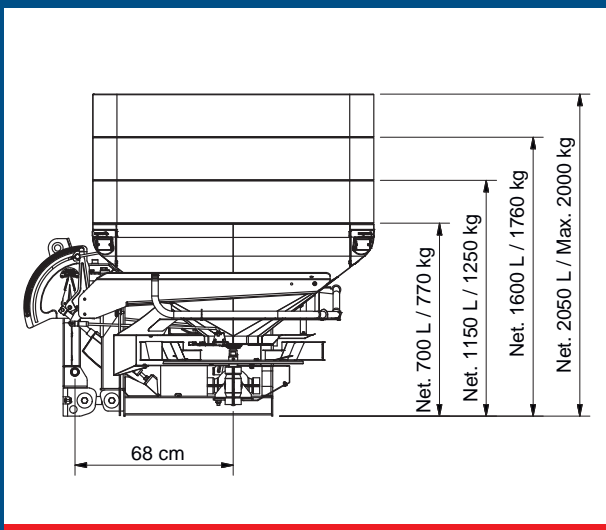
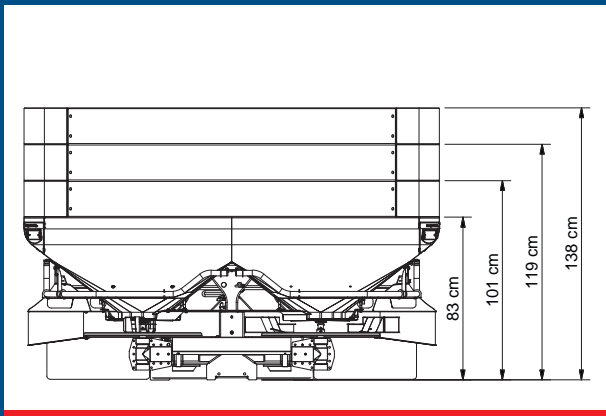
M2W base

- M** 12-42 m
- L** 1.250-2.675 l
- KG** 2.500 kg

Control units



L2W plus



STANDARD

CALIBRATOR ZURF or ISOBUS Controller • Fully automatic calibration • Headland spreading to border • Intelligent control • Eccentric agitator • Flexi-coat powder paint • Water resistant slip clutch • Extra wide guards



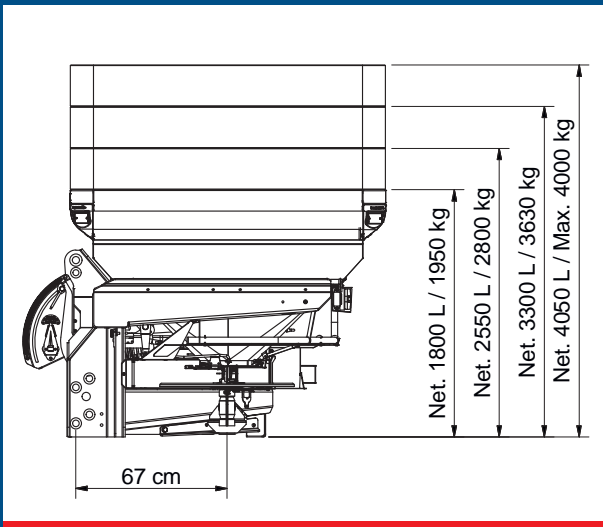
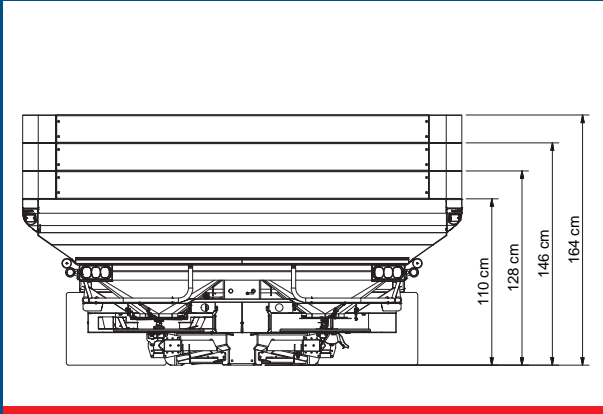
L2W plus

