

# **S-line Operator's Manual**

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**NB. Fitting instructions for different optional equipment  
– are supplied with the optional equipment!**

## **SPECIAL ATTENTION PLEASE!**

***In order to avoid that the material 'compress' with the risk of blocking the agitator and outlet follow these rules:***

- ***Always fill in the material cautiously – in a steady flow!***
- ***Never put pressure on the material during/after filling!***
- ***Avoid to "compact" the material when driving for a longer period of time!***
- ***When the shutter/outlet is closed the spreading disc / agitator should not rotate!***
- ***NEVER leave the spreader with material in the hopper!***

# MAIN SETTINGS

PTO- speed	400	RPM.
TILT-angle	Mounted Horizontal	
WORKING HEIGHT from ground to disc	60	CM
QUANTITY SETTING	See chart	G/M <sup>2</sup>
VANE POSITION	See chart	
LIMITER f/ SPREAD WIDTH	See chart	

## Spread Chart

PTO: 400 rpm

18-09-2007

Vane type      Speed      Agitator Type

Spread width      2 - 905

Material

Scale setting

Gr/m <sup>2</sup>	Km/h				Kg/min	Vane setting
	5	10	15	20		
1,00	0	0	0	0	0,0	- - -
1,50	7	3	2	2	1,1	3 - 3 - 3 - 3
2,00	36	18	12	9	6,0	3 - 3 - 3 - 3
2,50	92	46	31	23	15,3	3 - 3 - 3 - 3
3,00	145	73	48	36	24,2	3 - 3 - 3 - 3
3,50	181	90	60	45	30,2	3 - 3 - 3 - 3
4,00	223	111	74	56	37,1	2 - 2 - 2 - 2
4,50	277	138	92	69	46,1	2 - 2 - 2 - 2
5,00	351	176	117	88	58,5	2 - 2 - 2 - 2
5,50	416	208	139	104	69,3	2 - 2 - 2 - 2
6,00	452	226	151	113	75,3	2 - 2 - 2 - 2
6,50	470	235	157	118	78,4	1 - 2 - 1 - 2
7,00	0	0	0	0	0,0	1 - 2 - 1 - 2
7,50						
8,00						
8,50						
9,00						

Material Factor

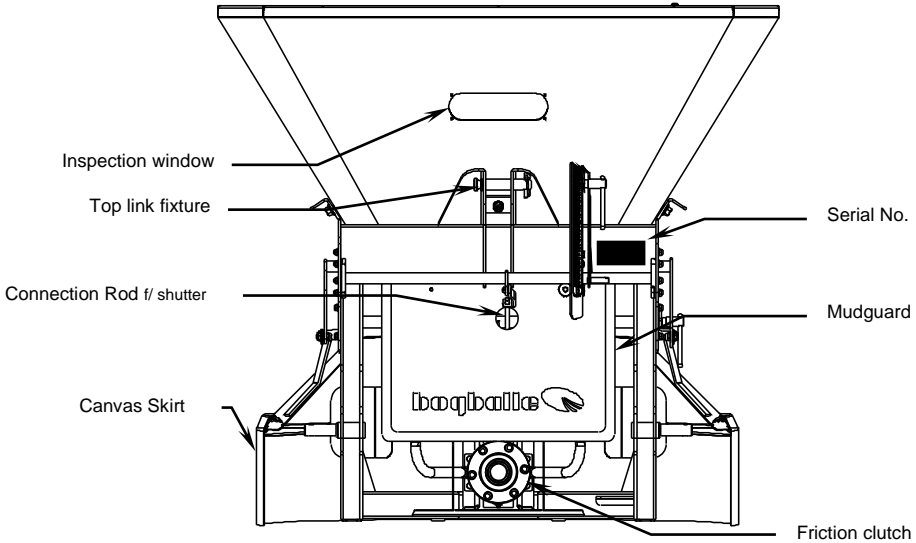
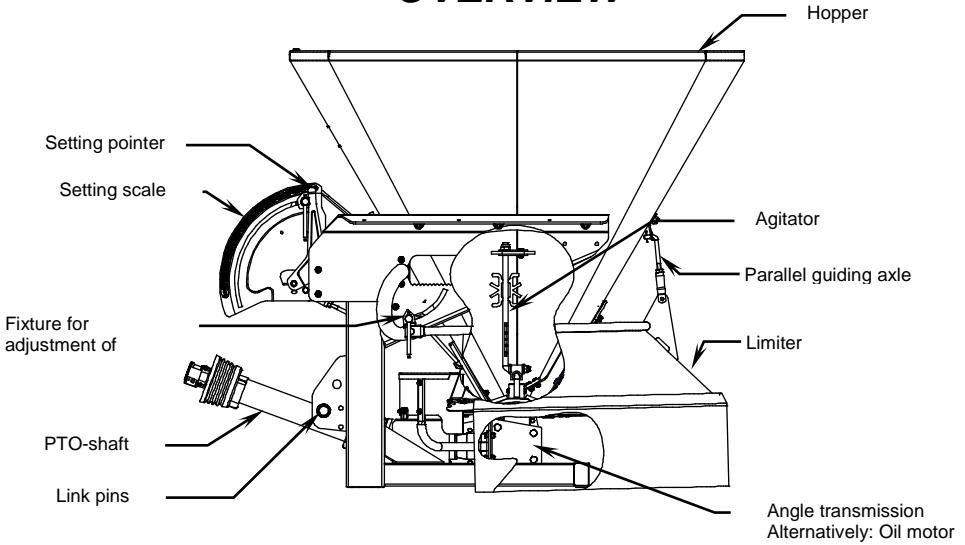
Setting of limiter

