

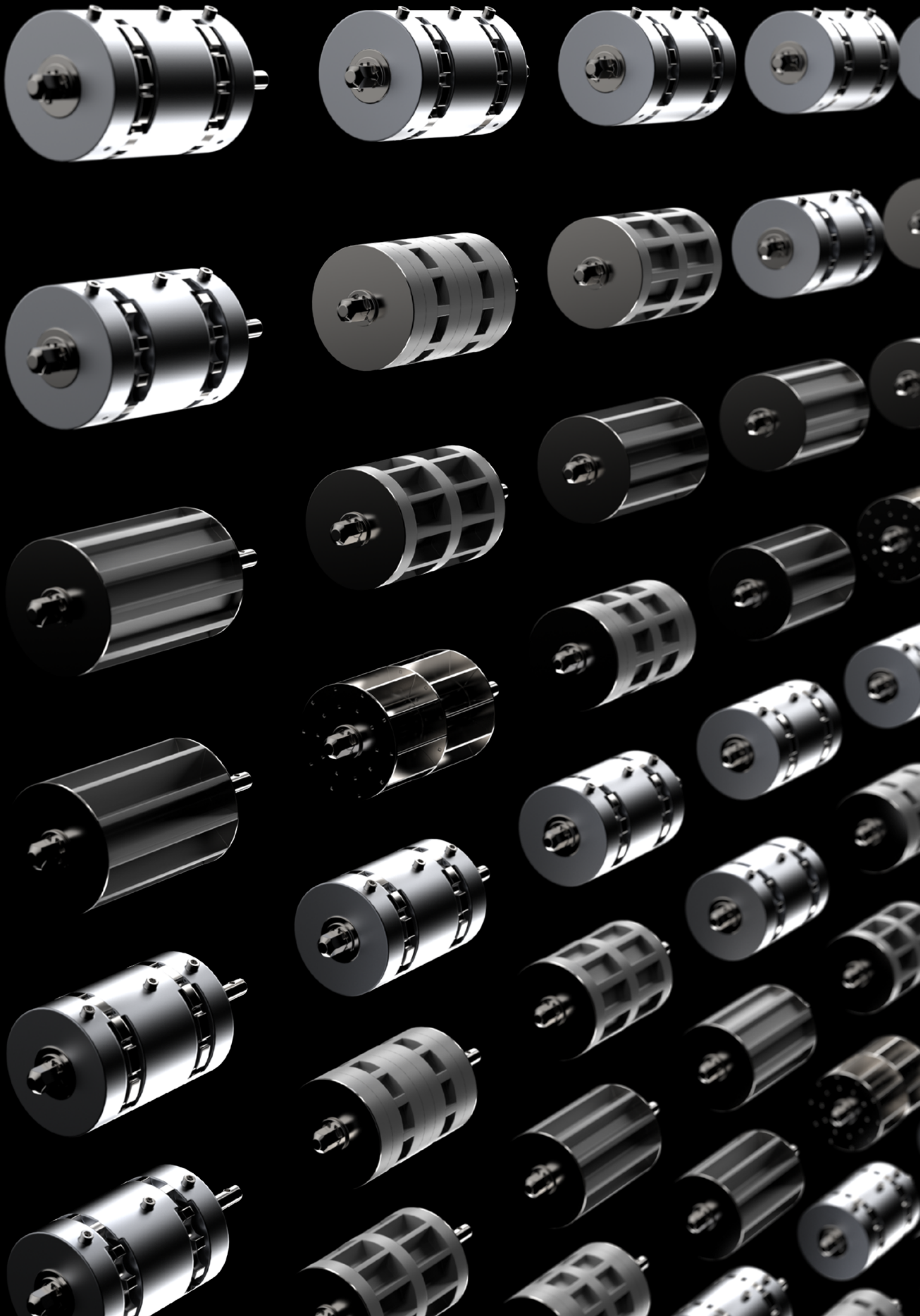
Operators Manual METERING UNIT

Keep Operations Manual In A Safe Place

Ensure Operating Instructions Are Read Prior To Starting Up
ISSUE: V1.0 - June 2023

HORIZON

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1.0 - User Information

1.1 - Preface

This operator's manual covers the metering unit found on our DSX drills and FT2200 front tank. Before commissioning and use of this system, read and comply with the operating instructions within this manual. Please also observe the safety notes and instructions as indicated and retain this document for future reference. All persons working on this system such as operators and maintenance personnel must read and adhere to the instructions and information contained within this manual. By doing this, the risks and hazards personnel will be exposed to will be reduced and decrease the likelihood of accidents and downtime. The operator's manual will also assist in the development of the operator's knowledge of the system and its intended purpose, allowing for the safe and effective operation of the system within its ideal performance window.

All information contained within this manual represents Horizon Agricultural Machinery Ltd's knowledge at the date of publication. Due to the ongoing developmental and improvement process, differences between the system and this operator's manual may occur. If this is the case, please contact your local dealer or Horizon Agricultural Machinery Ltd. directly for assistance or more detailed information. Technical data, weights, illustrations, and instructions may be altered to improve the operation of the system or its representation within this manual. Furthermore, your metering unit may differ to the one featured in manual illustrations due to a difference in model number or the fitting of optional equipment/product updates. Consequentially, some of the contents of this manual may not be relevant for the operator's equipment.

1.2 - Customer Service & Warranty

Horizon Agricultural Machinery Ltd. wants you to be completely satisfied with your machinery and the services we provide. Occasionally problems can occur. Most commonly encountered problems with this system and their solutions are contained within this operator's manual. However, if the fault is not rectified by following the contained procedures or is not discussed in this manual, your local dealer/Horizon Agricultural Machinery Ltd. will be available to assist you.

All our machinery comes with a 24 month* warranty as standard.

*Please refer to the Warranty Administration Manual (WAM) or contact your local dealer for details on how to process claims:

<https://www.horizonagriculture.com/dealer-support>

1.3 - Liability

This system was carefully manufactured by Horizon Agricultural Machinery Ltd. however occasionally small anomalies can occur even during intended usage. These anomalies range from causing deviations in the flow rate of product to total implement shut-down/failure. These anomalies can be caused by excessive part wear, missing or damaged components, incorrect settings and working rates, a lack of maintenance and poor execution of operation, amongst other things.

