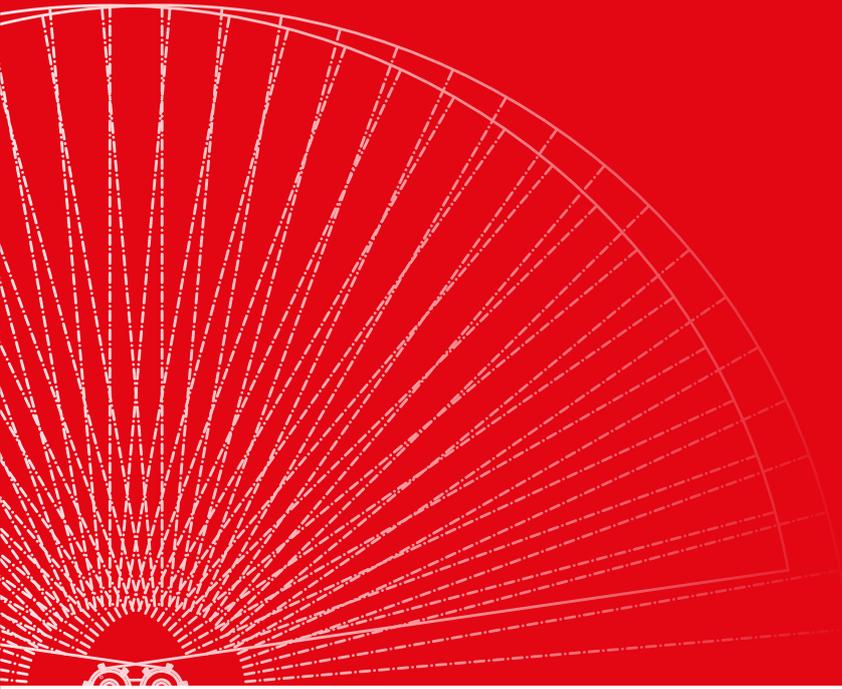




EN

# F2







## **CONTENTS**

F2.....	2
Construction.....	4
Bredal F2.....	9
Spreading of fertiliser.....	12
Headland spreading.....	13
Spreading tests.....	14
Standard equipment.....	16
Optional accessories.....	22
F2 technical specifications.....	26
Equipment overview.....	28
Dimensional sketches.....	29

## **F2 IS A LIFT-MOUNTED FERTILISER SPREADER FOR WORKING WIDTHS OF 12-36 M.**

F2 is a mechanically driven fertiliser spreader aimed at professional farming.

F2 is available as a lift-mounted spreader with a hopper capacity of 1500-4000 litres.





# **CONSTRUCTION**

Bredal spreaders have a robust construction and are designed for professional use. Every single component is sturdily constructed to maximise reliability, strength and service life.

## **> CONSTRUCTION**

F2 is designed to withstand the very heavy loads that can occur in the field.

Bredal always tests modifications and new designs meticulously before sending the products to market because, as experience shows, the machines are exposed to heavy loads under practical conditions. F2 is equipped with a very heavy-duty undercarriage.

Minimising daily maintenance is a high priority in the structural design of each spreader.

The spreader frame is a heavy-duty construction. Category 3 pegs are used for the tractor coupling.

The frame is built of thick sectional steel tubing and is reinforced at all heavily-loaded areas. The hopper is made of 3 mm steel plate. The spreader's sturdy construction gives it a very long service life.

The belt drive is constructed with a strong drive roller and front roller and maintenance-free bearing rails.

The vanes on the spreading discs are made of stainless steel and coated with a tungsten carbide wear layer to maximise service life.

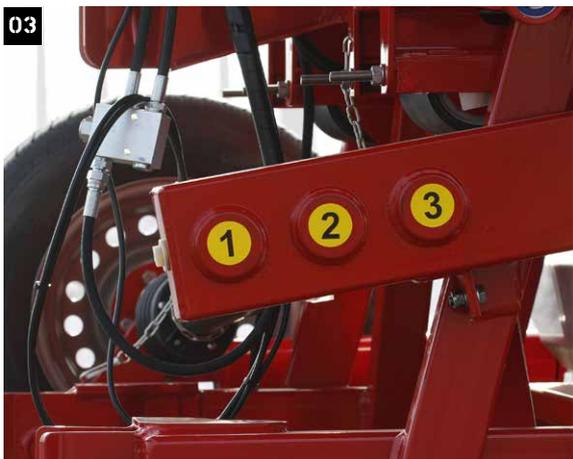
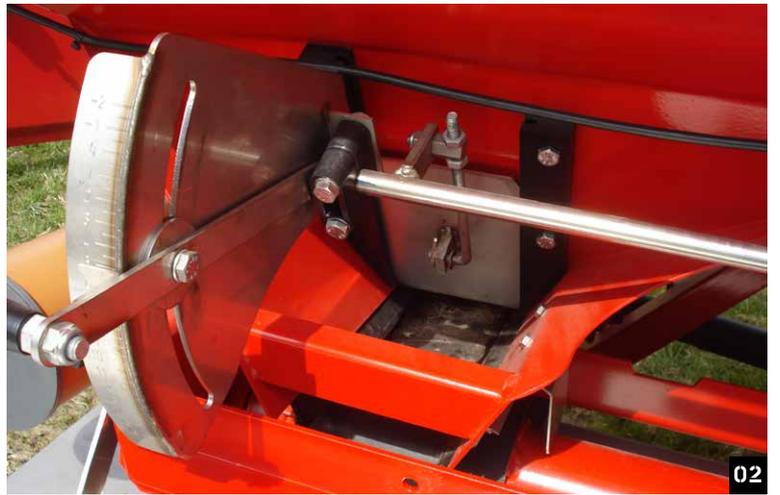
## **> POWDER COATING**