Quantity G/m<sup>2</sup>

## Example

- Spread Width : 2 Meter
- Speed : 15 Km/H
- Quantity : 31 G/M<sup>2</sup>
- Scale : 2,50**
- Vane Setting : All 4 vanes are set in position 2
- Limiter : Minimum ↓

# OVERVIEW



## PRACTICAL USE

- When driving with a full hopper it's **NOT** recommended to drive on an uneven surface for a longer period of time – this might cause the material to compact.
- The tractor's stabilization chains must be tightened in order to prevent the spreader from swinging from side to side while driving.
- When the shutter/outlet is closed the spreading disc should not rotate for a longer period of time. The material will compress and cause heat development and crushing of the agitator. The agitator can be damaged and involve overheat and damage of the friction clutch.
- When filling the hopper the material has to be filled in cautiously in a steady flow. Don't let the material fall in *at once* and from too high a position. Never put pressure on the material by pressing the material into the hopper with a mechanical/hydraulic shovel.
- Never leave the spreader with material in the hopper. Not even overnight!  
For example, road salt, which is hygroscopic, can by exposure to air of varying humidity form a coherent mass / lump which might block the outlet of the machine and prevent the agitator from rotating with possibly defective slip clutch or lack of power from the oil motor to follow.  
At a humidity of more than 75% a salt solution is formed on the salt crystals. If the humidity is reduced again, the water evaporates and the salt re-crystallize resulting in the formation of a coherent mass / lump.

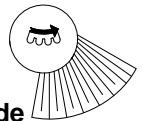
### VANE POSITION

The spread chart states the setting of the vanes, i.e.:

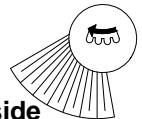
1,2,3,4 – or a combination.

Setting / position of the vanes is decisive for the distribution of the material. Basically the vanes are set according to the spread chart, but in case the material does not have the wanted distribution from side to side it can be necessary to adjust the spread pattern by adjustment of the vane position.

- **If the vanes are adjusted against the running direction (Higher figure), the quantity is increased to the spreader's right side**



- **If the vanes are adjusted in the in the running direction (Lower figure), the quantity is increased to the spreader's left side**



- In order to ensure an even distribution of the material it is often an advantage to set the vanes in two different positions, for instance 2-3-2-3.  
This should be done in such a way that the two vanes placed opposite to each other are set in the same position.

- The spreading vanes are set by loosening the vane bolts and then place and fix the vane in the requested position.

In case the material is supposed to be distributed even more to the left side of the spreader, the vane's inner fixture can be moved to track B.



**PTO-RPMs**

The spread chart states the PTO speed:

The PTO revolutions per minute are decisive for the spread width and are also of importance for the distribution of the material.

If the PTO revolutions per minute are lower than the stated number of revolutions – the spread width will be reduced and the sidewise distribution will at the same time be increased to the right of the machine.

The operation of the agitator is directly depending on the number of revolutions of the PTO. At a low revolution figure the operation of the agitator will be reduced – at a too high revolution figure the agitator will be under too high pressure, which involves increased wear and possible defect.

The stated PTO speed MUST be respected.