Therefore it is essential to check for correct function and operation prior to the use of this system and the implement it is fitted to.

2.0 - General Safety Information

Horizon Agricultural Machinery Ltd. have built this system in accordance with the latest technical standards and safety regulations. The risks of injury/death to the operator, third parties or damage to the implement or other material assets can still occur during use.

Please read and comply with all information contained within this manual **prior** to usage of the implement.

2.1 - Intended Use

This implement is designed to seamlessly meter and deliver granular product to seeding or fertiliser implements for extremely accurate seeding. The operator must observe warnings, instructions, notes, and maintenance schedule detailed throughout this owner's manual as well as the implements technical limitations. If any safety defects are detected whilst in operation, they should be immediately addressed.

2.2 - Spare Parts

Any worn or damaged parts should be replaced as soon as possible.

Genuine spare parts and accessories have been designed by Horizon Agricultural Machinery Ltd. specifically for this system. The use or assembly of non-original Horizon Agricultural Machinery Ltd. parts may in some cases have a detrimental effect on the system and your machines intended performance and safety standards.

Horizon Agricultural Machinery Ltd. will not assume any liability for damage caused by the use of non-original parts and accessories.

2.3 - Safety Symbol Representation

This operating manual highlights certain warnings and safety information as shown below. They are categorised based upon the severity of risk (Danger, Warning, Caution). They appear as follows:



DANGER

Indicates a danger with high risk that will result in death or serious bodily harm (such as loss of limb or long term harm) if not avoided.



WARNING

Indicates a danger with medium risk that may result in death or serious bodily harm if not avoided.



CAUTION

Indicates a danger with low risk that will result in injuries if not avoided.

Also included are supplemental markers such as:



IMPORTANT

This marker denotes important information in relation to the implement and highlights this to the user.

2.4 - Procedural Instructions

All procedures throughout the book are numbered consecutively to allow users to easily follow the steps required for maintenance and other tasks.

2.5 - Danger Area & Danger Points

Working on the metering unit system poses a risk as the area immediately surrounding the implement and tractor is hazardous to personnel. Whilst within this zone all personnel should pay attention to the machine status and any moving parts, as failure to pay adequate attention can result in serious injury or even death. The vehicle operator must therefore ensure no personnel are in this zone prior to machine movements or component actuation. Components of the tractor and machine can actuate unexpectedly, impacting personnel causing serious injuries especially if unnoticed by the vehicle operator. Lifted loads and components should be lowered to the ground to reduce the risk of injury and hydraulically lifted components can slowly lower over time causing crushing injuries. It is therefore highly recommended if any work is being carried out the tractor is prevented from restarting even for short term inspections, or if personnel are in the danger area they are advised to move, and the operator ceases work until the area is confirmed safe. If

carrying out maintenance and service work under actuated or lifted components please ensure all appropriate safety measures are taken to eliminate the risk of injury.

Warning stickers are fitted to implements in key areas to highlight dangers applicable in those areas. Hydraulic systems can store residual energy even if the tractor is isolated from restarting. Therefore, information regarding the removal of the residual energy is detailed in the systems or components relevant chapter.

Some components and systems such as the distribution fan are fitted with a guard to reduce the likelihood of injuries. Such guards should always be fitted whilst the implement is in operation and should only be removed when all components have come to rest, and the machine is secured against unexpected start up.

2.6 - Personnel Training

Misuse of agricultural machinery can cause accidents with severe outcomes, such as serious injuries, property damage or even fatalities.

Consequently, only personnel trained and instructed on this implement may work on or with it. This training must occur under the instruction of an experienced operator.

Activity	Personnel Specially Trained for the Activity	Trained Operators	Personnel With Specialist Training
Loading/Transport	X	X	X
Initial Operations/Set up			X
Operations		X	
Maintenance			X
Troubleshooting		X	X
Disposal	X		

Personnel Specially Trained for the Activity - Personnel trained to carry out the required tasks or operations (such as loading/unloading on behalf of a company, for example).

Trained Operators - Personnel trained in the risks of their assigned task(s) and familiar with the required PPE and preventative measures included in this manual to avoid incidents. These personnel can be trained by the implement owner (assuming they are adequately qualified) or other experienced personnel.

Personnel With Specialist Training - These personnel typically have a qualification or relevant experience to understand the risks and dangers posed by their assigned task. Furthermore, they can apply the knowledge of appropriate regulations to their working practices. These personnel can also carry out procedures requiring specialised tooling or equipment.

All personnel must be able to operate the implement in accordance with this owner's manual and be able to appropriately apply the information to their working procedures. Any apprentices or untrained personnel must be closely supervised by an experienced operator. Operators must know road traffic regulations applicable to their country and hold a valid licence when moving the implement and tractor on a public highway. Additionally, operators must be aware of machine functionality and operation to avoid specific dangers relating to the work being undertaken.

Implement owners must make this operator's manual available to all personnel operating or working on this implement, ensuring all personnel are trained and instructed as required.

2.7 - Personal Protective Equipment

Incomplete or missing Personal Protective Equipment (PPE) can increase the risk of injuries, long term health problems and fatalities. PPE includes but is not limited to:

- Protective clothing/tight fitting clothes
- Safety shoes
- Safety gloves
- Eye protection (safety goggles/glasses)
- PPE appropriate for the handling of dressed seed or fertiliser and Liquid fertiliser products (PPE equipment appropriate to the manufacturer's instructions e.g. respirator, safety gloves and eye protection)
- Removal of rings or loose jewellery items as well as securing long hair from entrapment (such as with a hair net or hair tie)

PPE should be effective and in proper working condition prior to usage as well as appropriate for the task being undertaken by the operator. PPE should not hinder the operator's effectiveness to work where such PPE is required.

2.8 - Operational Safety

2.8.1 - Commissioning

The metering unit system should be properly commissioned prior to first usage. Failure to do so can impact the operational safety of the system, placing the operator, other personnel and property at risk of severe damage, injuries or even fatalities. Nuts and bolts should be checked to ensure they are secure. Loose fixings can cause components to detach, negatively impacting the operational safety.

2.8.2 - Damage to the System

Any damage to the system can impact on the operational safety of the equipment. Some components are critical to the operational safety of the equipment and therefore any damage to these must be remedied immediately.

