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## F2 IS A MOUNTED FERTILIZER SPREADER FOR WORKING WIDTHS FROM 12-36 M.

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

 $\mathsf{F2}$  is built as a mounted spreader with a hopper capacity of 1500-4000 liters.









## CONSTRUCTION

Bredal spreaders have a robust construction and are designed for professional use. Every component of each Bredal machine is constructed with optimal reliability and strength to ensure the longest possible working life.

#### > CONSTRUCTION

 $\mathsf{F2}$  is designed to resist the very heavy loads which may occur in the field.

Bredal always test modifications and new designs meticulously before launching products on the market, because as experience shows, the machines are exposed to heavy loads under practical conditions. F2 is equipped with a very heavy constructed chassis.

In the whole construction, priority has been given to minimizing daily maintenance.

The lower frame of the spreader is very strongly built. When coupling to the tractor, category 3 pegs are used.

The frame is built of heavy profile metal and is reinforced at all exposed areas, the hopper is built of 3 mm plate. The robust construction results in very good durability of the spreader.

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

The vanes on the fertilizer discs are made of stainless steel and are coated with a tungsten carbide wear layer for longer working life.

#### > POWDER COATING

All painted parts on Bredal spreaders are painted with 2 coats of powder paint, which gives a strong surface, good corrosion protection and a beautiful finish.

The spreaders are designed for a maximum working life, so the quality of the surface treatment is vitally important.

BREDAL has invested heavily in this process, and as a result it has one of Denmark's largest and most modern powder painting facilities, where the machines are first shot-blasted and then painted with 2 coats of powder paint.

The powder painting system was specifically developed to provide a consistent surface and maximum corrosion and wear resistance for use in a harsh environment.











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 painted with 2 coats of powder paint, which gives a strong surface and a beautiful finish.



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

## BREDAL F2

BREDAL's F2 model is a purely mechanically driven, mounted fertilizer 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 means significantly less wear on the tractor and spreader.

With standard working widths of 12-36 meters and with hopper sizes from 1500 to 4000 litres, the standard version of F2 covers most needs.

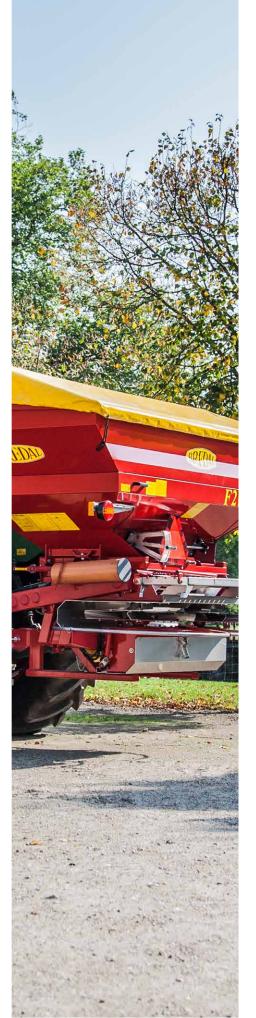
Simplicity is built into the F2, the spread wings do not need to be changed or adjusted whether you are spreading over 12 or 36 meters. Dosing is performed by a belt, which means that there is only one dosing table for all the fertilizers being spread.

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

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









## SPREADING OF FERTILIZER

F2 spreaders are designed to spread with high precision on large working widths.

F2 spreaders work according to the 4-double overlap principle where each disc spreads in double working width. This principle ensures that good spreading results are always achieved.

Bredal spreaders are designed to throw out fertilizer grains at a high exit speed. The high speed, combined with a low exit angle (7 degrees), minimizes the risk of wind sensitivity in field conditions.

Fertilizer is delivered to the centre of each disc without touching the vane, so the grains start to accelerate even before they come into contact with the vane. This reduces the risk of the fertilizer being damaged during spreading.

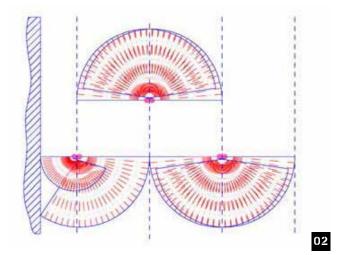
The 6 vanes mounted on each disc ensure that the fertilizer is delivered in small quantities, providing greater security in the spreading process.