**LIMITER**

The spread chart states the respective settings of the limiter:

<b>Minimum</b>	: ↓	Minimum spread width approx. 1 metre – skirt mounted.
<b>Middle</b>	: †	Middle position marked at lock for adjustment of the limiter.
<b>Maximum</b>	: ↑	Max spread width with limiter in upper position.
<b>Limiter demounted</b>	: ÷	limiter is demounted when spreading for instance mineral fertiliser.

The setting / position of the limiter is decisive for the spread width and can be steeples adjusted until the required spread width is reached.

## AGITATOR

When driven by PTO the rotation has to be started slowly with the tractor idling.

As standard the spreader is delivered with agitator for humid SAND and SALT (Agitator with rubber disc).

The operation of the agitator is decisive for ensuring a constant and uniform material flow.

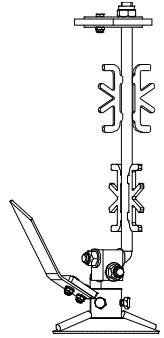
Material for slippery roads is often difficult to handle because the material can compress and build bridges with no flow as result. See the paragraph: "*Special attention please*"

The agitator is a wear part that must be checked now and then. Wear will influence the efficiency of the agitator resulting in smaller and at last no flow.

The primary wear parts are exchangeable and made of hardened steel.

Pay attention to the fact that severe wear of the universal joint may cause locking of the joint with overheat and defect friction clutch in the transmission as consequence.

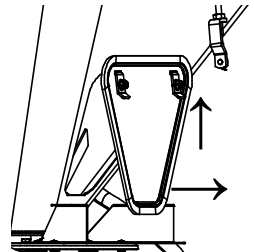
- When spreading very rough material / small crushed stones or mineral fertiliser the special free wheeling agitator is used (optional equipment).
- When spreading dry smooth-running materials - for instance dry salt or urea the special free wheeling agitator is also used.
  - Alternatively the standard agitator's axle is dismantled (agitator axle with rubber disc) in a way that only the lower ejector part is used. This solution might induce crushing/grinding of the material.




## SERVICE WINDOW, S3


As an example the hopper's service window can be used when servicing the spreader's agitator.


The tractor's motor always has to be stopped when the service window is open!

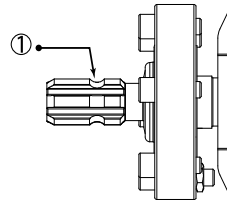



## CHECK OF SPREADER - before use

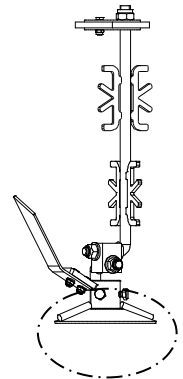
 The adjustment and closing shutters must be easy to move. Never use force. If the system is not easy to move – the reason is often lack of lubrication of the setting system's moving part or desiccated material remains.

- 
- The spreading discs must turn easily when the PTO is not mounted. Alternatively when using oil motor with open flow.
  - The spreading vanes must be intact and correctly fixed.
  - The PTO shaft must be of correct length, with suitable overlap of the axle ends (min. 50 mm.). If the overlap is too long or too short it will result in a serious damage of the transmission axle.**
  - DO NOT lift the spreader higher than working height (60 CM).

 If the shaft is not of correct length – and if the transmission is damaged, it will clearly appear from "press marks ①" on the splined axle. If the axle is pressed, metal fatigue might cause damage after a period of usage. Such damage is of course not under warranty!



 The lower part of the agitator is equipped with a sealing – the distance between the sealing and the bottom of the hopper has to be approx. 0,5 mm. If the distance is larger the agitator/sealing has to be adjusted to prevent leakage when spreading fine materials. The adjustment is done via the agitator's two pointed screws.



 **Check that all the bolts are tightened – especially the bolts securing the spreader's hopper!**



## TECHNICAL SPECIFICATIONS, general

• Hopper volume	:	<b>S2</b>	<b>S3</b>	
• Hopper capacity	:	130, 240, 350	500, 775, 1.050	Litres
• Spread width	:	Max. 600	Max. 1.600	Kg.
• Spreading capacity	:	2 – 8	2 – 8	Metres
• 3-point linkage	:	Ca. 5 – 350	App. 5 – 350	G/M <sup>2</sup>
•		Kat. I/II / ISO 730/I	Kat. II / ISO 730/I	

### S2 / S3 hydra w/ Oil Motor

• Oil pressure	:	Min. 120	Min. 140	Bar
		Max. 140	Max. 175	
• Oil Flow	:	Min. 20	Min. 32	L/Min.
		Max. 90	Max. 40	