2.8.3 - Field Use

The metering unit's condition and connections should be checked prior to undertaking any field work. Damaged or worn components should be replaced. The operator should check after an initial pass and at regular intervals throughout work that the product is being applied at the rate required.

2.9 - Dressed Seed & Fertiliser

Failure to properly handle fertiliser and dressed seed can cause poisoning and even death. Fertiliser and dressed seed should be stored as per the manufacturer's instructions when not in use. All information and instructions on the product manufacturer's safety data sheet should be followed, asking the supplier/manufacturer for a copy if necessary. The appropriate PPE can then be determined for usage whilst handling the product.

2.10 - Environmental Protection

Consumables such as Hydraulic oil, lubricants and other products can be hazardous to personnel health and damaging to the environment. These consumables must not spill or drain out into the environment. Should these products spill into the environment they must be recovered using absorbent materials or sand. These contaminated absorbent materials should then be disposed of in accordance with local regulations.

2.11 - Care & Maintenance

The metering unit system typically requires minimal maintenance, however it is important to regularly check components are not heavily worn or damaged. Consequently, it is highly recommended the operator follows the maintenance plan found in **section 14.0** to service the system at the recommended intervals. Advice for how the work is undertaken on commonly replaced components is included throughout this manual. For components not covered within this document, consult the manual for your implement or contact Horizon Agricultural Machinery Ltd. in case there are specific handling procedures or risks posed through this component's replacement. As such this service work must only be carried out by an authorised workshop or operator trained by Horizon Agricultural Machinery Ltd. for this purpose. When performing maintenance and replacing parts the implement must be secured on firm and level ground with all hydraulic and pneumatic systems de-pressurised, and electrical connections isolated prior to any work being undertaken. Raised components should be lowered or secured prior to work being undertaken underneath them.

When utilising a high-pressure cleaner, avoid areas around hydraulic seals, electrical components, bearings seals or the fan. It is also recommended that the nozzle outlet maintains at least 50cm clearance from the machine during cleaning operations. Seed dressings and fertilisers can contaminate surfaces and components (seed boots, hoppers, and the metering system). Therefore it is recommended to use the manufacturer's recommended PPE whilst working or cleaning these areas.

2.12 - Modification & Conversions

Any structural changes, modifications or conversions require the written approval of Horizon Agricultural Machinery Ltd. Structural changes may affect the function and operational safety of the metering unit system and the implement it attaches to. Any modifications made without the prior written approval will void any warranty claim. Horizon Agricultural Machinery Ltd. will not assume any liability for damages caused by unapproved changes, modifications or conversions. Any modifications approved by Horizon Agricultural Machinery Ltd. must be performed at an authorised workshop, or by an operator trained by Horizon Agricultural Machinery Ltd.

3.0 - Operations



IMPORTANT: Whenever working on the metering unit pay attention to the warning instructions.

It is essential to ensure that there are no air leaks from your implement as loss of pressure will lead to inaccurate metering. Make sure to check seals and moving parts for leaks after any maintenance or operating procedures to ensure the metering unit is working properly.