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

#### > H-SPREAD DISCS

For spreading fertilizers such as Granular Urea, Potash or Ammonium Sulphate, Bredal can supply a kit of special discs for working widths from 24-36 m.

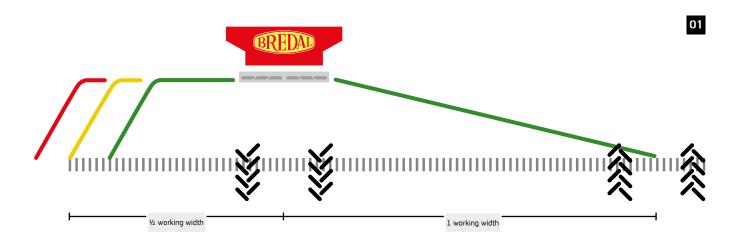






1 > SPREADING WITH F2 2 > BREDAL SPREADING PRINCIPLE of 4-double overlap 3 > H-DISCS specially designed for spreading Granular Urea, Potash and Ammonium Sulphate.

## HEADLAND SPREADING









The headland spreading system on Bredal spreaders works by changing the speed on one disc only, resulting in a reduced spread distance towards the boundary. The disc on the field side maintains a high speed, thereby ensuring the double overlap into the field.

The Bredal headland spreading system achieves a neat boundary at the division line, while preserving the actual spreading patterns towards the field. The headland gear is easy to operate.

Headland spreading is activated manually via the handle on the hopper and by moving the two downchutes.

1 > HEADLAND SPREADING principle 2 > SPC 4500-1 HEADLAND GEAR "closeup" of the gearing 3 > HANDLE FOR MANUAL SHIFTING OF HEAD-LAND GEAR 4 > SETTING THE DOWNSHUTE

## SPREADING TESTS

#### > TESTED SPREADERS

All Bredal spreaders are tested regularly with a wide range of fertilizer types at the independent spreading test centre at Bygholm (part of Aarhus University). Many tests are performed every day in a very realistic setting. Test results are based on weighing cell technology, where the actual spread amount collected in each tray is taken for results evaluation, not a theoretical calculation.

Bredal uses this very test centre because the surrounding conditions here are as close to practical farming conditions as possible.

#### > BREDAL SPREADING PRINCIPLE

Bredal spreaders use the 4-double overlap system. Here both discs cover a double working width, i.e. when spreading on the width of 24 m, the left disc covers 24 m to the left and 24 m to the right. Thus a 4-zone distribution mode is achieved which provides high precision and a good spreading result.

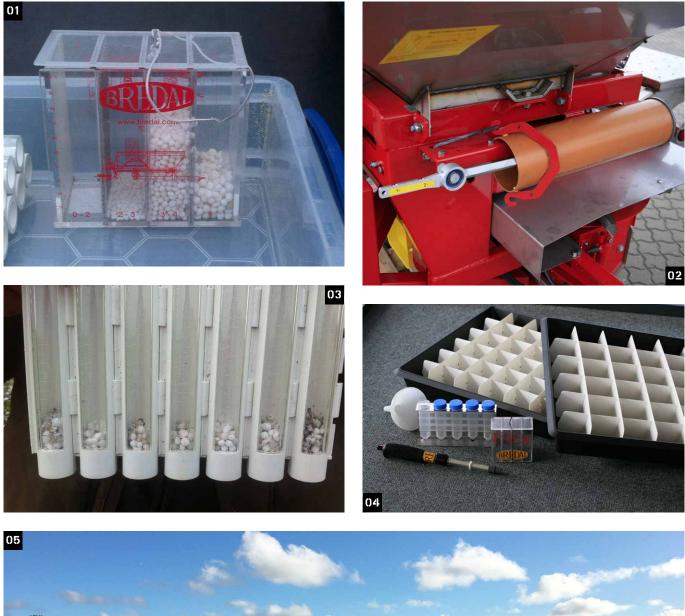
Bredal spreaders are designed to throw out fertilizer grains at a high exit speed. The high speed, combined with a very low exit angle (7 degrees), minimizes the risk of wind sensitivity in field conditions.

#### > BREDAL TEST KIT

The Bredal test kit is used to perform practical spreading tests for the purpose of optimizing the spreading pattern. The test kit consists of plastic trays incl. dividers, measuring tube with holder, a funnel, a granule strength tester and a sieve box.