- M** 12-24 m
- L** 700-2.050 l
- KG** 2.000 kg

Control units



M3 plus



STANDARD

Headland spreading to border • Eccentric agitator • Reduction outlet for slug pellets etc. • Rear lights • Section Control Dynamic Ready • Flexi-coat powder paint • Extra wide guards • Water resistant slip clutch • Ladder



M3 plus

M 12-42 m

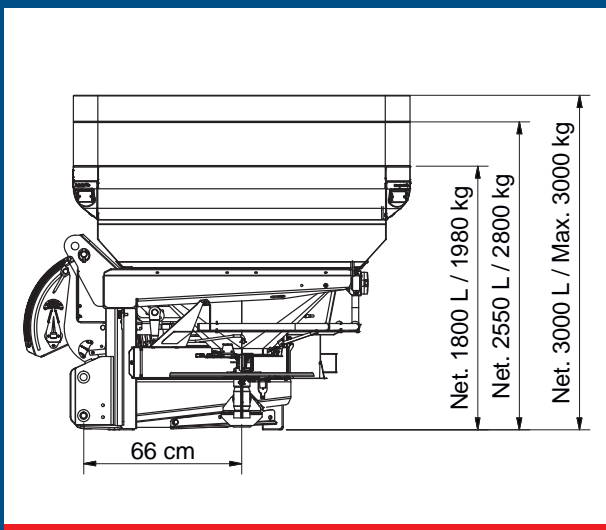
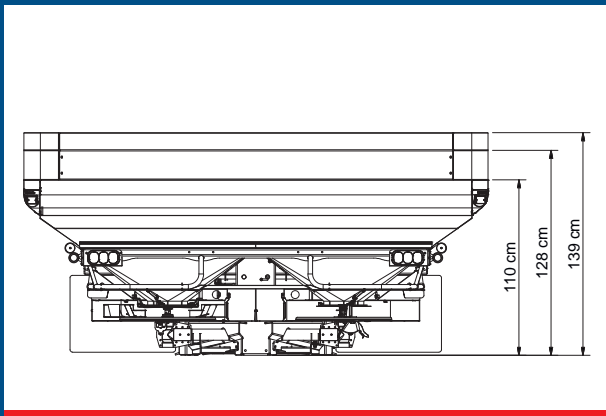
L 1.800-4.050 l

KG 4.000 kg

Control units



M2 plus



STANDARD

Headland spreading to border • Eccentric agitator • Reduction outlet for slug pellets etc. • Rear lights • Section Control Dynamic Ready • Flexi-coat powder paint • Water resistant slip clutch



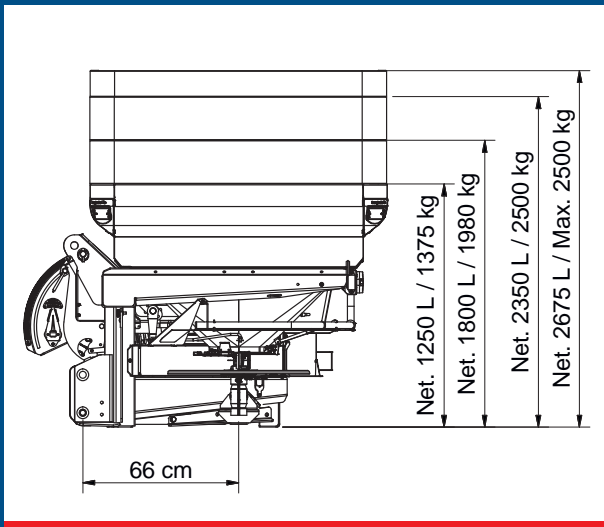
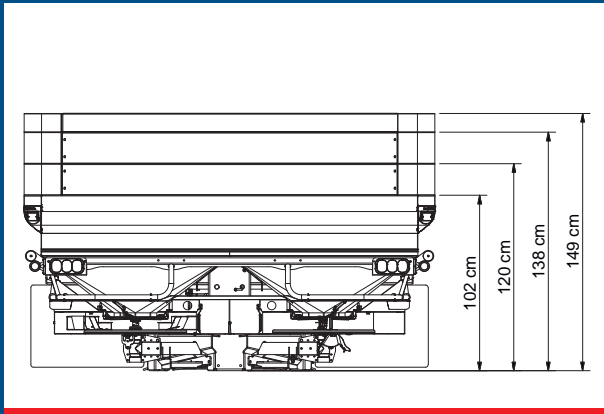
M2 plus

