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MANUAL 12 M. AUGER

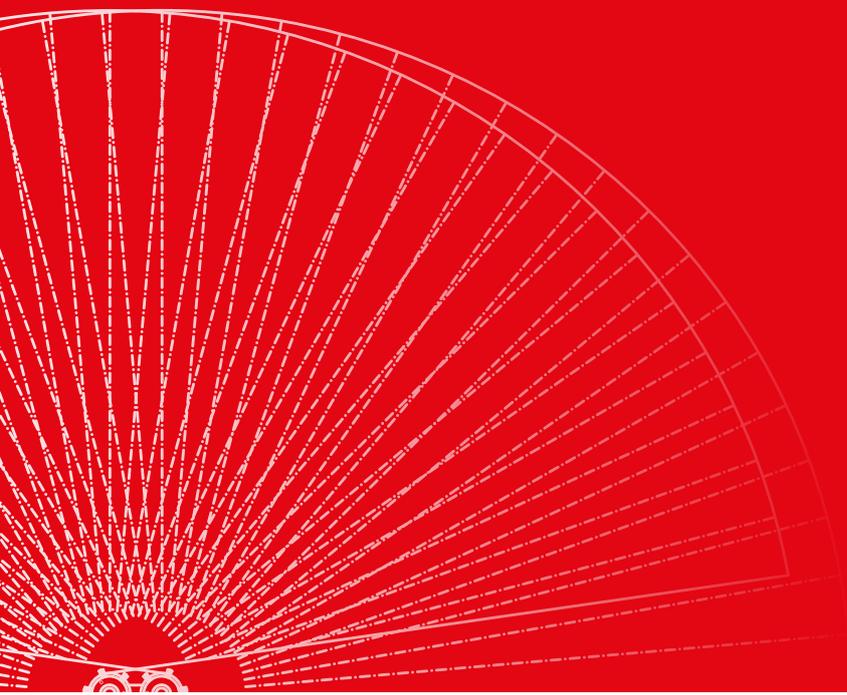
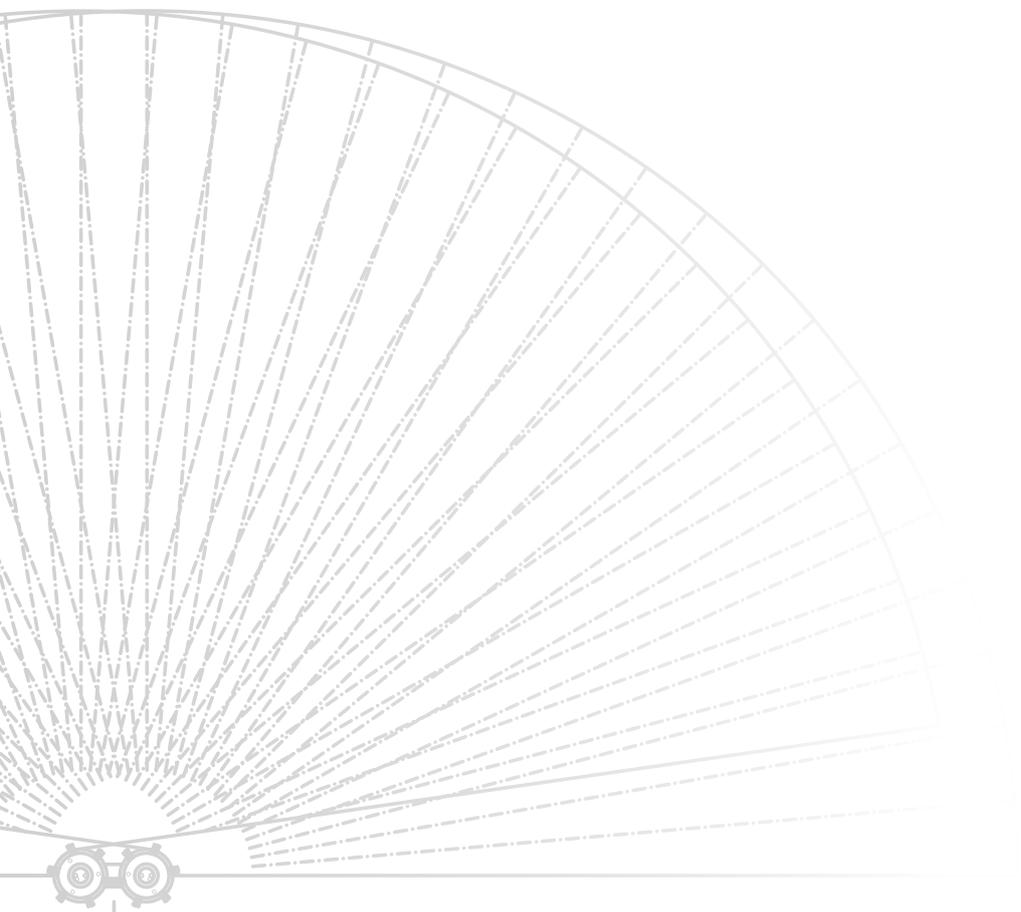


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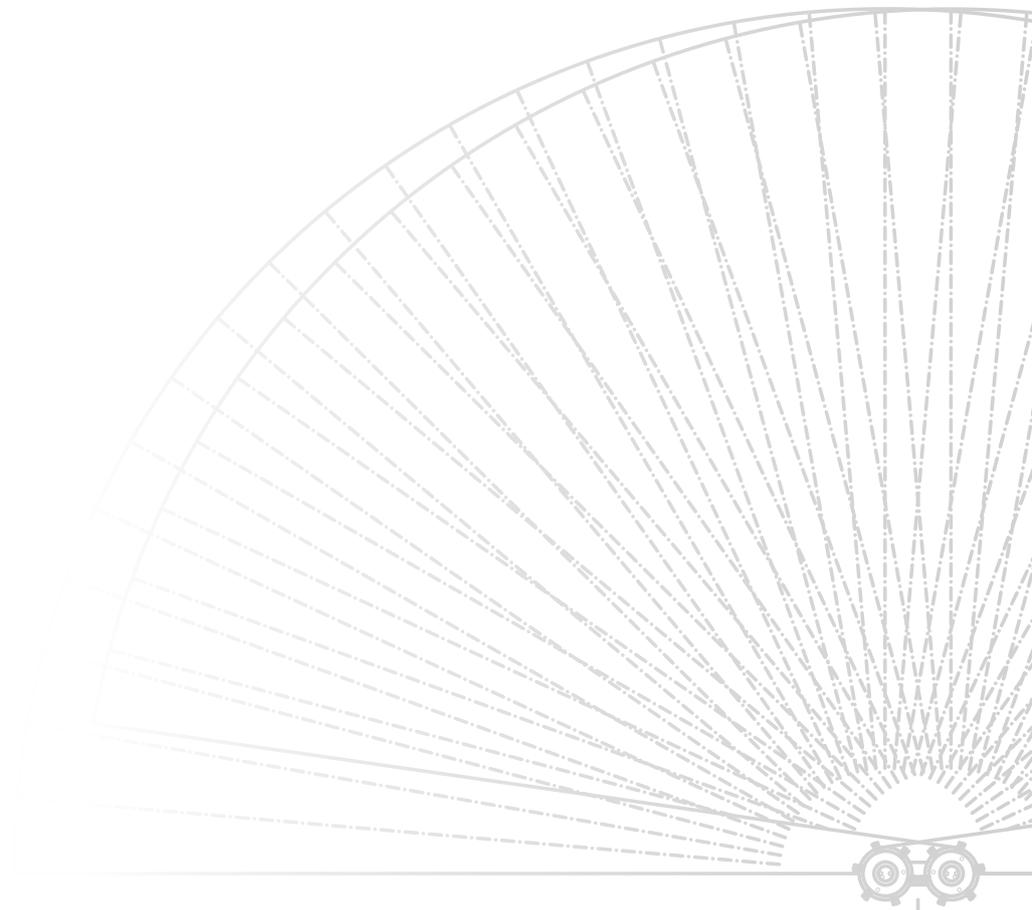
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FOREWORD