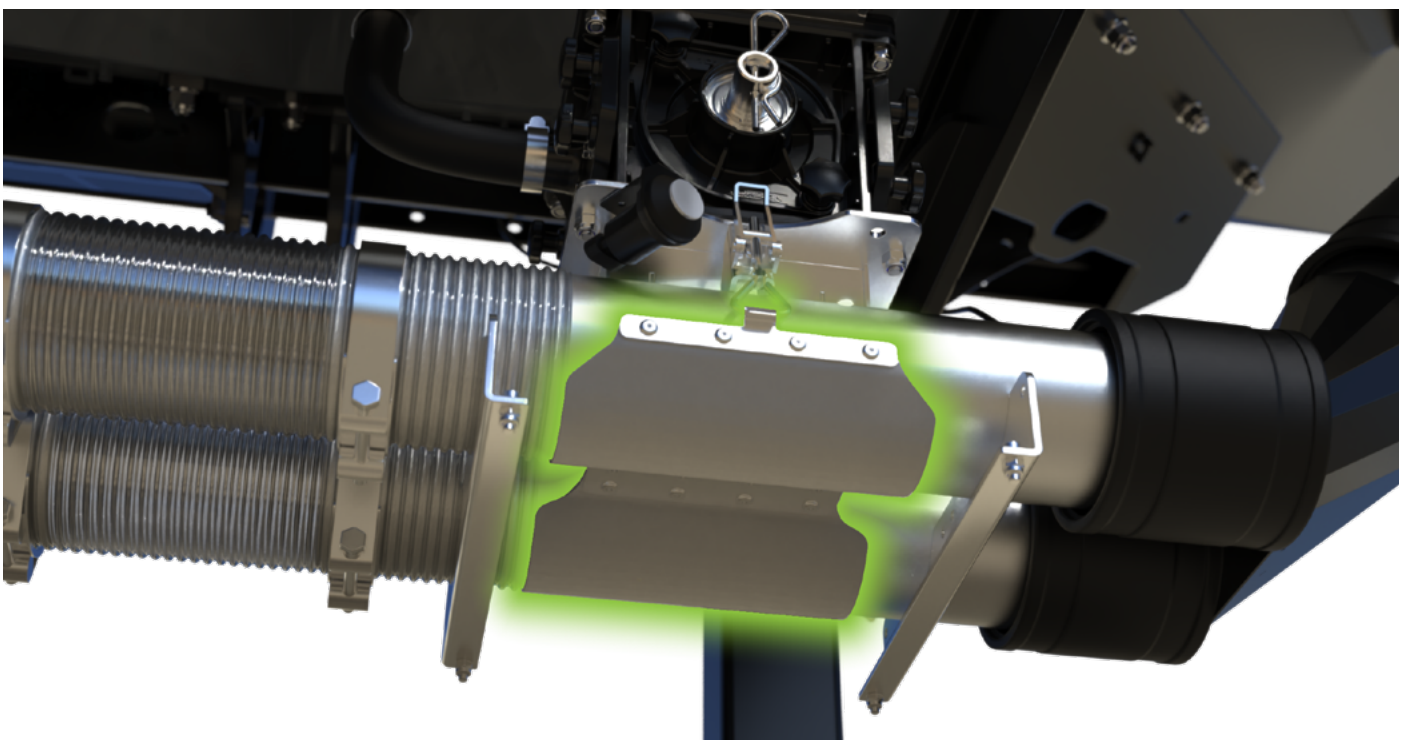
3.1 - Injector Box Assembly

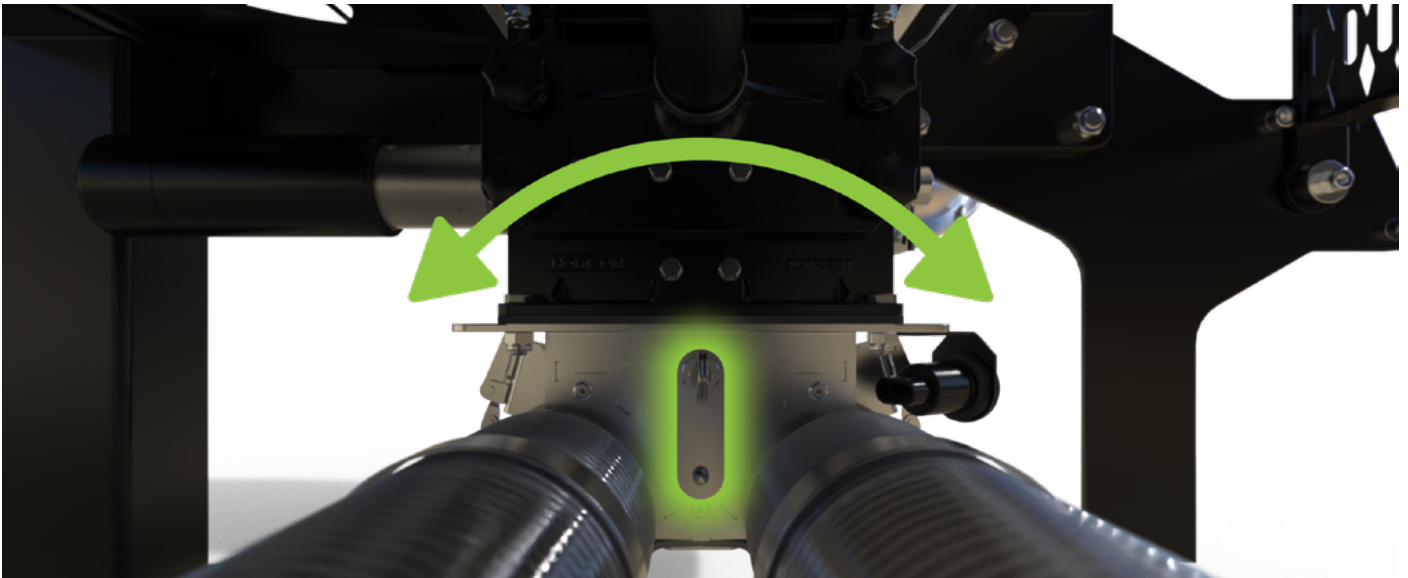
At the bottom of the metering unit is the injector box assembly. Seed metered by the metering unit assembly is picked up by the airflow from the fan, pulling the seed away from the metering unit and towards the distribution heads of your attached implement.

When calibrating, the polyurethane flap found underneath the injector box assembly is opened to allow seed to pass through. Without the fan running, the seed drops out through the opening at the bottom of the injector box assembly to allow for proper calibration. Once calibration is completed this opening must be closed tightly again. The polyurethane flap is designed to seal the injector box and allow for the seed to be picked up by the airflow and carried towards your implement for distribution.

When cleaning, open the polyurethane flap to allow product and water to flow through and empty properly.

Once the flap has been opened for either calibration or emptying the meter/hopper of product the flap must be resealed tightly.

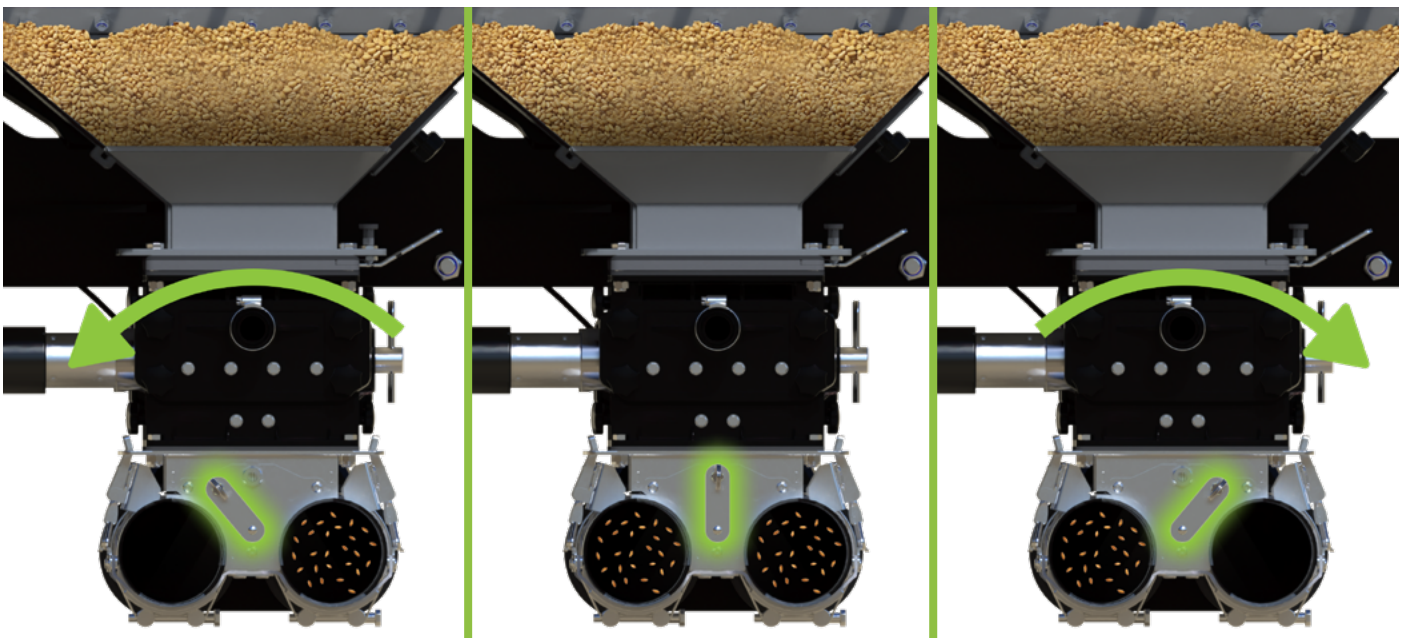




Each meter injector box assembly is also equipped with a selection lever. This lever can be adjusted to control the distribution of product to an attached drill implement.