#### > SETTINGS

Optimal spreading settings for various fertilizer types can be downloaded from the Bredal homepage.





1 > A SIEVE to monitor grain sizes 2 > CALIBRATION KIT 3 > MEASURING TUBE 4 > BREDAL TEST KIT Test kit includes plastic trays with dividers, measuring tube, funnel, granule strength tester and a sieve 5 > SPREADING TEST IN THE FIELD with Bredal and Test kit (trays positioned on the field)

## STANDARD EQUIPMENT

#### HOPPER SCREEN IN STAINLESS STEEL >

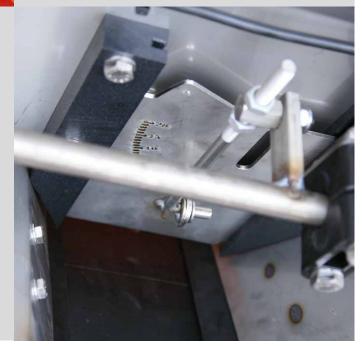
When spreading fertilizer it is important to have a screen inside the hopper to prevent lumps in the fertilizer falling down and blocking the opening to the rear door.





#### < 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 DOOR >

The rear door is made of stainless steel, with nylon guidance runners for easy adjustment, long life and minimal possible maintenance.



#### WINDOWS >

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



#### < BELT DRIVE

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

LED LIGHTS > Bredal spreaders are equipped with LED lights and side marker lights.



## STANDARD EQUIPMENT

#### PT0 >

All spreaders are supplied with a wide angle 6z PTO shaft. Alternatively, an 8z, 20z or 21z PTO can be specified.



#### < MECHANICAL LANDWHEEL DRIVE

Mechanically operated dosing is driven by a dosing wheel which is squeezed in towards the rear wheel of the tractor. Connection and disconnection is performed 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 3 speed gearbox.





Spring loaded tightening of the V-belts ensures that they are always tensioned properly.





#### < SPREADING UNIT

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

(Optional headland gear for 12 - 28 m working width)

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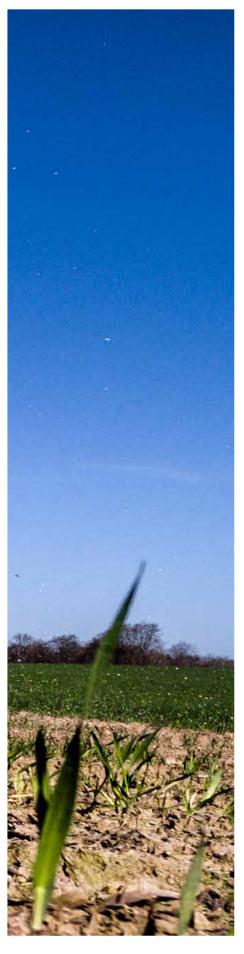












## ADDITIONAL EQUIPMENT

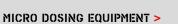
#### HOPPER EXTENSION >

Hopper extension to provide bigger capacity for F2 is offered in the following versions: standard 1500 litres plus 2500, 3000, 3200 or 4000 litres. Hopper extension can also be supplied in stainless steel.

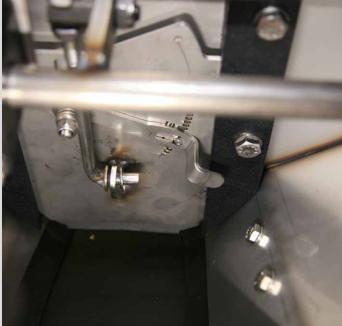


#### < PLATFORM WITH LADDER

The platform with ladder mounted on the rear of the spreader makes it even easier to loaded from big bags.



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



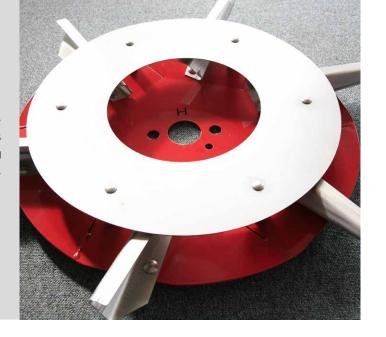






#### < CALIBRATION KIT

A weighing kit for determining fertilizer bulk density in a simple and precise way. To ensure the correct dosing in spreading, it is important to know the correct bulk density of the fertilizer being spread.