- M** 12-42 m
- L** 1.800-3.000 l
- KG** 3.000 kg

Control units



M2 base



STANDARD

Headland spreading to border • Eccentric agitator • Reduction outlet for slug pellets etc. • Rear lights • Section Control Dynamic Ready • Flexi-coat powder paint • Water resistant slip clutch



M2 base

M 12-42 m

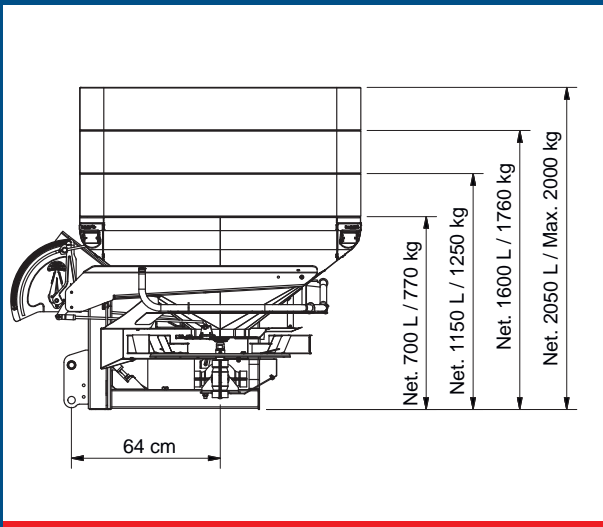
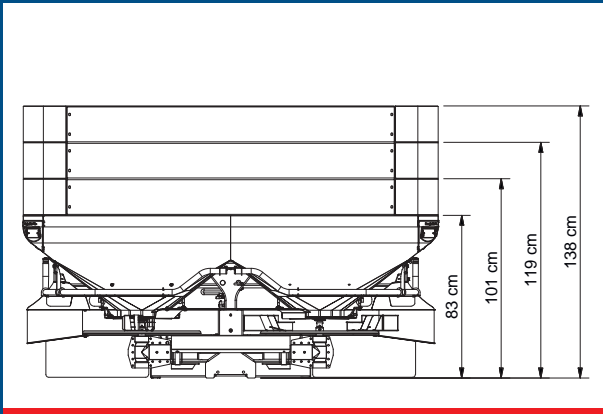
L 1.250-2.675 l

KG 2.500 kg

Control units



L2 plus



STANDARD

Headland spreading to border • Eccentric agitator • Flexi-coat powder paint • Water resistant slip clutch



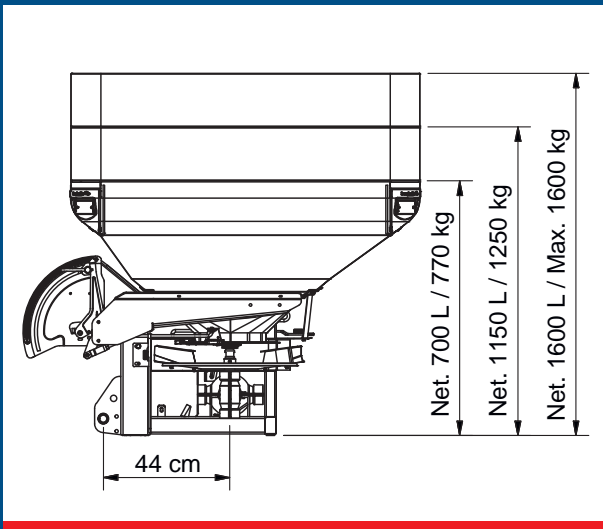
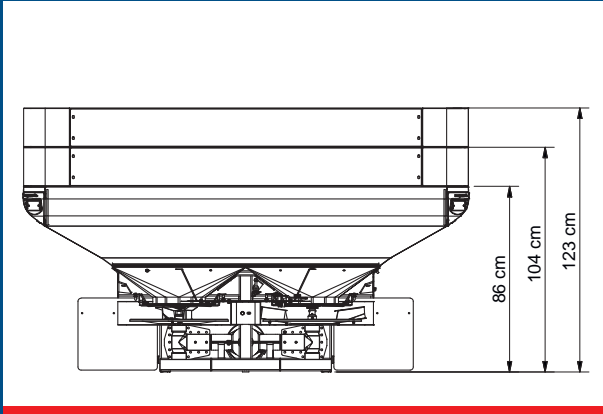
L2 plus