This manual provides instructions for using the 12-m auger mounted on K spreaders. Instructions for the rest of the spreader are found in the **K series Basic Manual**, and for operating the ISOBUS program are found in the **K series ISOBUS Manual**.

Bredal 12 m auger is designed to spread lime and other dry materials in form of powder. It is the responsibility of the operator that the machine is used exclusively for the intended purpose.



SAFETY

- The safety distance to be kept from rotating spreading discs is at least 30 meters. Disengage the tractor's PTO and hydraulic system whenever people or animals come closer than this.
- Never attempt to adjust the settings of or clean the spreader when the spread discs or augers are rotating.
- When loading the spreader, keep foreign objects, such as stones, etc., from getting in the spreader's hopper, as these can damage the spreader and endanger the surroundings.
- Sitting/standing on the machine while it is operating or during road transport is not permitted.
- Before working on the spreader, make sure to disengage the tractor's PTO and depressurize the hydraulic system.
- Check that shields on PTO shafts and the spreader are intact and correctly mounted.
- Never operate the hydraulic hopper extension nor the auger's fold-up/fold-out sections if anyone is within the spreader's hazard zone. Be aware that the augers jut out 6 meters on each side.

> TRAFFIC SAFETY

Traffic safety is important when driving on public roads. Therefore, complete the following checklist:

- The light system must be connected to the tractor's light socket, the lamps must be cleaned, and turning signals and brake lights must work correctly.
- Reflective warning triangles must be intact and clean.
- All hitch and wheel bolts must be tightened to the correct torque. Torque level for wheel nuts, 510 NM.
- The tire pressure must be correct.
- Make sure there are no cracks in tires, axles or rims.
- The hitch peg must be properly dimensioned and locked so that it cannot be ejected.
- Brakes must be connected and be in proper working order.
- For trailers with a bogie, the bogie **MUST** be locked at all times during road transport, because otherwise there is a risk that the vehicle will begin to sway and cause an accident. Also, the bogie **MUST** always be locked when driving in reverse as otherwise there is a risk of damaging the lock cylinder. Lock the bogie by pressurizing the outlet and possibly locking the ball valve as an additional safety precaution. Unlock the bogie by putting the tractor's hydraulic system in float position.
- **ALWAYS** lock the augers during road transport and the lock the ball valve for the fold-down and fold-up mechanisms as an additional safety precaution.

CHANGING OVER FROM AUGER TO ORDINARY SPREAD UNIT

Follow these instructions to change over from auger to ordinary spread unit if the spreader is equipped with both components.

> CHANGING OVER FROM SPREAD UNIT TO AUGER



- Disassemble the sensors for disc rpm and the headland gear, if relevant, and put them in their respective holders. Disassemble the hydraulic cylinders for guide plates and the headland gear, if relevant, and put them in their respective holders.



- Loosen the two large tightening bolts on each side of the side members and remove the rearmost bolts. Disassemble the PTO shaft. After this, pull out the spread unit to the rear and remove it.



- Disassemble the downchute plate with downchute.
- Remove the floorbelt divider and screen.



- Mount the frame with a rubber pad.
Push the frame all the way in against the end stop.



- Mount the downchute frame with rubber. Pull the frame all the way back.



- Install the sensor for the auger's oil divider. Push the sensor all the way in before pulling it back out 2 mm and then tightening it.



- Mount a compactor, if relevant.

> CHANGING OVER FROM AUGER TO SPREAD UNIT



- Disassemble the auger's oil-divider sensor and put it in its holder.

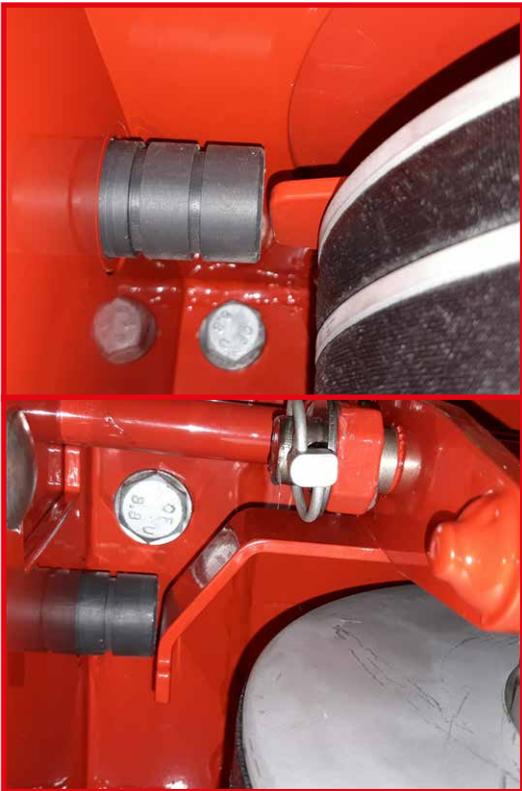


- Disassemble the downchute frame with rubber and the frame with a rubber pad.

- Disassemble the compactor, if relevant.
- Install downchute plate with downchutes.
(See the section "Adjusting scraper and downchute" in the K series Basic Manual).
- Mount the spread unit and PTO shaft.
(See the section "Attaching fertilizer equipment for A discs" or "Mounting of lime equipment" in the K series Basic Manual).
- Calibrate the spread-unit position at scale 120.
(See the section "Calibrating the spread-unit position" in the K basic manual).



- Mount the hydraulic cylinders for guide plates (if fertilizer equipment is mounted on the spreader) and the headland gear, if relevant.