## TECHNICAL SPECIFICATIONS, specific

SPECIFICATIONS		S2, 130 l	S2, 240 l	S2, 350 l	S3, 500 l	S3, 775 l	S3, 1.050
Load height	CM	77	96	115	115	133	152
Hopper volume	Litres	130	240	350	500	775	1.050
Hopper capacity, Max.	KG	175	325	470	675	1.045	1.600
Fill opening	CM	70 x 74	70 x 74	70 x 74	114 x 119	114 x 119	114 x 119
Net weight	KG	118	130	142	166	189	212
Total weight	KG	275	437	594	841	1.234	1.812

The hopper capacity is made from hopper volume in litres multiplied with a specific weight of ~ 1,35 Kg/litres.

## STANDARD EQUIPMENT

The S3 is from the factory supplied with the following standard equipment.

- PTO Shaft / alternatively w/ oil motor
- Agitator f/ Salt and Sand (w/ rubber disc)
- Pressure Compensator for protection of agitator
- Transmission, with friction / overload clutch (not w/ oil motor)
- Spreading vanes
- Limiter with skirt
- Sieve, mesh size 5 x 5 cm

## OPTIONAL EQUIPMENT

A line of useful optional equipment can be supplied – as mentioned below:

COMPONENT	DESCRIPTION	DIMENSION	
Module S2	110 Litres	76 x 80	CM
Hopper Cover S2	Foldable	76 x 80	CM
Module S3	275 Litres	120 x 125	CM
Hopper Cover S3	Foldable	120 x 125	CM
Extension Handle	Manual Control		
Remote Control of Quantity	Cable		
Remote Control of Quantity	Hydraulic		
Remote Control of Quantity	Electric motor, actuator		
Remote Control of Spread Width	Electric motor, actuator		
CALIBRATOR ICON	Ground Speed Related Quantity / Working Width		
Traffic Lights			
Special Agitator for Rough Material			

All BOGBALLE products are subject to a continuous development. Therefore, the list might not always be up-to-date.

## MAINTENANCE AND CARE

### NORMAL MAINTENANCE

The BOGBALLE machine is manufactured in such a way that it requires a minimum of maintenance.

In the construction it is considered that cleaning and lubrication can be completed quickly and thoroughly – without taking apart the machine.

The surface treatment consists of a robust FlexiCoat powder paint – in addition all essential wear parts and bolt assembling are made of stainless steel.

Many of the machine's components are greased once and need no extra maintenance, for instance the central and angle gears of the transmission.

### **The maintenance mentioned below is absolutely necessary!**

*"If the machine is maintained – it will still be new - in 5 years!"*

*"If the machine is not maintained – it will be old – next year!"*



The machine must always be thoroughly cleaned after use. The cleaning should be done with water perhaps including soap. When using a high-pressure cleaner only use low pressure and do not clean direct on the axle seals of the transmission and the oil motor.

Do not use grease-removing cleaning liquid – without giving the machine – right after drying – an application of anti corrosion oil.



It is strongly recommended to grease the machine in a corrosion protective liquid (for instance oil)– BEFORE using it first time.



- **Without protection, rust might arise within a few hours in areas, where the paint has been damaged – salt is very corrosive.**
- **THEREFORE – generally the machine must be greased daily in a corrosion protective liquid – when used.**
- **The machine must also be greased before storing.**



Please consider that cleaning products and corrosion protecting liquids might include dissolvent that might dissolve the glue fixing the transfers.

### ***PROTECTION, Friction clutch***



The transmission of the machine is equipped with friction / overload clutch.



The friction clutch is a *most important component protecting against overload* – and a *damaged transmission and agitator*.



The friction clutch must "slip" at START of the tractor PTO.  
If the clutch does not slip – the transmission will be damaged.

**The friction clutch is in principle maintenance free, but minimum once a year the torque must be checked – to make sure that the torque is between 240 – 300 Nm.**

**If the torque exceeds those limits, dismantle and clean the clutch components as corrosion or wear might be the reason.**

**After mantling the clutch, check that the torque limits are within the mentioned torque limits.**



The friction clutch "slips" approx. 1-2 turns at START of the tractor PTO. This reduces the load on the components of the transmission to approx. 1/10 of the load to which the transmission is exposed, if the coupling is not able to "slip".



***It is always necessary to START the tractor PTO  
"slowly / smoothly"!***

## LUBRICATION



The components below **must** be greased according to below instruction.

See the explaining sketch in the paragraph "OVERVIEW".