- M** 12-24 m
- L** 700-2.050 l
- KG** 2.000 kg

Control units



L1 plus



STANDARD

Headland spreading to/from border • Eccentric agitator • Flexi-coat powder paint • Water resistant slip clutch



L1 plus

M 10-18 m

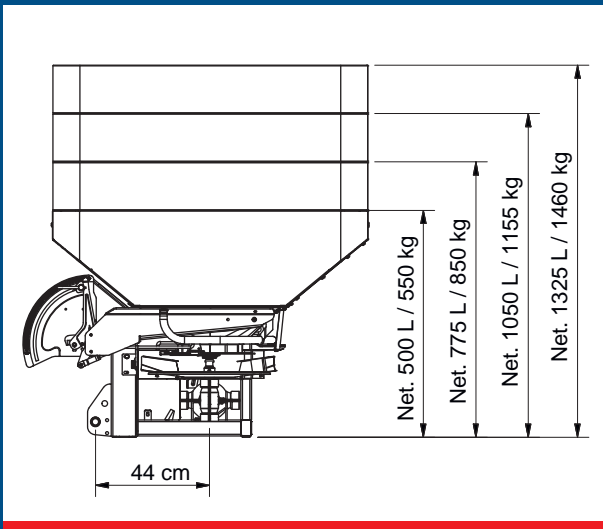
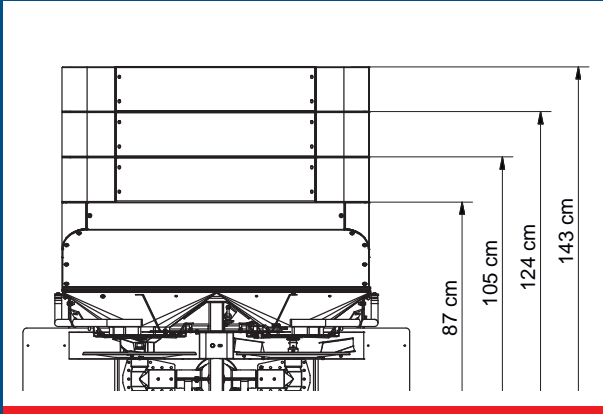
L 700-1.600 l

KG 1.600 kg

Control units



L1 base



STANDARD

Headland spreading to/from border • Eccentric agitator • Flexi-coat powder paint • Water resistant slip clutch