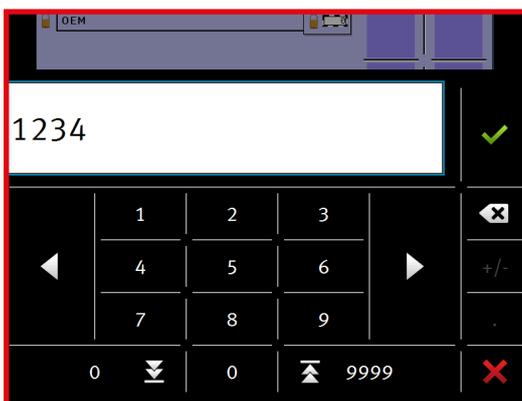
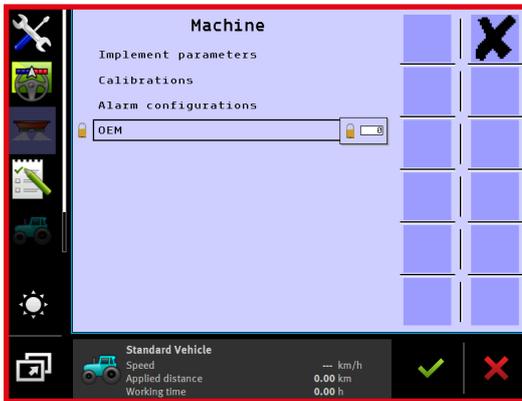


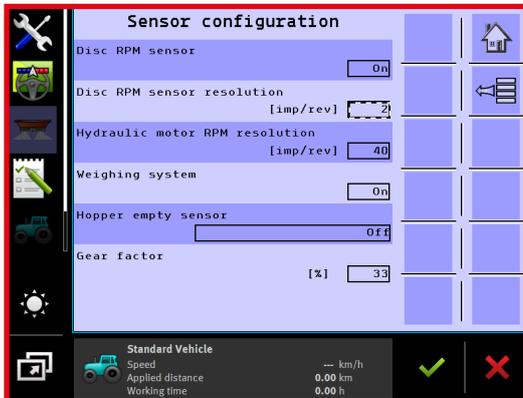
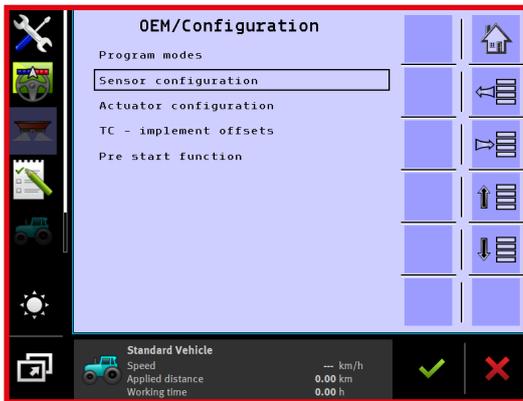
- Mount the sensors for disc rpm and headland gear, if relevant. The sensors must be positioned 2-3 mm from the detection plate.

> CHANGES TO ISOBUS SETTINGS

For changing over from auger to spread unit, change the values for “impulses per disc rpm”, “Use L/R Disc control” and “Disc start/stop” as follows:

1. Impulse changes:





Auger:

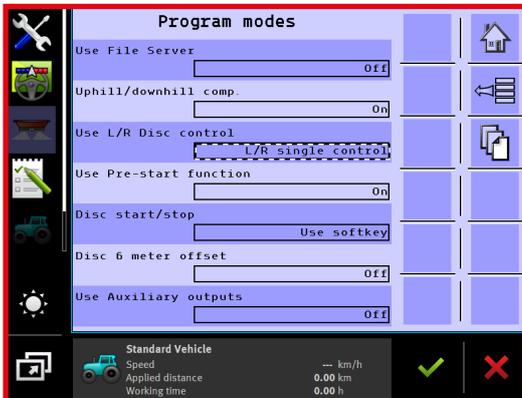
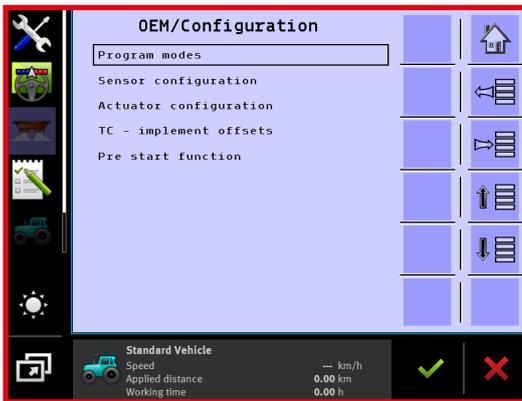
Set the Disc RPM sensor resolution at "12".

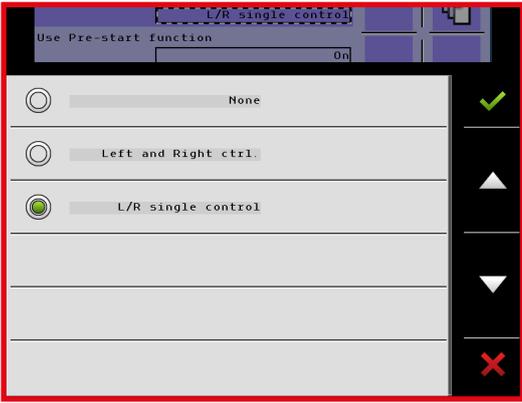
Discs:

Set the Disc RPM sensor resolution at "2" (for spread units without headland gear)

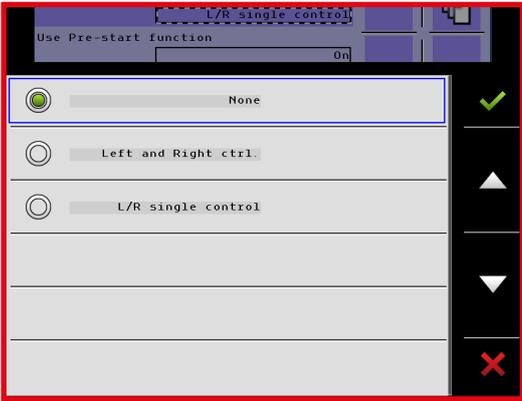
Set the Disc RPM sensor resolution at "1" (for spread units without headland gear)