### LUBRICATION ONCE A DAY:

COMPONENT	INSTRUCTION
Cardan joint and lock of the PTO	Use grease
Telescope axles of the PTO	Use grease
Setting and closing shutter (Bottom of hopper)	Use grease

### PARTS GREASED ONCE:



The angle gear is filled with special grease and needs no lubrication.

## GENERALLY



A new machine will always "move" a little bit in all nuts + bolts.

**Therefore, all the machine's nuts and bolts must be retightened - first time it is put into operation – after 3 to 5 hours operation.**

*Exception is the angle gear's bolts – these are locked and sealed with Loctite.*

**Special attention is needed towards the spreader's 6 M12 bolts tightening the hopper – these are tightened with a 90 Nm torque.**



*Be aware that stainless nuts + bolts might "weld together". When mounting such bolts – the thread must be greased with cutting lubricant or copper grease!*

## SPREADING VANES



The vanes will be worn due to the material. Therefore, the vanes are to be considered a wearing part – that must be exchanged dependent on the quantity and type of material.

**Always clean the contact surfaces of the vanes and the spreading disc for dust etc – before mounting and tightening the vane!**

IF HOLES ARE WORN IN THE VANES THEY MUST BE EXCHANGED AT ONCE!

## **GUARANTEE / RESPONSIBILITY**

- Claim conditions are according to Danish legislation. Service and repair are made free of cost within 12 months from date of purchase on the following conditions:
  - That the failure is due to construction or material faults (Normal wear, missing maintenance and misuse not included).
  - That the failure is not due to not original components / equipments.
  - That persons with no technical knowledge to the machine have not tried to repair.
  - Compensation for person or crop injury does not fall on the supplier.

## **GENERALLY**

This machine is intended for spreading sand, salt, urea and the like on icy roads and in special cases fertilisers.

Spreading of other flowing materials might also be possible. If so we draw the attention to data list of the material concerned in order to determine possible safety or health measures to be taken to minimize any risks.

If the machine is used for spreading material which is not defined in the spread charts for the spreader, the manufacturer of the machine can never be held responsible.

## **SAFETY and PROTECTION**

The transmission system of the machine:

PTO shaft, friction clutch and spreading discs w/ vanes – must be considered *“as dangerous”*, and absolute care must be taken with these machine parts, especially in connection with rotation of the tractor PTO system.

**DO NOT LEAVE THE TRACTOR CABIN – WITHOUT STOPPING THE PTO SYSTEM OF THE TRACTOR!**

- **Never go behind the machine – with rotating spreading discs.**
- **Never clean the machine - with rotating spreading discs.**
- **Never put hand/object into the hopper – with rotating spreading discs.**
- **Always check that the spreading vanes are correctly fixed.**
- **Check that the protection tubes of the PTO are intact.**
- **Check that the security chain of the PTO is fixed.**
- **Check that top link and top link pins are intact and secured by lynch pin.**

## Using the Calibration Kit

Limiter and canvas skirt is used as calibration kit.

Put the limiter in the lowest position with the canvas skirt mounted.

The calibration kit is used for stationary calibration, so that the machine is adjusted precisely in comparison to the nature of the material in question.

There may be big differences in the material dependent on temperature, humidity and other climate factors.

Be aware that the nature of the material may vary from supply to supply. It is therefore recommended to make a calibration test for each new supply.

Is the hopper wet on the inside, the humidity will prevent the fertiliser from falling down. In such cases minimum 3 calibrations must be made – where the last calibration quantity is valid.

The calibration kit is also used if the material is not found in the spread chart.

### PROCEDURE:

1. The scale stop is fixed at 4,5 on the spreader's scale
2. Let the PTO-shaft rotate at 400 rpm.  
(The materials flow is dependent on the PTO rotations)
3. A calibration test is performed for exactly 30 sec.  
(The spreader's outlet is opened for 30 sec.).
4. The calibration value is weighed
5. The fertiliser's Flow Factor is calculated cf. the below formula:

$$\frac{\text{Quantity [g/m}^2\text{]} \times \text{Spread width [M]} \times \text{Speed [Km/h]} \times 20}{\text{Calibration value [Kg/}_{30\text{ sec.}]}}$$

6. In the Flow Factor list on the next page you can find the Flow Factor closest to the *calculated* Flow Factor – read off the scale figure or use the Flow Factor directly and adjust the spreader's scale.