L1 base

- M** 10-18 m
- L** 500-1.325 l
- KG** 1.600 kg

Control units

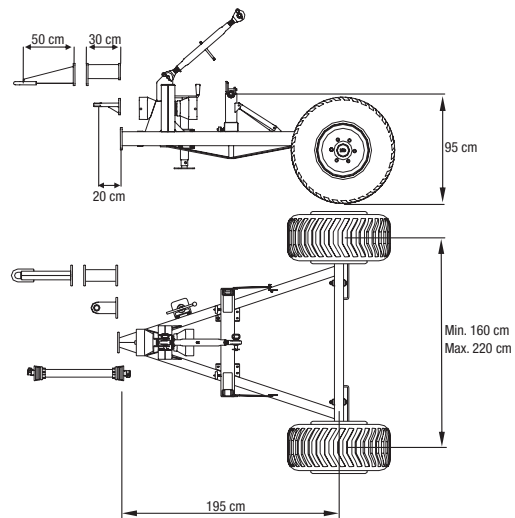
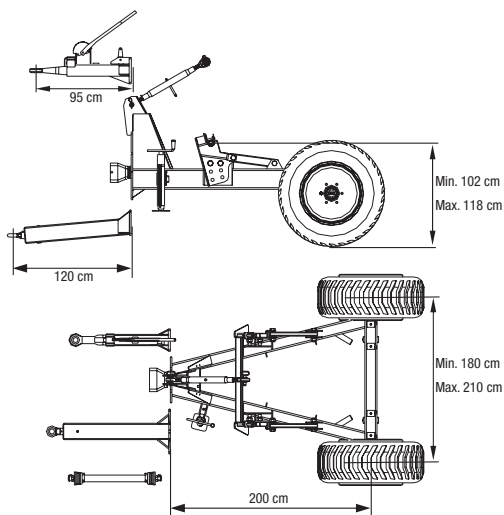




M-Trail + L-Trail + BXL 1300

M-Trail and L-Trail

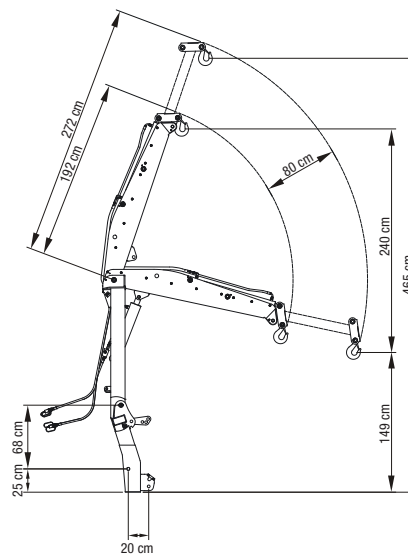
Our range of trailers is the perfect solution for using a large spreader with a small tractor. Common for both variants is adjustable wheel track width. Naturally the spreader can also be used for late application on the 3-point linkage. The range of trailers fits M-line spreaders and L2 (except M6W).



BXL 1300

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 spreaders with a capacity up to 3.300 litres.



- 1 M3-Trail
- 2 L2-Trail
- 3 M3-Trail
- 4 BXL 1300
- 5 BXL 1300



5 Control units - a world of possibilities (1-3)

CALIBRATOR ZURF

The spreading work is done in an efficient and flexible way with CALIBRATOR ZURF. Fitted with weighing technique and CALIBRATOR ZURF the spreader is 100% speed related and fully automatic. This ensures high precision and quality in the spread pattern, as the quantity will be accurate no matter forward speed and field conditions.

A user friendly logical layout and function is supported by a help function and operating instructions in the display. Before spreading work begins planned field work can be uploaded via USB connection. After having finished the work, recorded data can be downloaded and used for a complete documentation of field work.

CALIBRATOR ZURF which is standard on M6W, M3W, M2W and L2W, is the super intelligent solution meeting the extraordinary needs. Can also be used with M3, M2, L2.

CALIBRATOR ICON

CALIBRATOR ICON is the intelligent solution for controlling M3, M2, L2 and L1 spreaders without the weighing system. Operation is by easy to understand icons. CALIBRATOR ICON contains all necessary functions required for a professional spreading result. Field data for different fields can be downloaded to a PC and imported to Excel. Average rate (Kg/ha), total spread area (ha) and total kg applied for each field is recorded.

ISOBUS Controller

All spreaders with weighing technique is also available with ISOBUS. This super professional solution, which makes it possible to operate the spreader via the tractors ISOBUS terminal. The ISOBUS controller fulfils the ISO 11783 norm and controls all functionality of the spreaders electrical components. The ISOBUS controller is equipped with a break-away plug for easy connection with the tractors ISOBUS network. With the ISOBUS solution we offer high precision and quality in spread pattern no matter forward speed or field conditions. The ISOBUS solution can be controlled automatically by GPS depending on the tractor terminal and software.