2. Changing "Disc control":

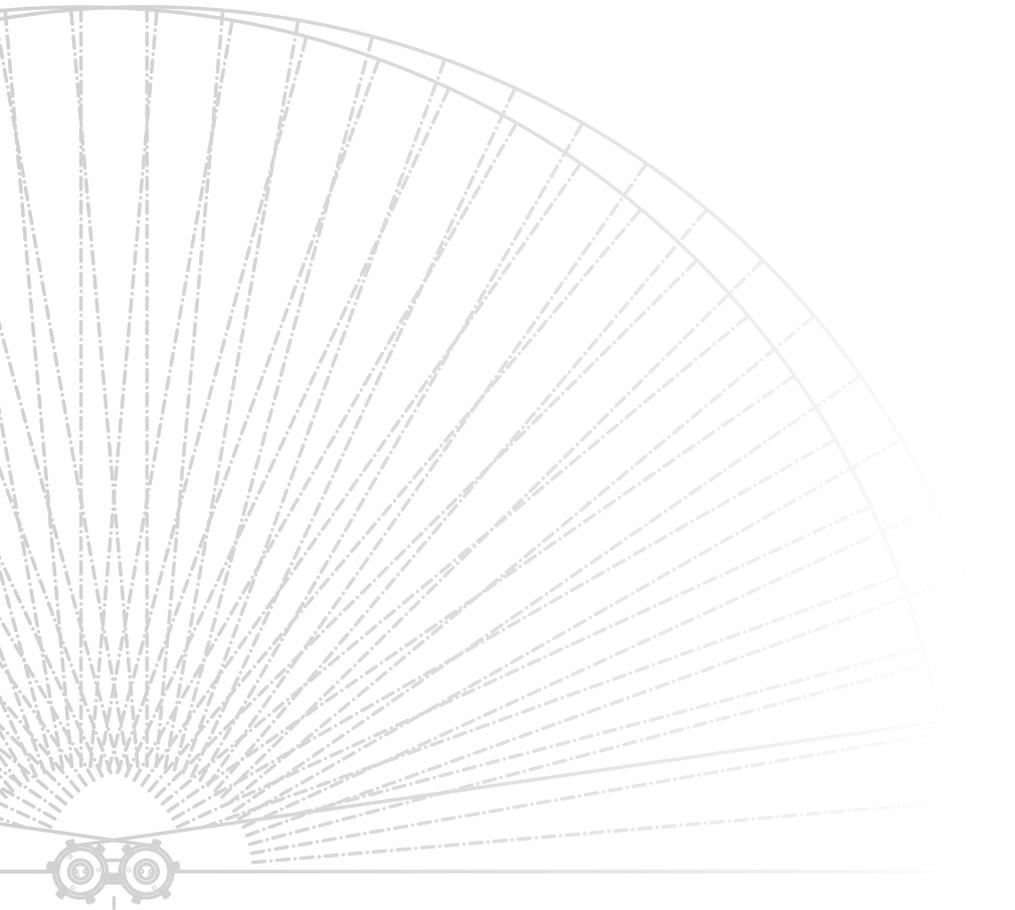




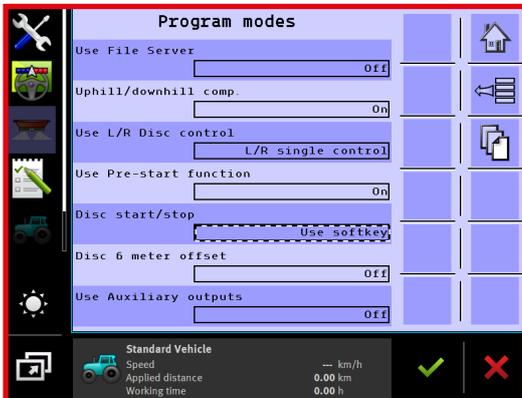
Auger: Set "Use L/R Disc control" at **L/R single control**