### Symbol explanation:

[Kg/Ha] : The wanted quantity

[M] : Spread width

[Km/h] : Speed



: Calibration value after 30 sec. at scale figure 4,5



: Scale 0-9, Flow Factor 645-6575

## Flow Factor Calculation

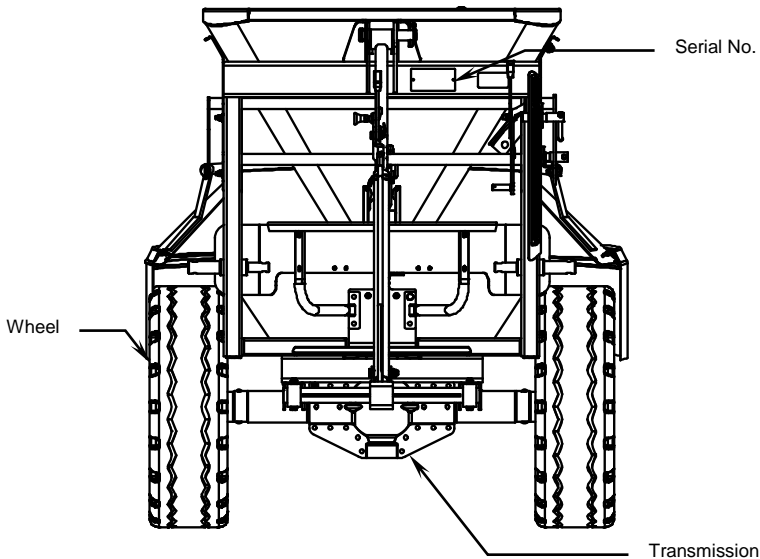
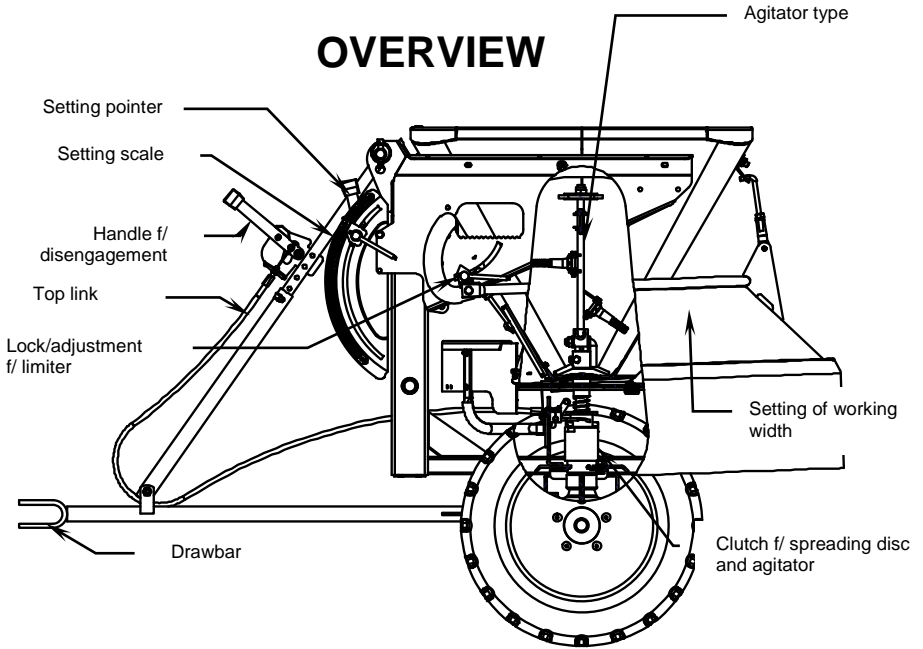
 4,5	▶ <b>PTO</b> ▶ 400 rpm	 30 sec.	$\frac{[\text{g/m}^2] \times [\text{M}] \times [\text{Km/h}] \times 20}{[\text{Kg}]} = \text{Flow Factor}$
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	[g/m <sup>2</sup> ]	X	[M]	X	[Km/t]	/	Kg	=	Flow Factor	
Rough Road Salt	21	X	6	X	15	/	15	=	2520	▶ 4,3
			X	X		/		=		▶
			X	X		/		=		▶
			X	X		/		=		▶
			X	X		/		=		▶
			X	X		/		=		▶
			X	X		/		=		▶
			X	X		/		=		▶
			X	X		/		=		▶
			X	X		/		=		▶
			X	X		/		=		▶