-
- 1** CALIBRATOR ZURF
 - 2** Upload of settings
 - 3** Recorded field data
 - 4** CALIBRATOR ICON
 - 5** RS232 connection
 - 6** ISOBUS Controller



1



2



3



4

5 Control units - a world of possibilities (4-5)

FREE Concept – Automatic headland and section control

With the FREE Concept it is possible to control the spreader wirelessly via a standard Android tablet for integrated automatic headland and section control. This solution is working independently of 3rd party systems and tractor manufacturers.

The spreader is controlled via an iZURF communication module which works as "point of contact" between spreader and CALIBRATOR ZURF. The commands coming from the tablet are either manually operated via the touch screen or automatically operated based on GPS signal.

Beside the user-friendly interface, the FREE solution offer full utilisation of the tablets well known user-interface such as internet connection, direct access to spread charts, manuals, navigation, email, weather report etc.

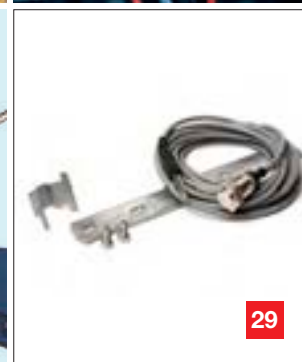
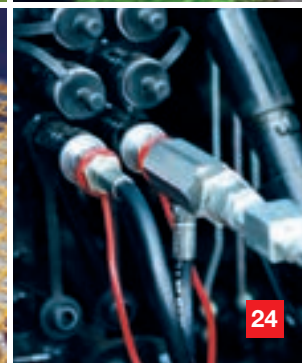
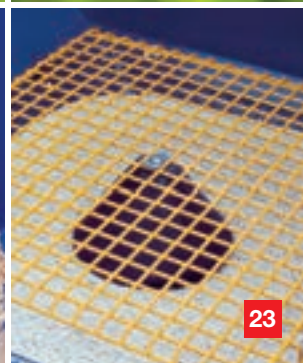
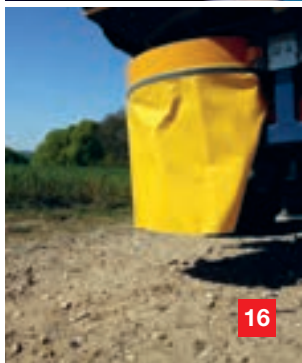
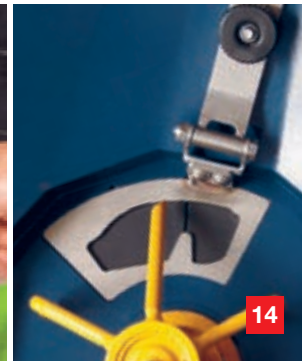
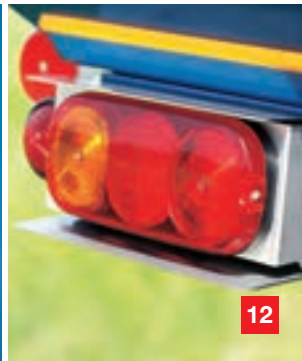
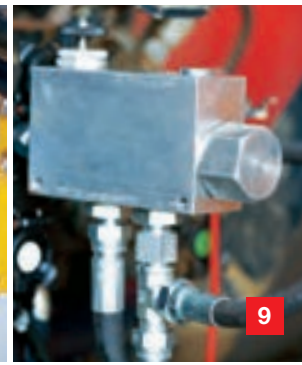
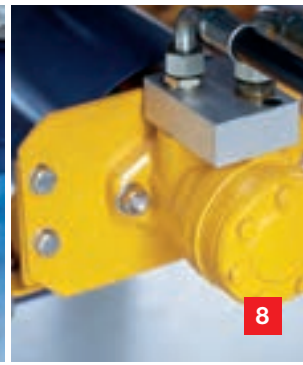
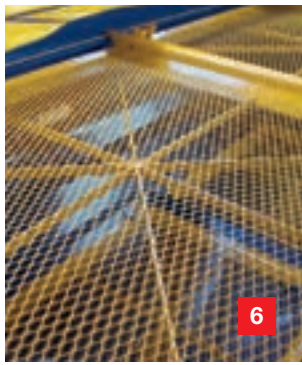
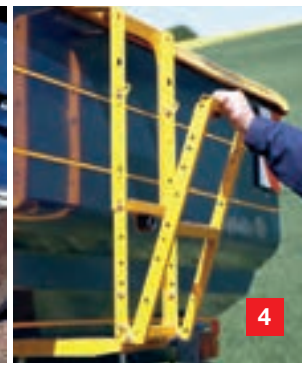
The spreading work is displayed on the screen all the time and simultaneously there is access to all functions. Recorded field data can forwarded directly from the tablets email system.