All painted components on Bredal spreaders are sprayed with two layers of powder coating, which gives a resilient surface, good anti-corrosive protection and a beautiful finish.

The spreaders are designed for a maximum service life, which is why high-quality surface treatment is essential.

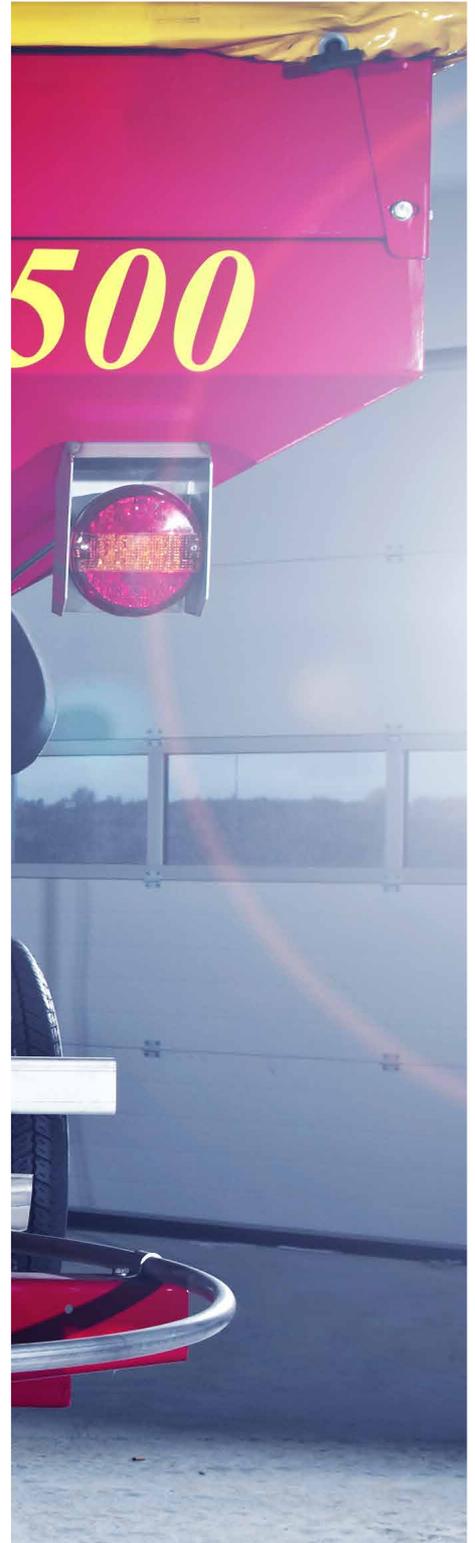
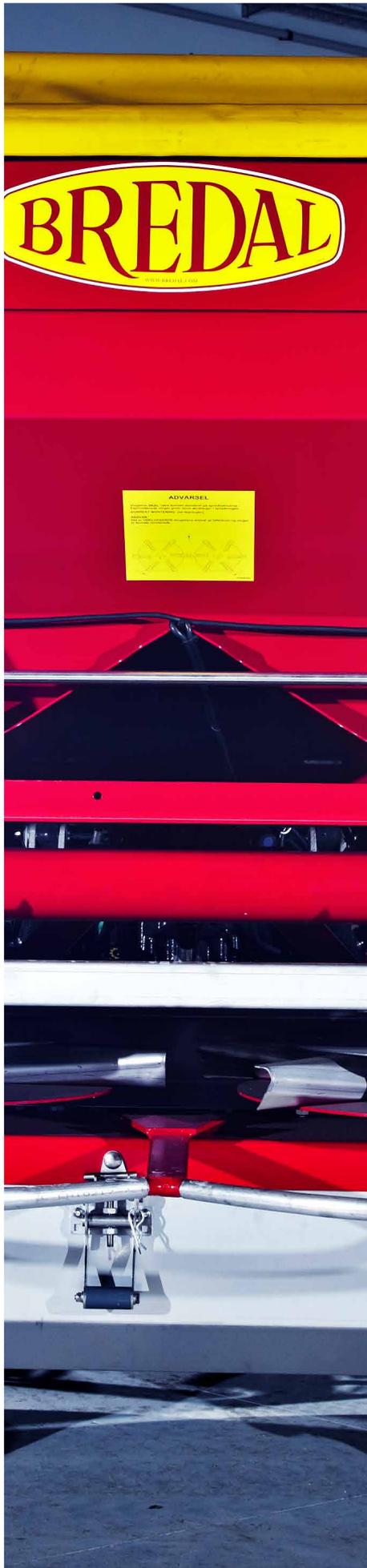
As a result of BREDAL heavily investing in this process, Bredal now has one of the biggest, most highly modernised powder-coating facilities in Denmark, where spreaders are first shot-blasted and then sprayed with two layers of powder coating.