When the lever is in the centred position product flows into both distribution heads. When being used in this application the metering rotors must be symmetrical to allow for accurate rate application.

With the lever adjusted to one side the product will be introduced to the airflow on the side opposite of the lever. For example, with the lever to the right of the machine product will be distributed to the left-hand tube.



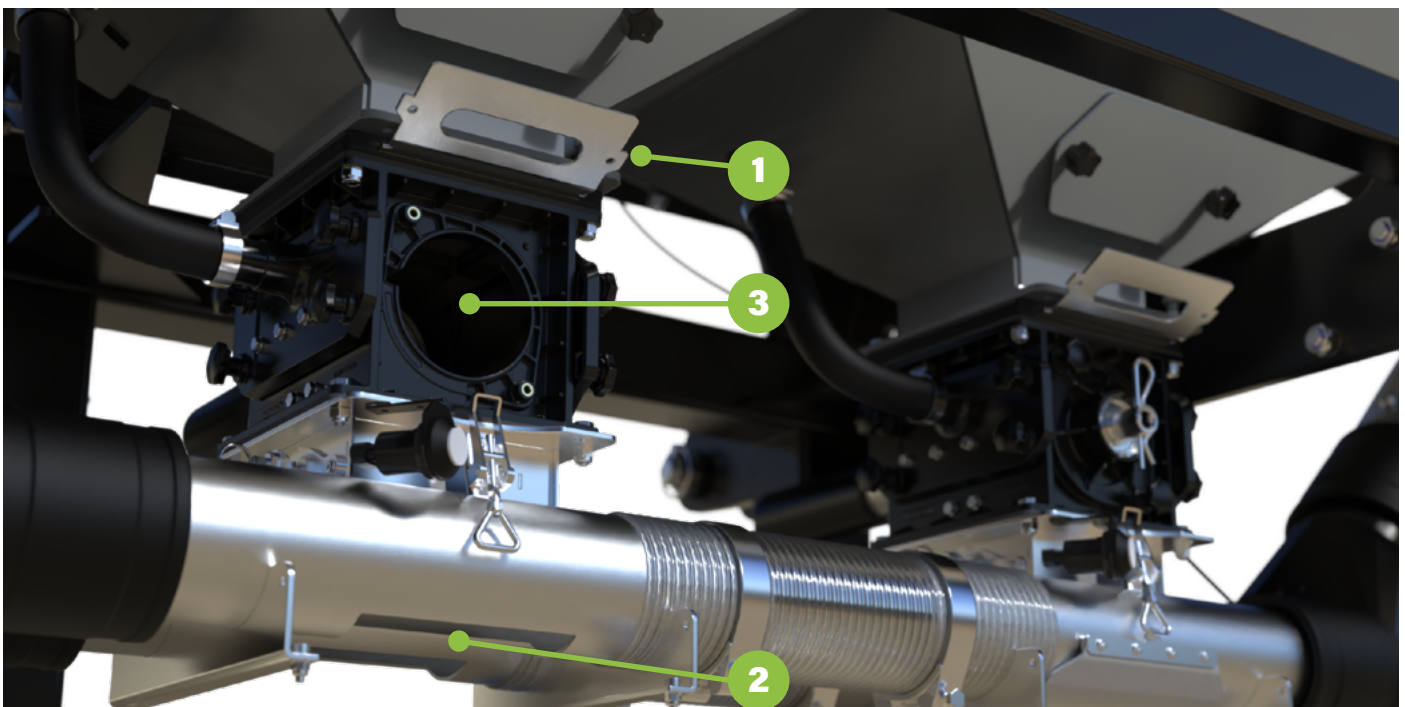
The distribution heads can be plumbed in two different ways, allowing for selective seeding. This means the right distribution head can feed to the rear coulters whilst the left-hand distribution head feeds the front coulters. In this configuration the levers can be used to selectively route the product located in each hopper to the correct distributor head.

Certain machines are plumbed without selective seeding (typically at the customer's request). In this application each distributor tower feeds one side of the machine's coulters. Using the lever

to adjust the seed flow therefore allows for half the machine to be shut off. Please note for half machine shut off the application rate would need to be halved whilst the levers are in this position to maintain the required application rate. The levers are also manually activated, and therefore must be readjusted and the rate reset if returning to full width operations.

3.2 - Unloading the Hoppers

1. If the implement is attached to a tractor, the tractor should be turned off with the parking brake applied and the ignition key removed.
2. Place a big bag, seed sock or other suitable catchment container underneath the hopper. Ensure catchment container is under the injector box assembly.
3. Make sure the guillotine is in the maintenance position. If it is in the working position, remove it and secure it in the maintenance position following the instructions in **section 3.5.4** (1).
4. Open the polyurethane flap at the bottom of the injector box assembly under the meter (2).
5. Undo the plastic knobs holding the front plastic bearing housing on and remove the retaining R-clip.
6. Remove the front bearing housing and remove the metering wheel from inside the metering unit.