Android is a trademark of Google Inc.

GPS assisted controllers

We offer the possibility for connecting CALIBRATOR ZURF to a standard GPS system for automatic section control in wedges and automatic start/stop on headlands. This only requires an interface between for instance Trimble, Teejet, TopCon or Patchwork etc.

-
- 1 CALIBRATOR FREE
 - 2 Section Control via TeeJet
 - 3 Section Control via TopCon
 - 4 Section Control via Trimble



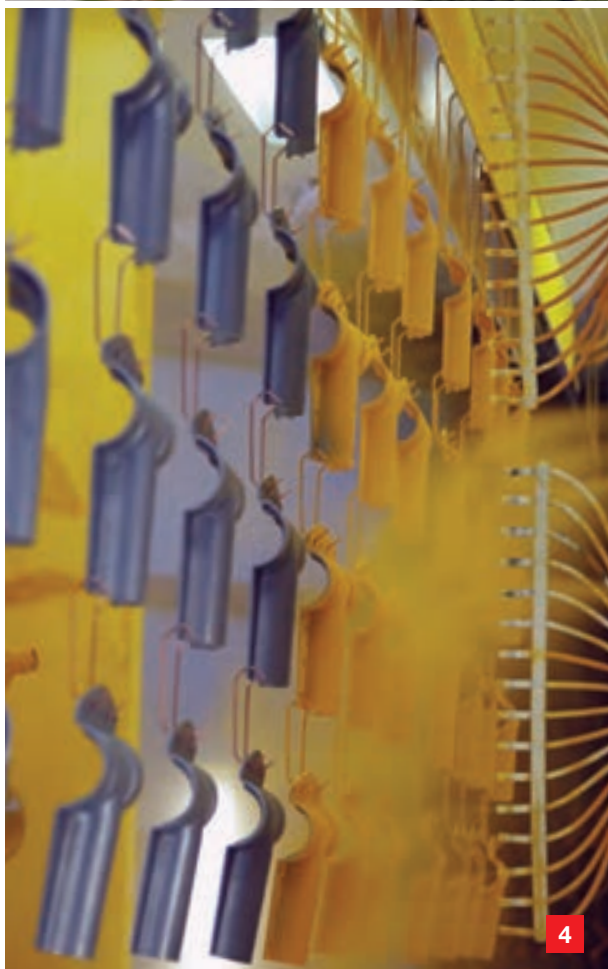
Equipment

		M6W plus	M3W plus	M2W plus	M2W base	L2W plus	M3 plus	M2 plus	M2 base	L2 plus	L1 plus	L1 base
Options	Photo											
Headland spreading to border (manual operation)		☐	☐	☐	☐	☐	■	■	■	■	■	■
Headland spreading from border (manual operation)		☐	☐	☐	☐	☐	☐	☐	☐	☐	■	■
Headland spreading to/from border (manual operation)		☐	☐	☐	☐	☐	☐	☐	☐	☐	■	■
Cable remote control for headland spreading	21	-	-	-	-	☐	☐	☐	☐	☐	☐	☐
Headland spreading to border (electrical remote control)		■	■	■	■	☐	☐	☐	☐	☐	☐	☐
Headland spreading (electrical remote control)		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Headland spreading to/from border (electrical remote control)		☐	☐	☐	☐	☐	☐	☐	☐	☐	-	-
Pto excl. overrun clutch		-	-	-	-	■	-	-	-	■	■	■
Pto incl. overrun clutch		■	■	■	■	☐	■	■	■	☐	☐	☐
Water resistant slip clutch		■	■	■	■	■	■	■	■	■	■	■
Sieves	23	■	■	■	■	■	■	■	■	■	■	■
Late application attachment	13	■	■	■	■	☐	■	■	■	☐	-	-
Degreemeter for working width adjustment		■	■	■	■	■	■	■	■	■	■	■
Mudguards		■	■	■	■	■	■	■	■	■	■	■
Reduction outlet for slug pellets etc	20	■	■	■	■	☐	■	■	■	☐	☐	☐
Reduction outlet for small amounts of fertiliser	14	-	-	-	-	■	-	-	-	■	■	■
Section Control Dynamic	28	☐	☐	☐	☐	-	☐	☐	☐	-	-	-
Section Control Standard		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
iZURF communication module	27	☐	☐	☐	☐	☐	-	-	-	-	-	-
Rear lights in stainless steel housing	12	■	■	■	■	☐	■	■	■	☐	☐	☐
Safety guard EN14017		■	■	■	■	■	■	■	■	■	■	■
Hopper cover, foldable with full opening	1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Storage wheels	3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ladder, foldable	4	■	■	☐	☐	☐	■	☐	☐	☐	-	-