The powder-coating system was specifically developed for harsh environments to provide an anti-corrosive, highly wear-resistant and uniform surface.



1 > LANDWHEEL DRIVE showing the mechanical landwheel drive 2 > REAR DOOR IN STAINLESS STEEL showing the rear door with handle and scale 3 > GEARS 4 > DOWNSHUTE 5 > BREDAL F2 2500





*The spreader and all components are sprayed with two layers of powder coating, which gives a resilient surface and a beautiful finish.*



1 > BREDAL F2 2 > BREDAL F2 hopper seen from above

## **BREDAL F2**

BREDAL's F2 model is a lift-mounted, mechanically driven fertiliser spreader

The F2 spreader uses simple and robust mechanically driven dosing as standard, which means in practice that dosing is constantly being adjusted automatically to the driving speed without the use of electronics.

This means that the tractor PTO should not be connected or disconnected when turning in the headland. Only the hydraulically operated dosing wheel should be activated, which significantly reduces wear on the tractor and spreader.

With standard working widths of 12–36 meters and hopper capacities from 1500 to 4000 litres, the standard version of F2 meets most needs.

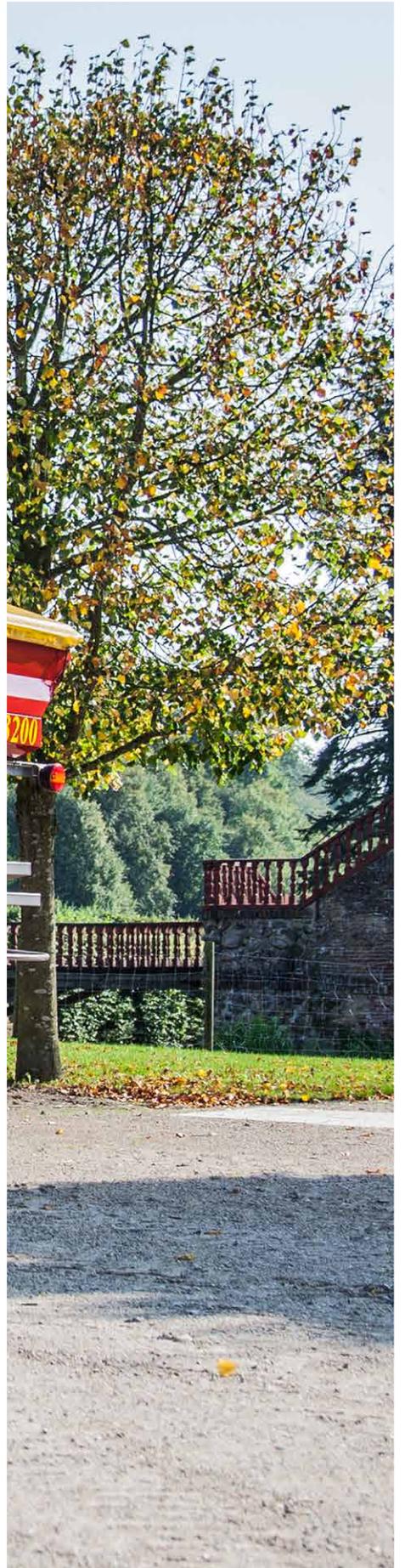
Simplicity is incorporated into F2. The spreading vanes do not need to be changed or adjusted no matter if you are spreading across 12 or 36 metres.

Dosing is performed by a belt, which means that there is only one spread chart for all fertilisers spread.

BREDAL's F2 is available with hoppers either painted red or stainless steel.

**F2 IS BREDAL'S WELL-KNOWN  
LIFT-MOUNTED FERTILISER  
SPREADER WITH A CAPACITY  
OF 1.5-4 M<sup>3</sup>.**





# SPREADING OF FERTILISER

F2 spreaders are designed to spread with high precision across wide working widths.

F2 spreads according to the quadruple overlap principle where each disc spreads across a double working width. This maximises the probability of achieving good spreading results at all times.

Bredal spreaders are designed to fling fertiliser particles at a high exit speed. The high speed, combined with a low exit angle (7 degrees), minimises sensitivity to wind in field conditions.