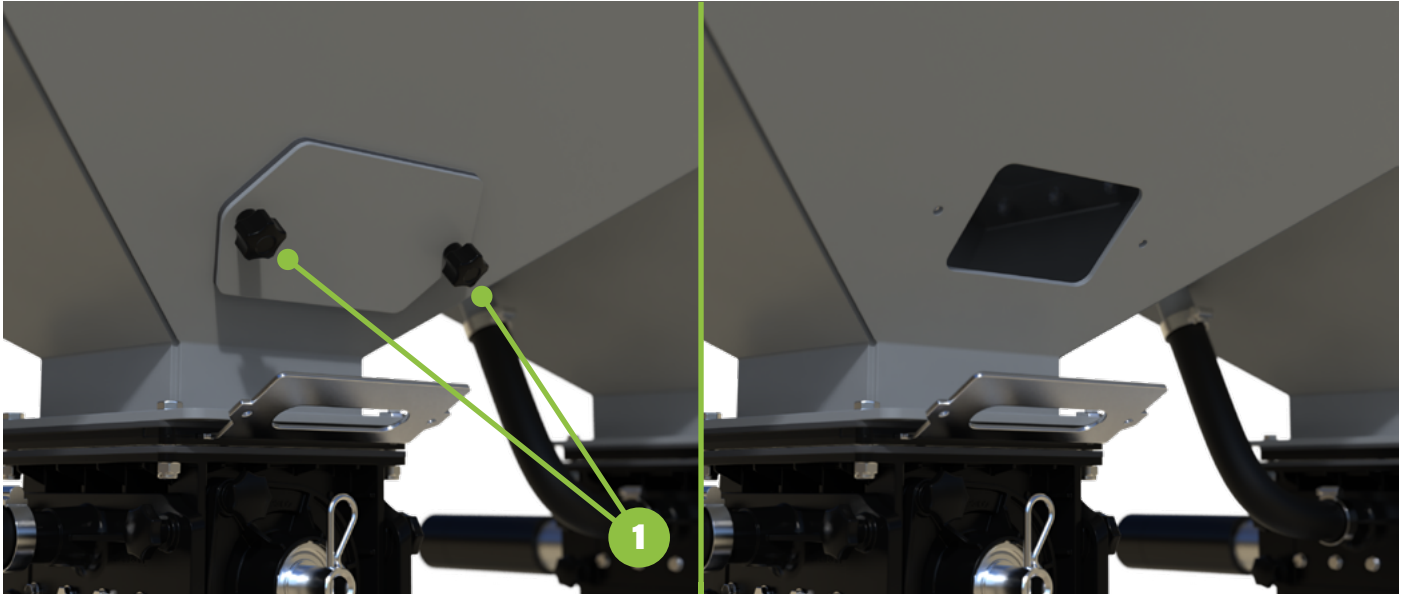


7. Remove the guillotine and allow the product to flow out of the hopper, draining into your catchment container.
8. Once all the product has drained and you have checked for any remaining pieces, reinsert the guillotine and close the polyurethane flap. Reinsert the metering wheel and secure it in place by attaching the front bearing housing, two plastic knobs and retaining R-clip.

Make sure to move the catchment container away from underneath the hopper prior to moving the implement.

3.3 - Opening the Inspection Hatch

Our hoppers are fitted with inspection hatches to aid cleaning and help operators diagnose problems with the metering unit. The hatches can be opened by unscrewing the plastic knobs (1) holding the hatch on either side. When the hatch is reattached, ensure it is secured tightly and does not allow any leaks that may lead to a loss of pressure.



3.4 - Fan Checks & Maintenance



WARNING - There is a significant risk of injury from the fan when it is running. **Never** run the fan without its protective shroud installed. Only dismantle the protective grille when the fan is stopped and isolated from restarting.

Clean the protective grille regularly to prevent debris build up that would lead to a restriction in airflow and possible blockage. Using compressed air for this purpose is recommended

Clean any deposits and dirt from the fan blades to prevent imbalance and damage to the impeller and bearings. Most soiling should be easily removed with compressed air (If the material is dry) for more stubborn soiling of the fan guard it is recommended to utilise a high-pressure water cleaner and allow the distribution piping to dry prior to usage.

3.4 - Metering

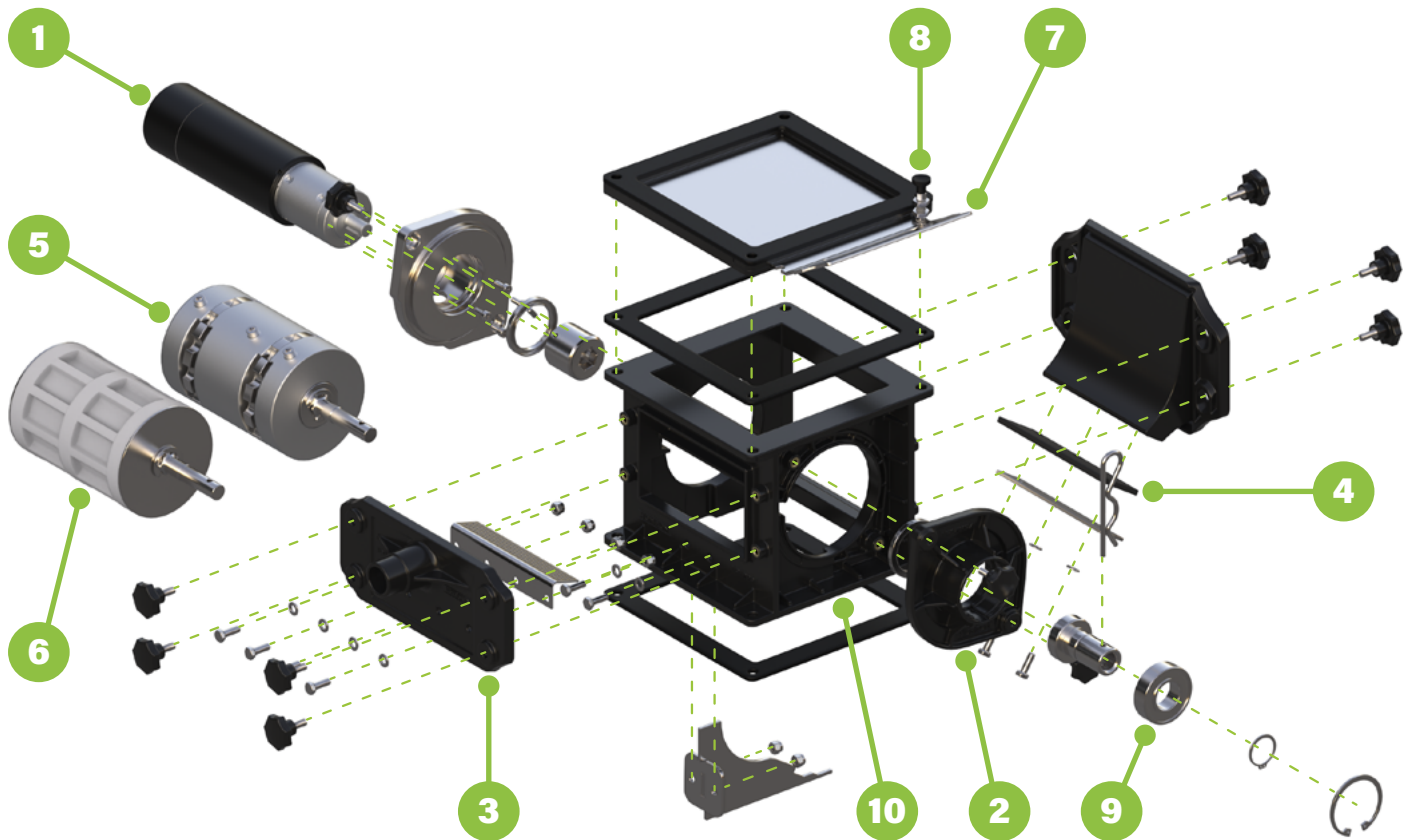
The metering unit system and guillotine is positioned under the hopper. The guillotine is used to contain product in the tank if the metering rollers need to be removed for calibration.