Sieve, top mounted covering the full hopper area	6	☐	☐	☐	-	-	☐	☐	-	-	-	-
Extra wide guards, for use with twin or wide flotation wheels	5	■	■	☐	☐	■	■	☐	☐	☐	-	-
Reduction gear, 1000/540 og 540/540 rpm incl. storage wheels	7	-	☐	☐	☐	-	☐	☐	☐	-	-	-
Hydraulic motor, spreading discs driven by hydraulic	8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Flow control, for tractors without adjustment of oil flow	9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Reflector board	10	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Overrun clutch for pto		■	■	■	■	☐	■	■	■	☐	☐	☐
Bracket for reflector board		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Row equipment, 2-rows	19	-	-	-	-	-	-	-	-	-	☐	☐
Outer link pins Ø37	26	-	☐	-	-	-	☐	-	-	-	-	-
Adapter for mounting in cat. 4N lift	2	☐	-	-	-	-	-	-	-	-	-	-
Link pin extension, 100 mm cat I and II (max. 1.200 kg)	18	-	-	-	-	-	-	-	-	-	☐	☐
Link pins cat. I (max. 1.200 kg)	17	-	-	-	-	-	-	-	-	-	☐	☐
Connection system +/- 40%, for high/low quantities	11	☐	☐	☐	☐	-	☐	☐	☐	-	-	-
Agitator for grass seed	22	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Test Kit for fertiliser analysis, incl. D-indicator og F-indicator	30	■	■	■	■	■	☐	☐	☐	☐	☐	☐
Speed cable, 7 pin ISO11786	25	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Speed sensor, inductive for CALIBRATOR	29	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Pilot counter valæve, prevent oil-leak off from hydr. remote	24	-	-	-	-	-	☐	☐	☐	☐	☐	☐
Calibration kit, L2	15	-	-	-	-	☐	-	-	-	☐	-	-
Calibration kit, L1	16	-	-	-	-	-	-	-	-	-	☐	☐

■ Standard

☐ Option

- Not available



The company behind the world's best fertiliser spreader

BOGBALLE is one of the worlds leading manufacturers of fertiliser spreaders. 365 days a year we work on developing technique for spreading of mineral fertilisers - a technique that through generations has been a passion.

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.

-
- 1 BOGBALLE A/S
 - 2 Quality control of CALIBRATOR ZURF
 - 3 Programming of welding robot
 - 4 Powder paint
 - 5 Press brake robot



Dealer:



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