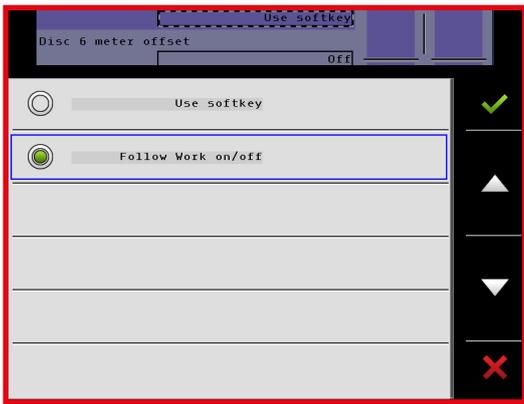


Discs: Set "Use L/R Disc control" at **None**

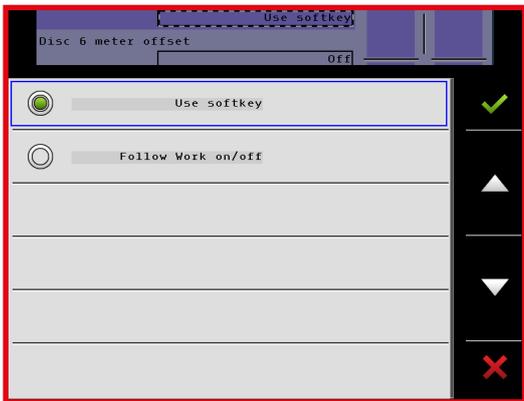


3. Changing "Disc start/stop"

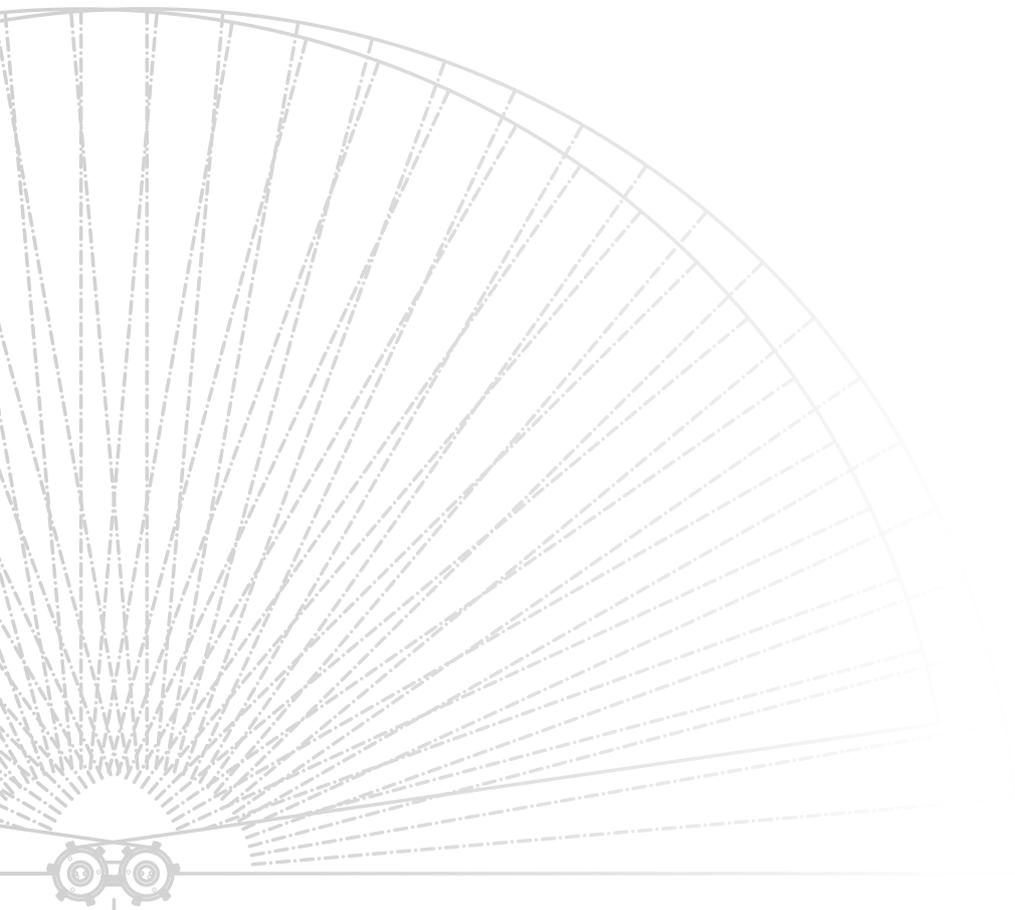




Auger: Set "Disc start/stop" at **Follow Work on/off**



Discs: Set "Disc start/stop" at **Use softkey**



SETTING UP AND OPERATING

APPLICATION RATE:

The spreader can spread material at a rate of 150–600 kg/min, depending on auger rpm.

This yields the following results (examples):

750–3000 kg/ha at 10 km/h.

1250–5000 kg/ha at 6 km/h.

DRIVING SPEED:

Select a fixed driving speed, typically 6–12 km/h.

REAR DOOR:

Spreaders with ISOBUS controls:

The usual rear-door setting is on a scale from 100 to 150, depending on application rate and driving speed.

Generally, the preferred application rate is best achieved by opening the rear door as little as possible, as a small door opening and high belt speed give the most even application rate.

Spreaders with mechanical landwheel drive:

Select gear and rear door setting as usual according to the application table. (*See the K series Basic Manual*).

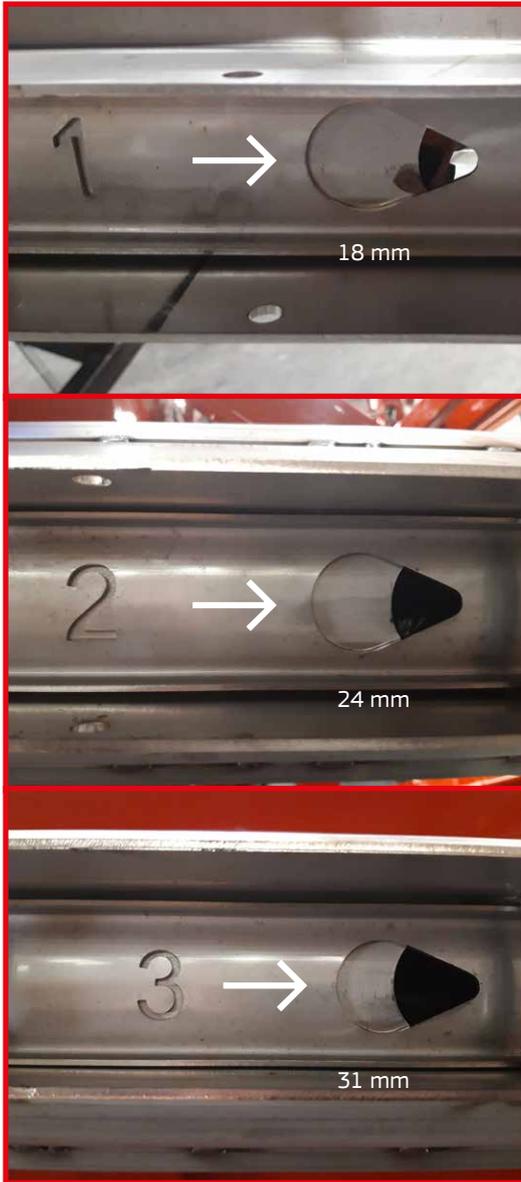
Hydraulic rear door:

Set these units by loosening the bolt and adjusting the end stop. The end-stop scale is read at the upper edge of the retaining piece.



BASIC SETTING OF OUTFLOW HOLES

As a general rule, the outflow hole openings should be set at the standard factory setting. It is possible to check the standard setting using the three gage blocks so the opening of the first hole in the inner section is 18 mm, the first hole in the middle section is 24 mm and the first hole in the outer section is 31 mm.



RECOMMENDED SETTING OF AUGER RPM

The diagram below shows the graph for auger rpm as a function of the application rate in kg/min.

The diagram can be used for the recommended setting of auger rpm and applies to the standard setting of the outflow holes.

Maximum auger speed: 300 rpm.

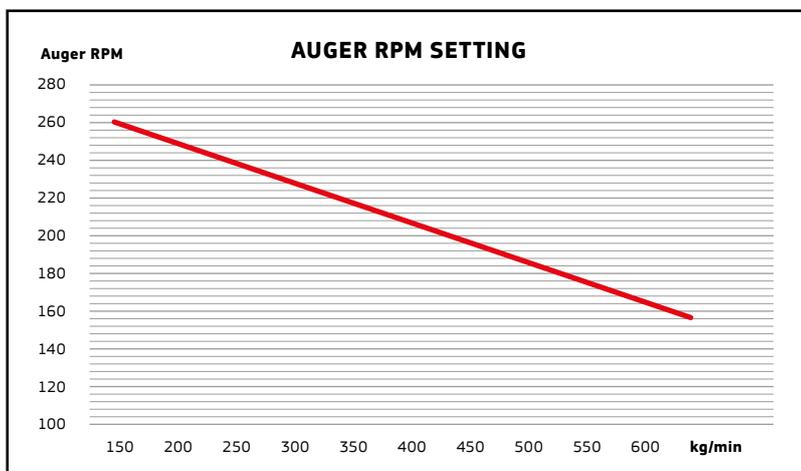
Example:

Preferred application rate: 2000 kg/ha

Driving speed: 8 km/h

Find kg/min. from the formula: $\frac{(\text{kg/ha}) \times (\text{km/h})}{50} = \frac{2000 \times 8}{50} = 320 \text{ kg/min.}$

According to the diagram, the auger must run at 220 rpm to apply 320 kg/min.



For spreaders with ISOBUS controls, enter the rpm on the terminal.

For spreaders with mechanical landwheel drive, change the auger rpm by adjusting the oil flow from the tractor. As it is not possible to read the rpm speed, trial and error must be used.

The maximum speed of roughly 300 rpm equates to a flow of oil from the tractor's oil outlet of about 25 liters/min.