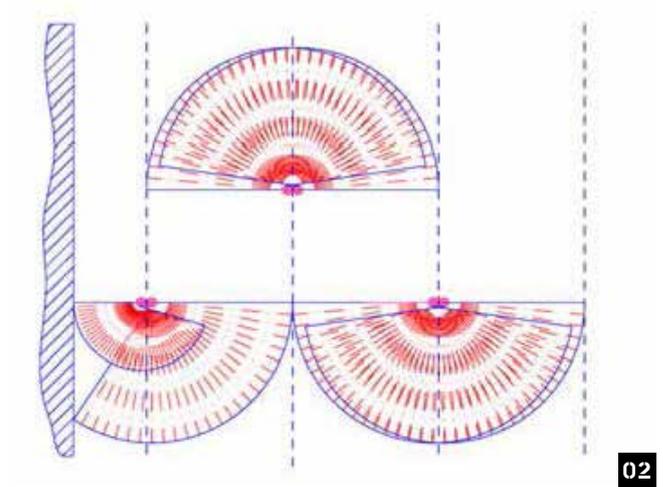
Fertiliser is fed to the centre of each disc without being hit by the vane, so the fertiliser particles start to accelerate even before they make contact with the vane. This reduces the risk of damaging the fertiliser during spreading.

The six vanes mounted on each disc ensure that the fertiliser is dispensed in small quantities, providing greater reliability in the spreading process.

The large diameter (ø72 cm) of the spreading discs ensures that the fertiliser particles accelerate to a very high speed before leaving the disc. At a speed of 1000 rpm, the fertiliser particles accelerate up to 250 km/h, which considerably reduces sensitivity to wind.

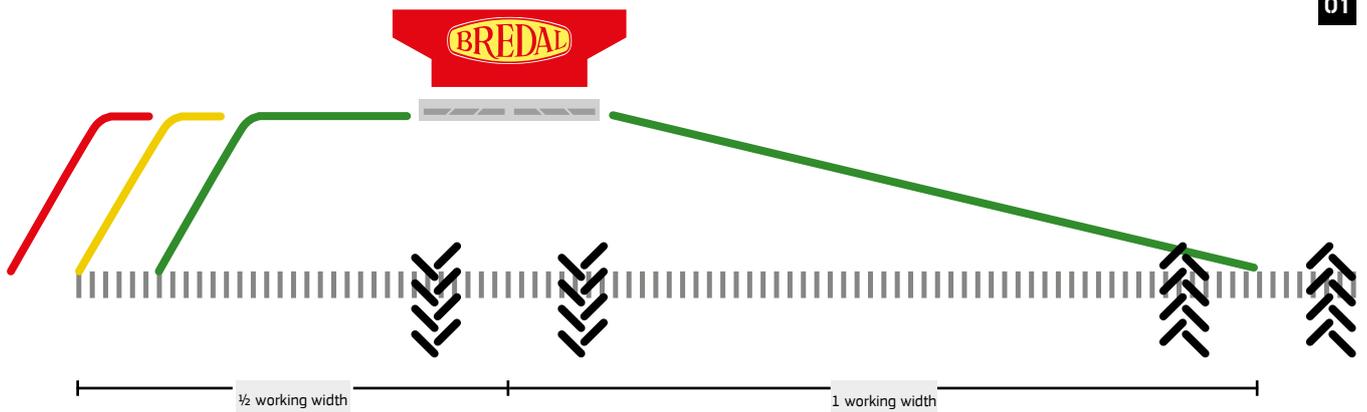
## > H DISCS

Bredal also offers specialised spreading discs for spreading fertilisers such as granular urea, potash and ammonium sulphate across working widths from 24 to 36 metres.



# HEADLAND SPREADING

01



02



Bredal's headland spreading system works by changing the rpm speed of only one disc, to reduce the working width towards a boundary. The disc spreading into the field continues to run at high speed, thereby ensuring double overlap into the field.

The Bredal headland spreading system properly delimits the spreading towards the field border, while maintaining the spreading patterns on the side facing the field. The headland gear is easy to operate.

Headland spreading is activated manually via the handle on the spread unit and by moving the two downshutes.

03



04



1 > HEADLAND SPREADING schematic drawing 2 > SPC 4500-1 HEADLAND GEAR close-up of the gearing itself 3 > HANDLE FOR MANUAL SHIFTING OF HEADLAND GEAR 4 > SETTING A DOWNSHUTE

# **SPREADING TESTS**

## **> TESTED SPREADERS**

All Bredal spreaders are tested regularly with a wide range of fertiliser types at the independent Research Centre Bygholm (under the Faculty of Agricultural Sciences at Aarhus University). Many tests are performed every day in a very realistic setting. The test results are based on weight-cell technology, i.e. on the amounts actually dispensed (collected in trays), not on theoretical calculations.

Bredal uses this test centre for the very reason that it conducts tests under conditions that closely resemble actual field conditions.