The drive motor turns the rotor and meters product out of the tank and into the air stream provided by the fan.

Rotors can be changed to use different sized flutes, depending on seed size and rates.

The rubber scraper prevents excessive seed from passing the rotor. The scraper can be readjusted closer to the rotor for smaller product and further away for larger product.

3.5.1 - Metering Overview



- | | |
|------------------------------------|---------------------|
| 1. Drive Motor | 6. Metering Rollers |
| 2. Front and Rear Bearing Housings | 7. Guillotine |
| 3. Vent Chamber | 8. Plunger |
| 4. Rubber Scraper | 9. Bearing |
| 5. Small Seed Metering Rollers | 10. Meter Housing |

3.5.2 - Rubber Scraper

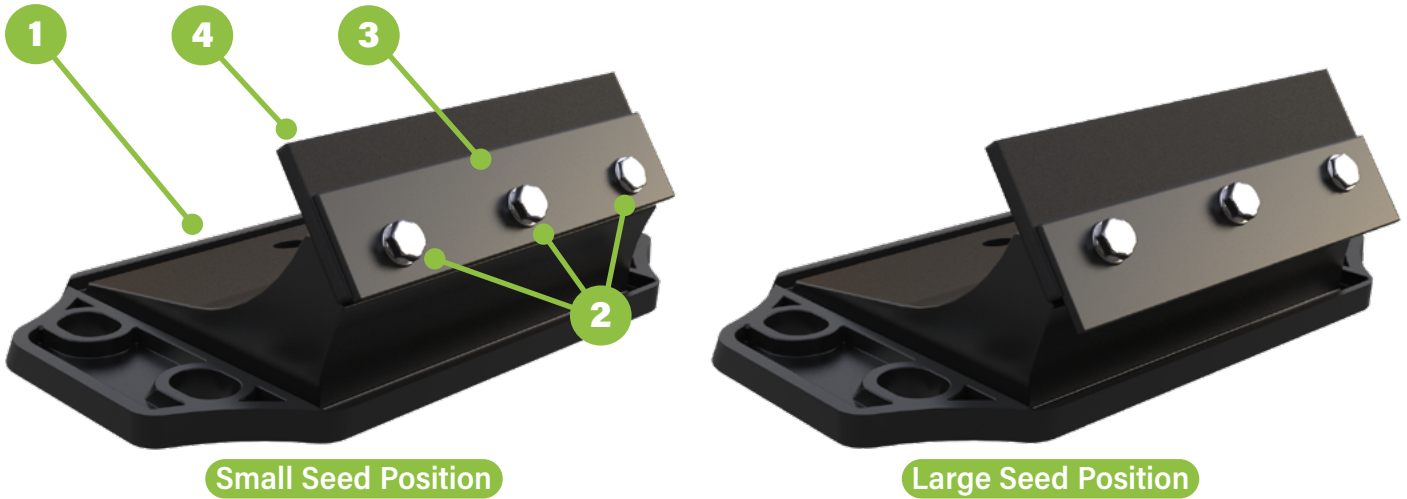
The rubber scraper in the metering unit has 3 positions depending upon the type of seed being used. One position is for smaller seed and granular products, whilst the other two are for larger seeds. The position of the clamping plate determines which configuration the scraper is in.



IMPORTANT: The scraper is a wearing item and must be regularly checked and periodically replaced. Best practice is to inspect prior to the start of each drilling season.



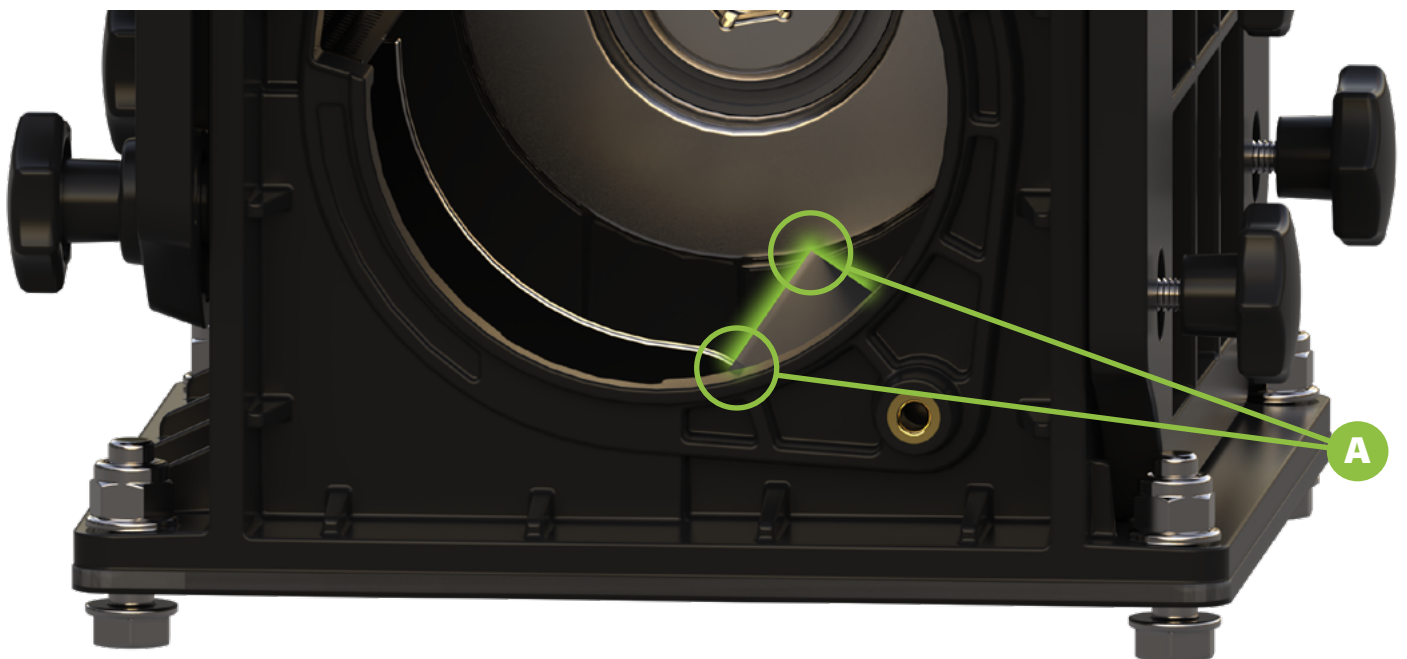
IMPORTANT: Incorrect setup and calibration of the rubber scraper can cause high motor loading (producing error codes or incorrect seeding rates).