ADJUSTING RPM AND OUTFLOW HOLES:

Fine-tune the auger rpm if necessary, so material flows out of all holes yet without very much coming out of the end of the auger:

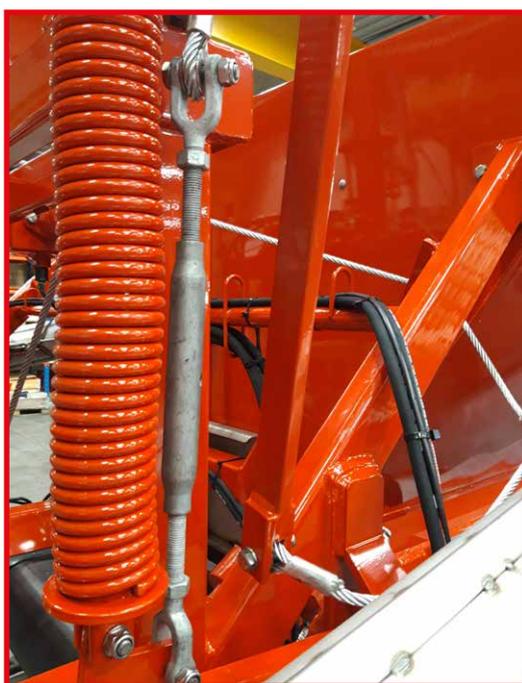
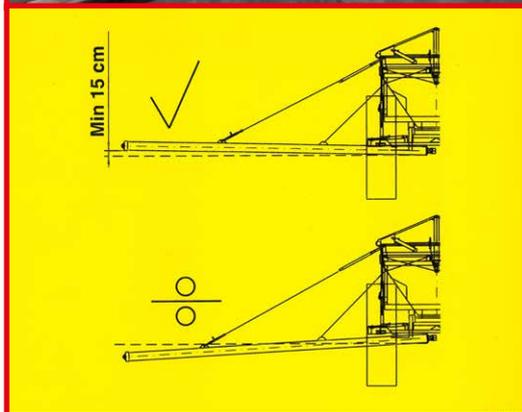
- If no material is flowing out of the outer outflow holes, increase the rpm.
Maximum permissible rpm: 300. If the rpm is higher than this, the auger will be very noisy and overloaded.
If application rates are too low, increasing the rpm is not always enough. In this case, it may be necessary to close the holes slightly. Close all holes to the same extent until the preferred spreading is achieved.
- If too much material is coming out of the end of the auger, reduce the rpm.

ADJUSTING THE AUGER SUSPENSION PARTS



Support wire

The support wires outermost on the auger keep it in its working position. The outermost end of the auger must be 20 cm higher than the innermost. The height can be adjusted using the wire tightener on each auger.



Lifting wire

The lifting wires innermost on the auger keep it in place as it is being folded up. The auger must rest lightly on the lock in the transport position. If the height does not fit the lock, it can be adjusted using the wire tightener on the side of the console.

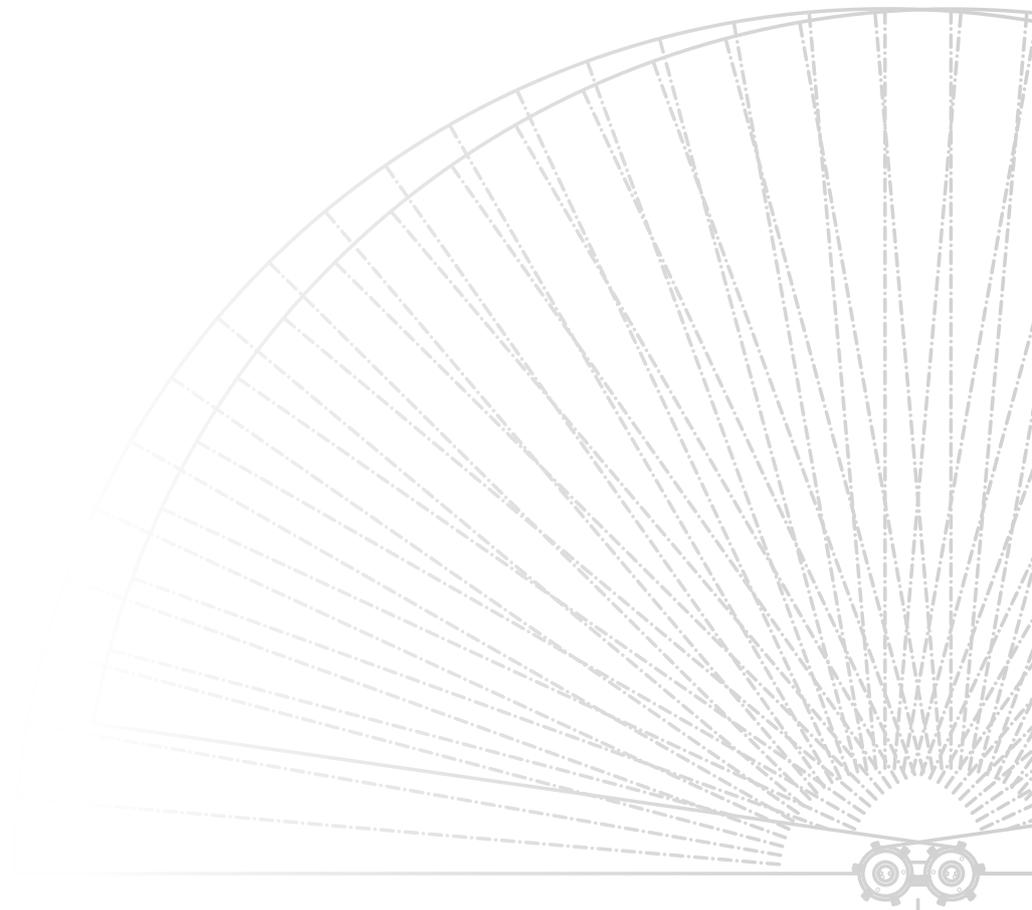


Using the threaded sections on each side of the lifting cylinder to adjust how far the auger folds up on each side. The left auger is adjusted on the right side and the right auger is adjusted on the left side.