## **> BREDAL SPREADING PRINCIPLE**

Bredal spreaders use the quadruple overlap system. This means that both discs cover a double working width, i.e. when spreading with a working width of 24 metres, the left disc covers 24 metres on the left-hand side and 24 metres on the right. Thus a distributes fertiliser in four portions, ensuring highly accurate and uniform spreading results.

Bredal spreaders are designed to fling fertiliser particles at a high exit speed. The high speed, combined with a very low exit angle (7 degrees), minimises sensitivity to wind in field conditions.

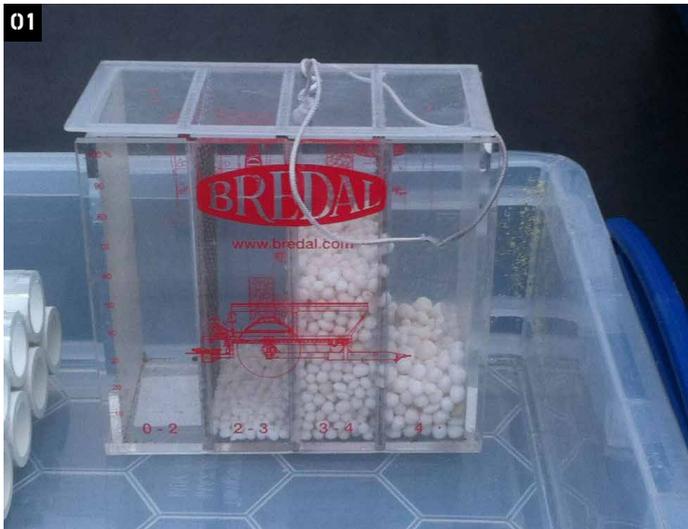
## **> BREDAL TEST KIT**

The Bredal Test Kit is used to perform practical spreading tests to

optimise spreading patterns. The Bredal Test Kit contains plastic trays (with dividers), measuring tubes with holder, a funnel, a crushing strength tester and a sieve shaker.

## **> SETTINGS**

Optimised spreading settings for various fertiliser types can be downloaded from the Bredal website.



**1 > A SIEVE SHAKER** to determine particle distribution **2 > CALIBRATION KIT** **3 > MEASURING TUBES** **4 > BREDAL TEST KIT** Test kit includes collector trays (with dividers), measuring tubes, a funnel, crushing-strength tester and a sieve shaker **5 > SPREADING TEST IN THE FIELD** with Bredal Test Kit (trays laid out on the field)

## STANDARD EQUIPMENT

### **STAINLESS STEEL HOPPER SCREEN >**

When spreading fertiliser, it is necessary to have a screen inside the hopper to prevent lumps of fertiliser falling down and blocking the opening to the rear door.

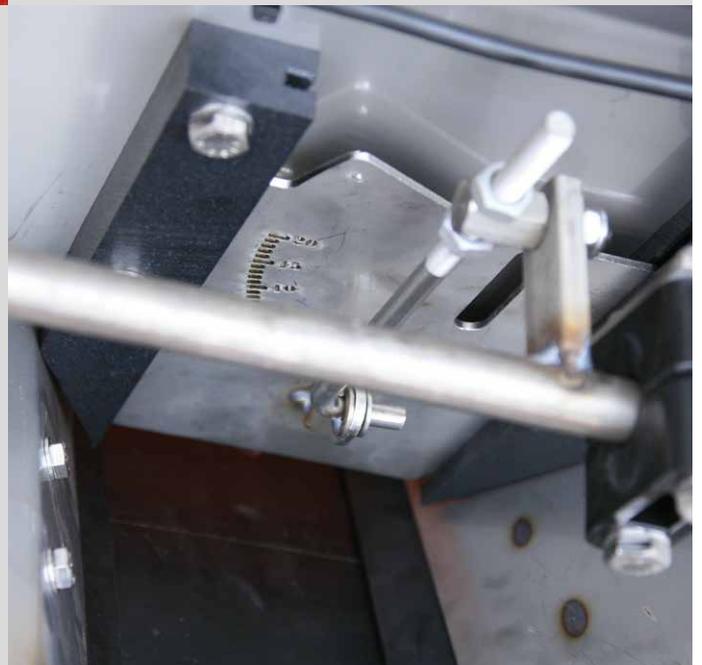


### **< CROSSBAR FOR HYDRAULIC HOSES**

All hydraulic hoses for connecting and disconnecting the landwheel drive are gathered at the front of the tractor, where a pilot controlled check valve is located. The check valve prevents accidental start of dosing.