<b>F</b>	<b>0,0</b>	1380	<b>3,0</b>	4080	<b>6,0</b>		
	0,1	1470	3,1	4170	6,1		
	0,2	1560	3,2	4260	6,2		
	0,3	1650	3,3	4350	6,3		
	0,4	1740	3,4	4440	6,4		
	0,5	1830	3,5	4530	6,5		
	0,6	1920	3,6	4620	6,6		
	0,7	2010	3,7	4710	6,7		
	0,8	2100	3,8	4800	6,8		
	0,9	2190	3,9	4890	6,9		
	1,0	2280	4,0	4980	7,0		
	1,1	2370	4,1	5065	7,1		
	1,2	2460	4,2	5150	7,2		
	1,3	2550	▶ 4,3	5235	7,3		
	1,4	2640	4,4	5320	7,4		
	1,5	2730	4,5	5405	7,5		
	1,6	2820	4,6	5490	7,6		
	1,7	2910	4,7	5575	7,7		
	1,8	3000	4,8	5655	7,8		
	1,9	3090	4,9	5735	7,9		
645	2,0	3180	5,0	5815	8,0		
715	2,1	3270	5,1	5895	8,1		
785	2,2	3360	5,2	5975	8,2		
855	2,3	3450	5,3	6050	8,3		
930	2,4	3540	5,4	6125	8,4		
1005	2,5	3630	5,5	6200	8,5		
1080	2,6	3720	5,6	6275	8,6		
1155	2,7	3810	5,7	6350	8,7		
1230	2,8	3900	5,8	6425	8,8		
1305	2,9	3990	5,9	6500	8,9		

# S2-Trail

## OVERVIEW





## PRACTICAL USE

When setting the spreading system of the machine, say vane setting, PTO speed and limiter, see the paragraph 'PRACTICAL USE' S2 / S3.

S2 Trail reaches its maximum spread width at 16 Km/h – corresponding to 400 rpms/min. on the spreading disc of the machine. It's not recommended to go faster than 16 Km/h when spreading as it'll reduce the agitator's functionality and service life.

- Mount the spreader in the draw bar of the pulling vehicle.
  - The top link of the machine is adjusted in such a way that the spreading disc is horizontal.
  - Check that the spreading disc is running easily and that shutter and setting handle are easy to move.
  - Take away hard lumps and especially stones.
- When driving with a full hopper it is NOT recommended to drive on an uneven surface for a longer period of time – this might cause the material to compact.
- Agitator and spreading disc must be disengaged if more than 100 m are driven with closed shutter (Avoid if possible that agitator and spreading disc are rotating when the shutter is closed)
  - Spreading disc and agitator can with advantage be disengaged instead of closing the shutter – as most types of material stay in the hopper when the agitator do not rotate.

## AGITATOR

- **Agitator and spreading disc are engaged when the spreader is stopped.**
- The spreader is standard supplied with agitator for humit SAND and SALT (Agitator with rubber disc and rubber fingers).
- When spreading very rough material / small crushed stones the free wheeling agitator is used (Optional equipment).
- When spreading dry smooth-running materials – for instance dry salt or urea the special free wheeling agitator is also used.
  - Alternatively the standard agitator's axle is dismantled (agitator axle with rubber disc) in a way that only the lower ejector part is used. This solution might induce crushing/grinding of the material.



## Wheel slip

The S2 Trail spreading system is operated by the left wheel of the spreader. In case the ground is icy and the spreading material is compact – wheel slip may arise. (The wheel slides on the ground.)

In such cases the following check and changes are recommended:

- It must be ensured that no bigger foreign objects in the hopper are causing blocking of the agitator.
- Open the setting handle 100% (scale 9,0) so that possible compacted material is loosened when driving.
- Reduce the air pressure in the pulling tyre for better road grip.
- Mounting of a Snow Sock on the pulling wheel (Snow Socks are optional equipment)
- Put spikes in the pulling wheel. (Spike tyre is optional equipment).
- Engagement of the spreading system can, if necessary, be made at low speed less than 5 km/h. Only recommended on icy roads.

**Do not mount snow chains**

## Forward speed for S2 Trail

The spreader should **not** drive more than **25 Km/h**.