Lock

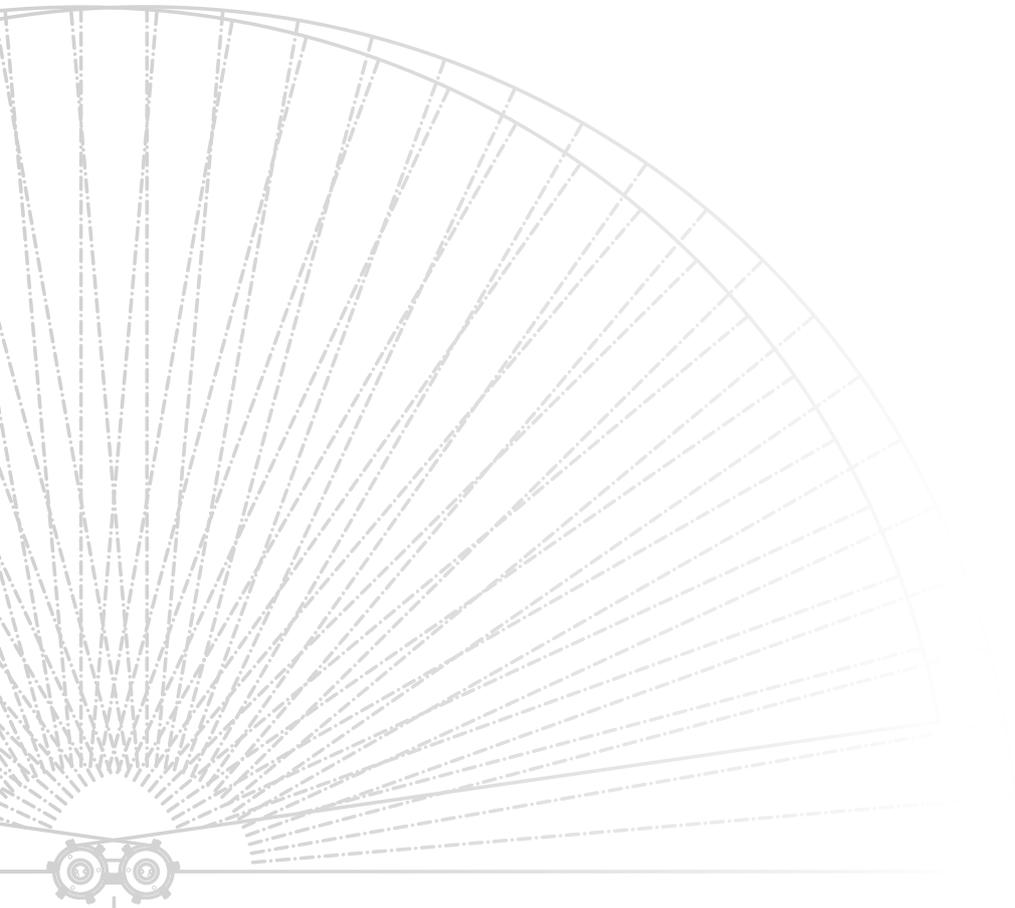
If the lock does not fit the bracket on the auger, it can be adjusted back and forth by loosening the bracket on the side of the hopper

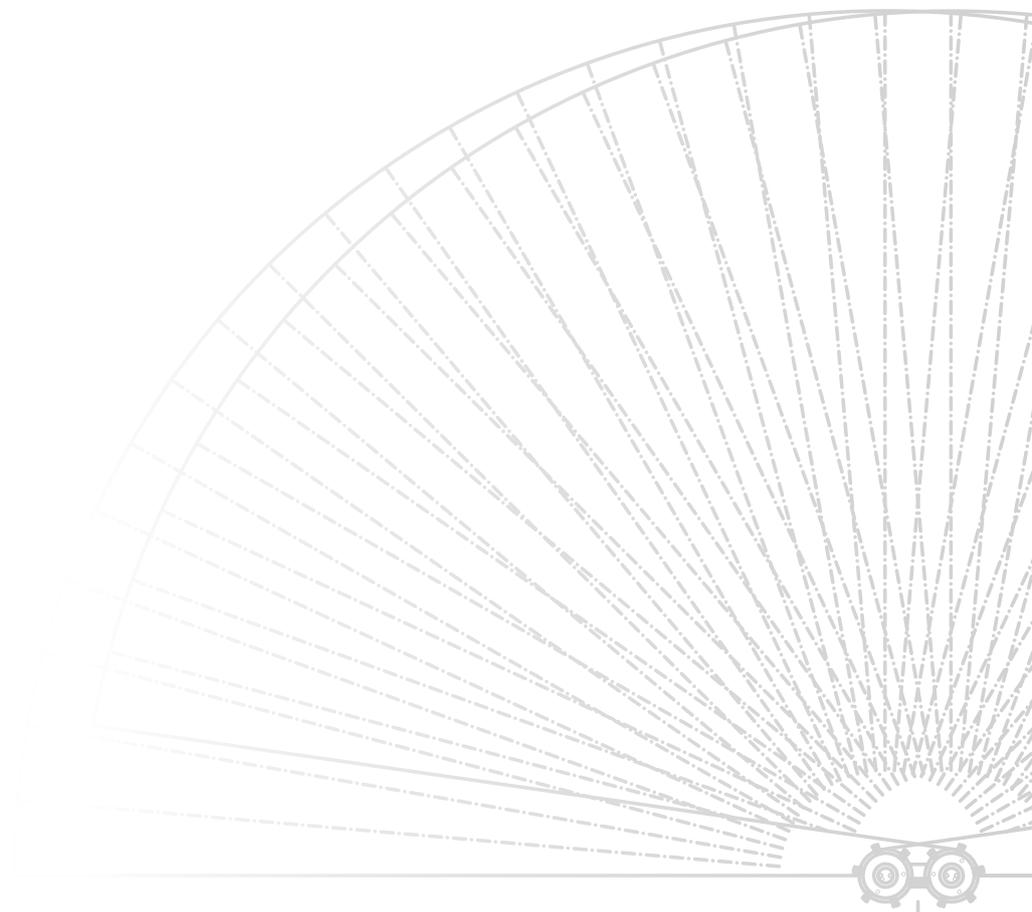


LUBRICATION POINTS

> 100 HOURS

Auger flange bearings (6 points).



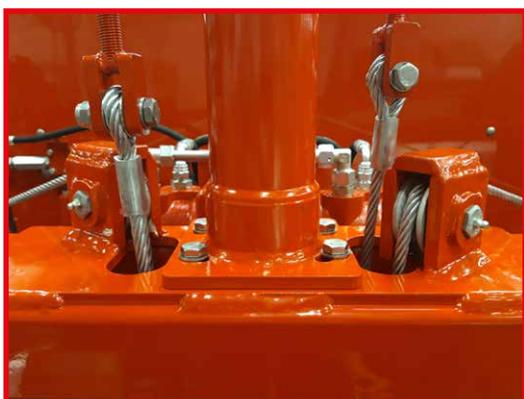


LUBRICATION POINTS

> 200 HOURS



Lifting cylinder (1 point).



Guide rollers for lifting cylinder (6 points).





Lever arm (2 points).



Auger swivel link (4 points).



Lock (2 points).



Hydraulic rear door (1 point).