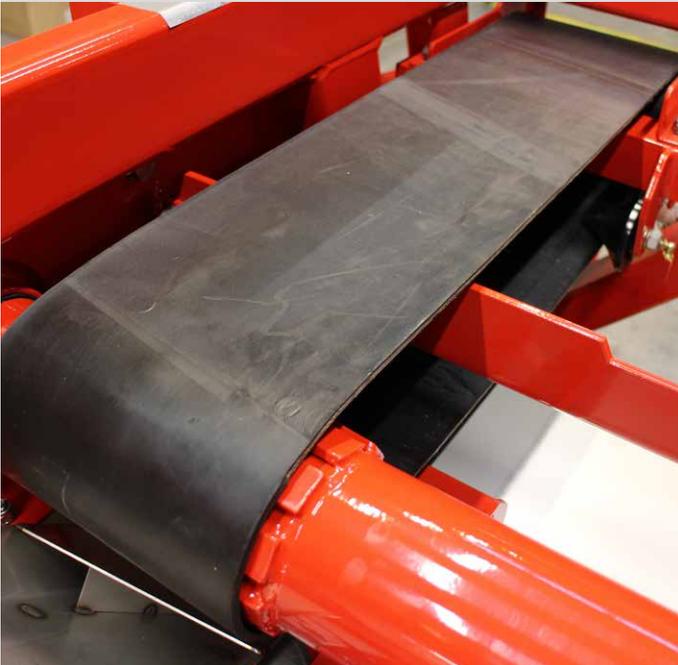
### **STAINLESS STEEL REAR DOORS >**

The rear doors are made of stainless steel, with nylon slide rails to maximise service life and minimise maintenance.



**WINDOWS >**

There is a window in the front of the hopper which makes it possible to monitor the hopper contents.



**< BELT DRIVE**

The belt drive is constructed with a strong drive roller and front roller and maintenance-free bearing rails.

**LED LIGHTS >**

Bredal spreaders are equipped with LED lights and side marker lamps.



## STANDARD EQUIPMENT

### **PTO >**

All spreaders come with a wide-angle 6z PTO shaft. Alternatively, 8z, 20z and 21z PTOs are available.



### **< MECHANICAL LANDWHEEL DRIVE**

Mechanically operated dosing is driven by a dosing wheel which is pressed against the rear wheel of the tractor. It is activated/de-activated hydraulically from the tractor cab. The dosing wheel can be infinitely adjusted for the different track widths and tyre sizes on the tractor. The dosing wheel drives the dosing belts, making dosing dependent on driving speed.

### **GEARBOX >**

The dosing wheel drives the dosing belts via a powerful three-speed gearbox.



**SPRING LOADED TIGHTENER >**

Spring loaded V-belt tensioning ensures that these are correctly tensioned at all times.



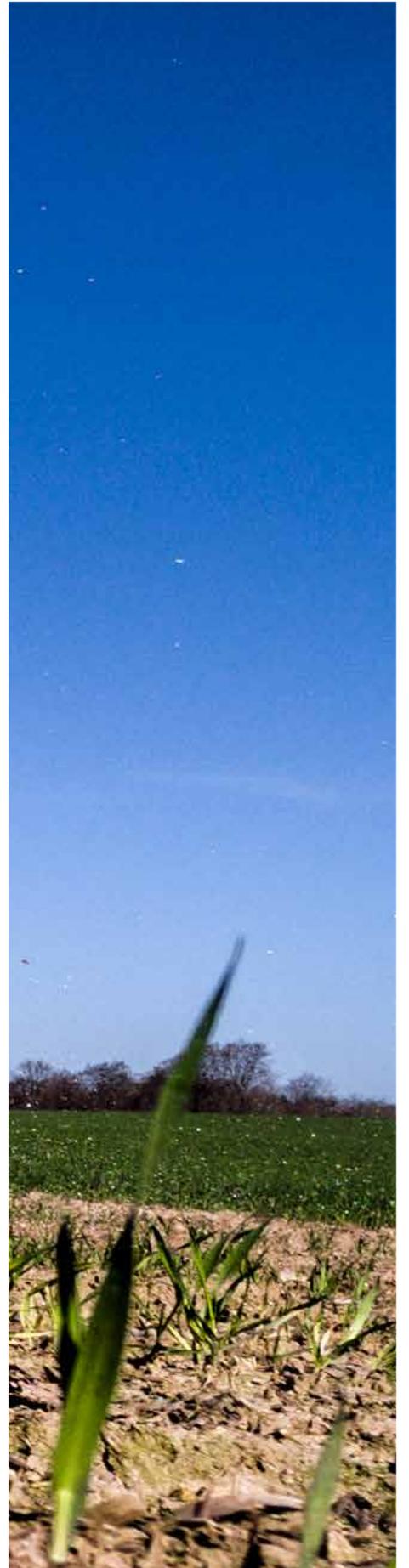
**< SPREAD UNIT**

F2 is available with a SPC4500-1 belt transmission, spreading discs for 12–36 m working widths and a headland gear for 24–36 m working widths.

(Alternatively a 12–28 metre headland gear is available.)







## OPTIONAL ACCESSORIES

### HOPPER EXTENSION >

Hopper extensions are available to increase F2's hopper capacity from 1500 litres to 2500, 3000, 3200 or 4000 litres. The hopper extensions are also available in stainless steel.