**Transport only with disengaged spreading system / agitator.**

**Pay attention to the fact that the S2 trail may ‘tilt’ if the hopper is full and the machine is driving on a slope or in a sharp turn at speeds higher than 8 km/h.**

## TECHNICAL DATA, general

### S2 Trail

- Hopper volume : 130, 240, 350 Litres
- Hopper capacity : Max. 600 Kg.
- Spread width : 1 – 8 Meter
- Spreading capacity : Ca. 5 – 350 g/m<sup>2</sup>

## TECHNICAL DATA, specific

SPECIFIKATION		S2 Trail, 130 l	S2 Trail, 240 l	S2 Trail, 350 l
Load height	cm	115	133	152
Hopper volume	Litres	130	240	350
Hopper capacity, Max.	Kg	175	325	470
Hopper opening	cm	70 x 74	70 x 74	70 x 74
Net weight	Kg	150	162	174
Total weight	Kg	325	487	600

The hopper capacity is made from hopper volume in litres multiplied with a specific weight of ~ 1,35 Kg/litres.

## STANDARD EQUIPMENT

The S2 Trail is from the factory supplied with the following standard equipment.

- Agitator f/ Salt and f/ Sand (w/ rubber disc and rubber fingers)
- Transmission, with cable operation for disengagement of spreading disc.
- Spreading vanes
- Limiter w/ canvas skirt
- Sieve, mesh size 5 x 5 cm
- Manual setting of quantity

## OPTIONAL EQUIPMENT

A line of useful optional equipment can be supplied – as mentioned below:

COMPONENT	DESCRIPTION	DIMENSION	
Module S2	110 litres	76 x 80	Cm
Hopper cover S2	Tiltable	76 x 80	Cm
Cable control of quantity			
Remote control of quantity	Hydraulic		
Remote control of quantity	Electric motor, actuator		
Remote control of quantity	Electric motor, actuator		
CALIBRATOR ICON	Ground speed related quantity / working width		
Traffic lights			
Special agitator for rough material			
Spike tyre	Better friction on icy surfaces		
Snow Sock	Better friction on snow-covered surfaces		

All BOGBALLE products are subject to a continuous development. Therefore the list might not always be up-to-date.

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## **EC-Declaration of Conformity**

### **Manufacturer:**

**BOGBALLE A/S**  
**Bogballe · DK-7171 Uldum**  
**Phone +45 7589 3266 Fax +45 7589 3766**

### **Declares that machine:**

Sand and salt spreader:

**S2 / S3**

### **Is made in conformity with:**

*directive of 17<sup>th</sup> May 2006 conc. mutual approximation of the laws of the member states on machines (2006/42/EØF), with special reference to the enclosure II, A and enclosure I of the directive, conc. essential safety and health claims in connection with construction and manufacture of machines.*

### **International/national standards:**

DS/EN ISO 12100  
DS/EN ISO 13857 1<sup>st</sup> edition – 2008.03.26  
DS/EN 349  
ISO 500, 1<sup>st</sup> edition – 2004.02.01  
DS/EN ISO 4254-1 :2008  
DS/EN ISO 4254-8 :2018

### **When mounted with CALIBRATOR:**

#### **Is made in conformity with:**

*directive of 15<sup>th</sup> December 2004 conc. mutual approximation of the laws of the member states on electromagnetic compatibility (2004/108/EØF)*

### **International/national standards:**

DS/EN ISO 14982 :2009  
DS/EN 61000-6-3 :2007  
DS/EN 61000-6-4 :2007

Bogballe, 2018-08-27

  
Nils Jørgen Laursen

## PICTOGRAMS



Read Operator's Manual and safety rules before starting.



Staying under the machine is prohibited.



Safety distance for flying material must be observed.



Avoid contact with rotating parts.



Avoid contact as long as parts are moving.



Do not spray water in this area.

**< 70 dB (A)**

Noise level of the machine is below 70 dB (A)



1: YEAR / 2002

2: NET. Kg standard machine / Total: See manual

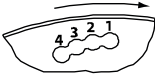
## SYMBOL EXPLANATION

**2-904**

2 is for **spreading width** and 904 is for **material**



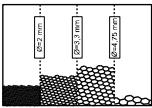
**Vane Type** (e.g. S3)



**Vane Settings** (e.g. 3-3-3-3)



**Quantity** (gr/m<sup>2</sup>)



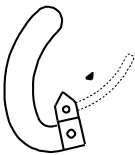
**Grain Size:**

Ø > 4,75 mm  
 4,75 mm > Ø > 3,30 mm  
 3,30 mm > Ø > 2,20 mm  
 Ø > 2,20 mm



**Density** (Kg/L)

**Limiter Settings:**



**Maximum** spread width



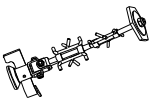
**Medium** spread width



**Minimum** spread width



**Dismount** limiter



**Agitator** (standard)



**Agitator** (optional)