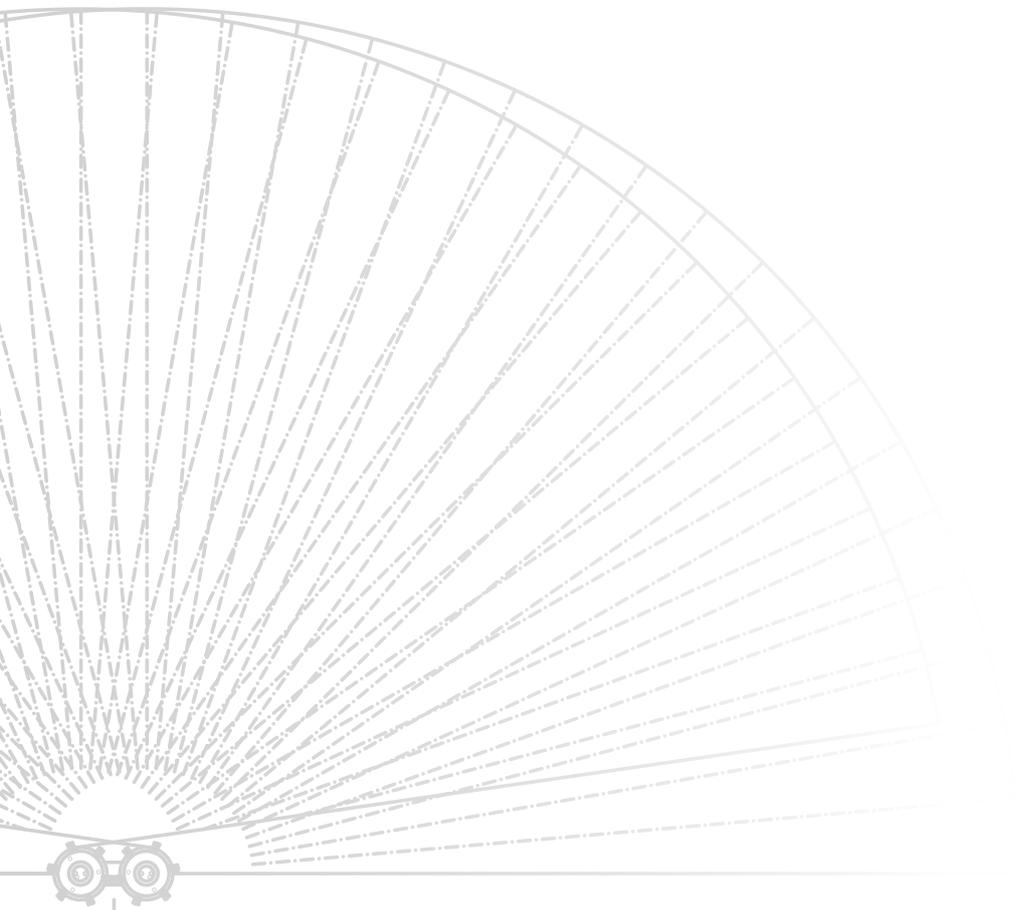
OTHER MAINTENANCE AND CLEANING

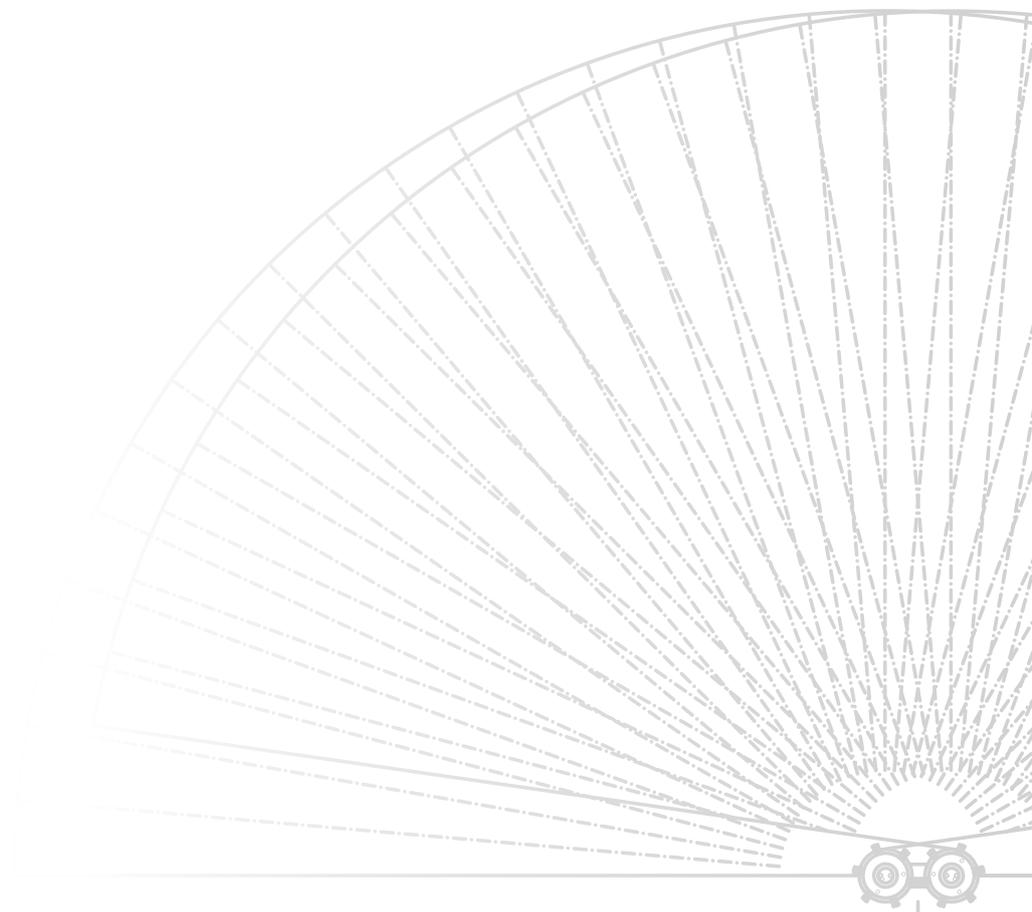
Cleaning:

- Every day make sure that outflow and auger coils are unobstructed and clean.
- Run the auger until empty after completing a task.
- Before storage, clean the auger by blowing pressurized air through it, for instance.
- When washing the auger, avoid filling it with water as water can mix with residual lime and form a paste that will dry into a hard, firmly attached coating.

Other maintenance:

- Regularly check the steel wires to make sure they are whole and intact.
- Replace the auger's Teflon scrapers if they are become so worn that the auger itself is grating against the auger cylinder.
- Change the Oil filter every one or two years.









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MANUAL

12 M. AUGER

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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 product line has also included winter equipment such as sand and salt spreaders.

The company's interests in 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 technologies ensuring the production of top-quality machines.

SIMPLE
PRECISE
RELIABLE