### < PLATFORM WITH LADDER

The platform with ladder mounted on the rear of the spreader makes it even easier to pour in contents from bigbags.

### MICRO-DOSING EQUIPMENT >

Used for spreading slug pellets or seeds. Micro-dosing equipment makes it possible to spread at rates as low as a few kg/ha.



**LATE APPLICATION EQUIPMENT >**

Late application equipment for spreading in high crops.



**< CALIBRATION KIT**

The calibration kit determines the fertilizer's bulk density simply and precisely. To ensure that the spreader's application rate is correct, it is important to know the correct bulk density of the fertilizer being spread.

**H DISCS KIT >**

Specially designed fertilizer equipment for spreading fertilizers such as granular urea, potash and ammonium sulphate across working widths of 24–36 metres.



## OPTIONAL ACCESSORIES

### **HOPPER, STAINLESS STEEL >**

The spreader is available with a stainless steel hopper to make cleaning and maintenance easier.



### **< COVER**

A cover is available to protect hopper contents during road transport and spreading.



# F2 TECHNICAL SPECIFICATIONS

## > F2 1500 TECHNICAL SPECIFICATIONS

Capacity:	1.50 m <sup>3</sup>
Net weight:	from 825 kg
Spread unit:	SPC4500-1

Hopper length:	1520 mm
Hopper width:	2400 mm
Loading height (standing on the ground):	1480 mm

*The weight depends on the model and equipment chosen*



## > F2 2500 TECHNICAL SPECIFICATIONS

Capacity:	2.50 m <sup>3</sup>
Spread unit:	SPC4500-1

Hopper length:	1520 mm
Hopper width:	2400 mm
Loading height (standing on the ground):	1745 mm

## > F2 3000 TECHNICAL SPECIFICATIONS

Capacity:	3.00 m <sup>3</sup>
Spread unit:	SPC4500-1

Hopper length:	1520 mm
Hopper width:	2400 mm
Loading height (standing on the ground):	1870 mm

## > F2 3200 TECHNICAL SPECIFICATIONS

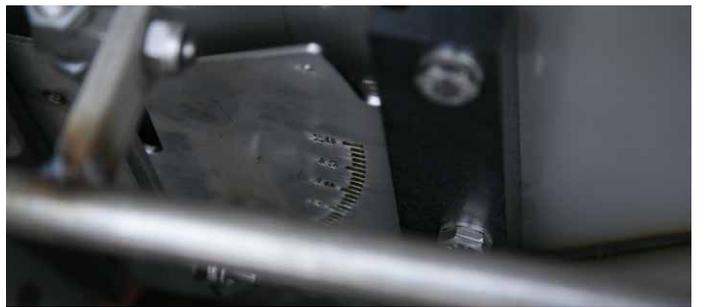
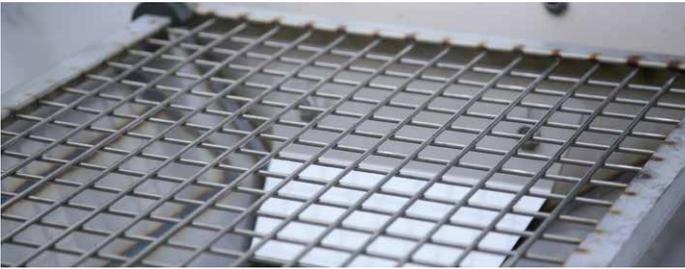
Capacity:	3.20 m <sup>3</sup>
Spread unit:	SPC4500-1

Hopper length:	1520 mm
Hopper width:	3000 mm
Loading height (standing on the ground):	1950 mm

## > F2 4000 TECHNICAL SPECIFICATIONS

Capacity:	4.00 m <sup>3</sup>
Spread unit:	SPC4500-1

Hopper length:	1520 mm
Hopper width:	3000 mm
Loading height (standing on the ground):	2080 mm

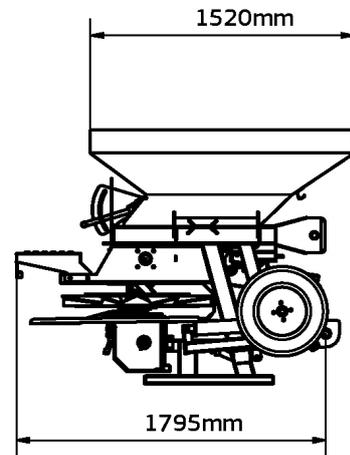
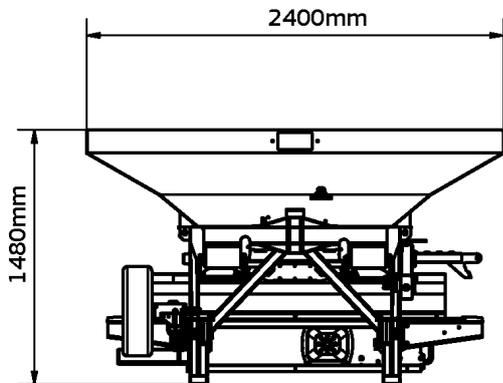