#### `H´- DISCS KIT >

Specially designed equipment for spreading fertilizers such as Granular Urea, Potash and Ammonium Sulphate at working widths of 24-36 m.

## ADDITIONAL EQUIPMENT

HOPPER IN STAINLESS STEEL > The spreader can be supplied with a stainless steel hopper to make cleaning and maintenance easier.



#### < COVER

A cover can be specified to protect hopper contents during road transport and spreading.



## **F2 TECHNICAL SPECIFICATIONS**

#### > F2 1500 TECHNICAL SPECIFICATIONS

Capacity: Net weight:	1.50 m <sup>3</sup> from 825 kg
Spreading 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>
Spreading unit:	SPC4500-1
Hopper length:	1520 mm
Hopper width:	2400 mm
Loading height (standing on the ground)	1745 mm

#### > F2 3000 TECHNICAL SPECIFICATIONS

Capacity: Spreading unit:	3.00 m <sup>3</sup> 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>
Spreading unit:	SPC4500-1
Hopper length:	1520 mm

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

#### > F2 4000 TECHNICAL SPECIFICATIONS

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Capacity:	4.00 m <sup>3</sup>
Spreading unit:	SPC4500-1
Hopper length:	1520 mm
Hopper width:	3000 mm
Loading height (standing on the ground)	2080 mm



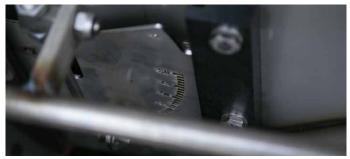














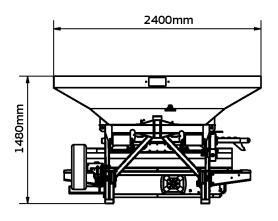
## EQUIPMENT OVERVIEW

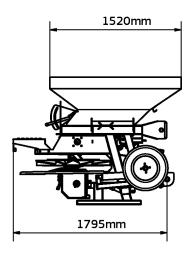
		1 4	
EQUIPMENT	Standard	Additional	Not possible
LED lights kit	0		
12-36 m spreading discs	0		
24-36 m spreading discs, type: 'H'		0	
Power transfer, 6z PTO shaft with wide angle	0		
SPC4500-1 spreading unit	0	1	
Headland gear for headland spreading, 24-36 m	0		
Headland gear for headland spreading, 12-28 m		0	
Weighing cells			0
ISOBUS, computer control			0
Calibration kit		0	
Hopper extension (up to 4000 litres)		0	
Screen, in stainless steel	0		
Cover		0	
Hopper, in stainless steel		0	
Rear door, in stainless steel	0		
Micro dosing equipment		0	
Late application equipment		0	
Inspection window in front	0		
Step inside the hopper	0		
Platform with ladder		o	

F2

## F2 DIMENSIONAL SKETCHES

## F2 1500

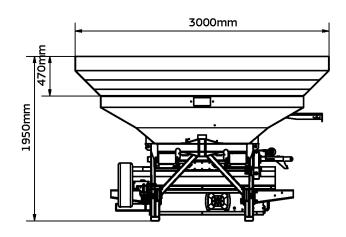




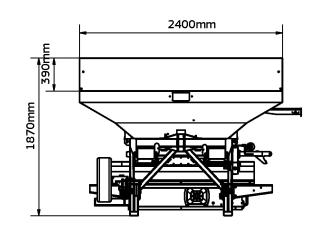
## F2 2500

2400mm

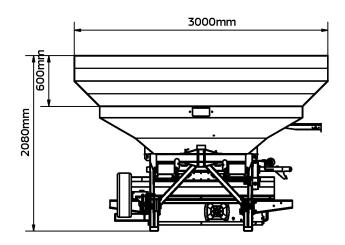
F2 3200



F2 3000



F2 4000







## SMPLE PRECISE RELABLE

For more than 50 years, Bredal has specialized in the development and production of high-quality lime and fertilizer spreaders for agricultural purposes. The company's goal is to build reliable machinery, precise in use, and simple to operate and maintain. In recent years, the Bredal product line has been expanded to include winter equipment in the form of sand and salt spreaders.

The company's interests in most of the countries importing Bredal machinery are represented by local importers who sell Bredal spreaders and provide technical support and service.

Bredal is located in Vejle, Denmark, where it has state-of-the-art production facilities with the latest equipment for producing high-quality machines.