# EQUIPMENT OVERVIEW

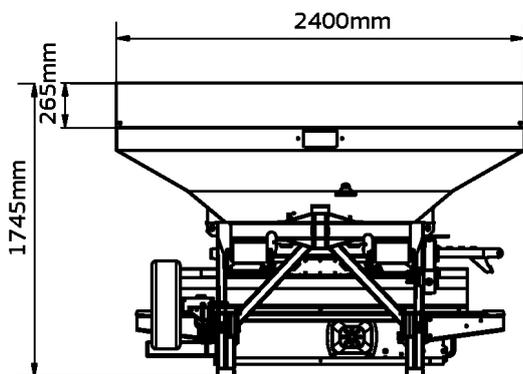
EQUIPMENT	F2		
	Standard	Optional accessory	Not possible
LED light kit	o		
Spreading discs, 12–36 m	o		
Type H spreading discs, 24–36 m		o	
Power transfer, 6z PTO shaft with wide angle	o		
SPC4500-1 spread unit	o		
Headland gear for headland spreading, 24–36 metres	o		
Headland gear for headland spreading, 12–28 metres		o	
Weight cells			o
ISOBUS, computerised control			o
Calibration kit		o	
Hopper extension (up to 4000 litres)		o	
Screen, stainless steel	o		
Cover		o	
Hopper, stainless steel		o	
Rear doors, stainless steel	o		
Micro-dosing equipment		o	
Late application equipment		o	
Inspection window in front plate	o		
Steps, inside hopper	o		
Platform with ladder		o	

# F2 DIMENSIONAL SKETCHES

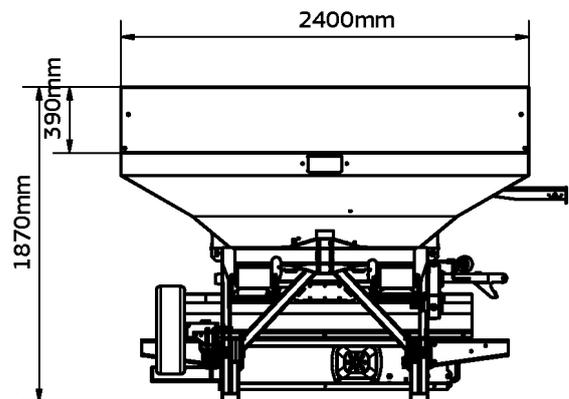
## F2 1500



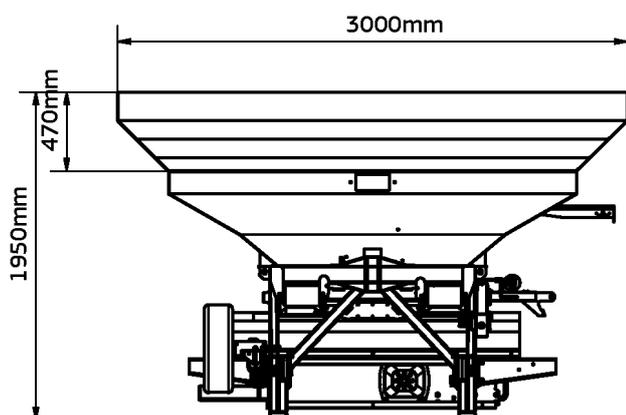
## F2 2500



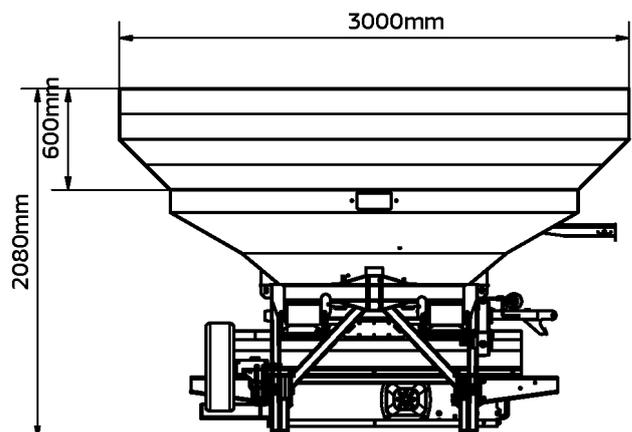
## F2 3000



## F2 3200



## F2 4000





Throughout a lifetime, Bredal has specialized in the development and manufacture of high-quality lime and fertilizer spreaders for easy operation and a robust construction. In recent years, however, the products also include winter equipment such as sand and salt spreaders.

In the export markets, the interests of the company are taken care of by local importers, who also assist in the sale, service and support of Bredal's products.

Bredal has state-of-the-art production and testing facilities using the latest technologies to ensure that the quality of the products is top notch.

**SIMPLE  
PRECISE  
RELIABLE**