- | | |
|-----------------|-------------------|
| 1. Scraper Door | 3. Plate |
| 2. Bolts | 4. Rubber scraper |

Adjusting the scraper:

1. Remove rotor from housing.
2. Remove the 4 x thumb screws and scraper door (1) from the housing
3. Remove the 3 x bolts (2) and flip the plate (3) 180° to expose more or less of the rubber (4).
4. Install the scraper door into the meter housing.



A. 1mm Above Meter Housing

5. For its standard position, adjust the rubber so it extends 1mm into the rotor cavity (A). For larger product like peas and beans see **section 3.5.3**
6. Remove the scraper door.
7. Verify the rubber is even across the width.
8. Replace scraper door and tighten the bolts thoroughly, then install the rotor.

3.5.3 - Adjusting the Rubber Scraper for Peas and Beans

For the largest product sizes like peas and beans, the scraper needs to be adjusted to its largest seed position. Peas and beans are coarser than more typical seeds, leading to the metering unit being more susceptible to blocking and putting heightened strain on the drive motor, as well as leading to inaccurate metering.

Adjusting the scraper for peas and beans can be done following the steps on the previous page, whilst ensuring that the rubber piece is mounted as low as it's slots will allow (illustrated in the graphics below). The clamping plate should then be reattached in its large seed position.

Note that the rubber scraper depicted below has its clamping plate removed, but the clamping plate should always be reattached before reinstalling in the metering unit housing.



3.5.4 - Guillotine

As part of the metering assembly above the rotor chamber there is a stainless steel guillotine door. It has 2 positions:

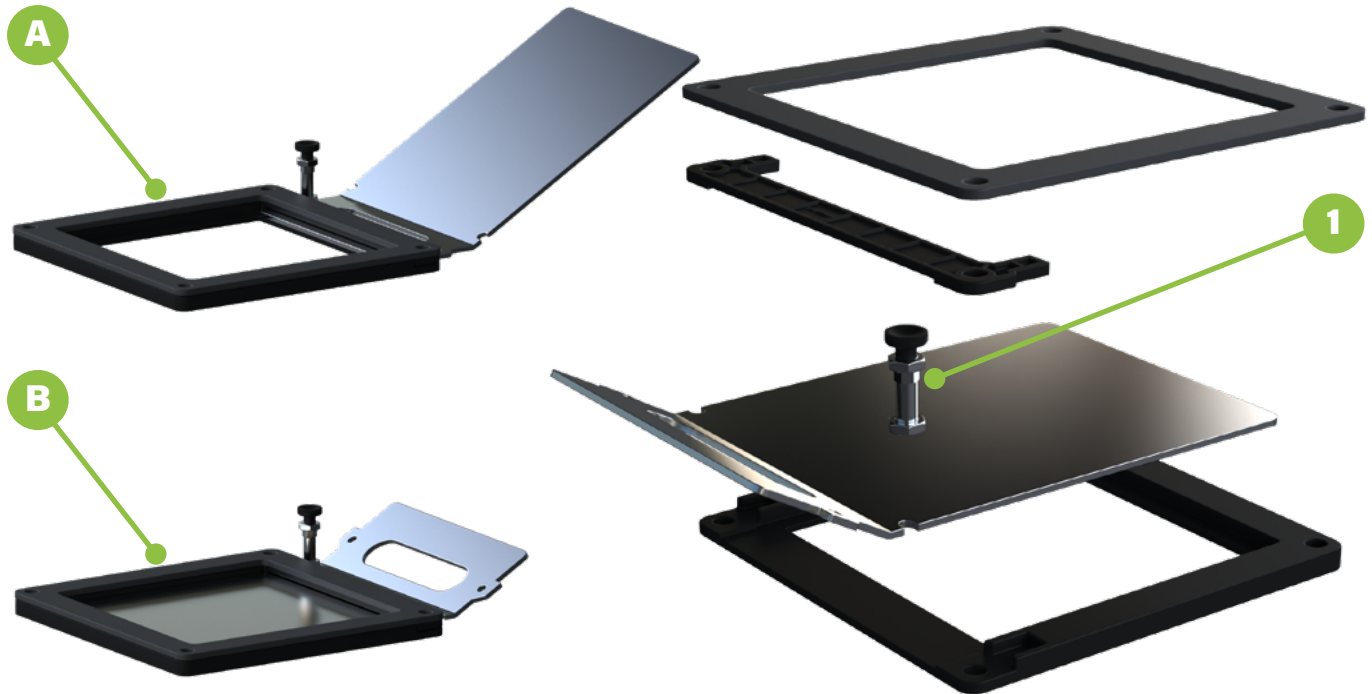
- A. Working position** - Guillotine is in the outward position allowing product to flow to the metering housing
- B. Maintenance position** - Guillotine is in the inward position stopping the flow of product to the metering assembly to allow for easier maintenance work to be undertaken



IMPORTANT: The door must always be in one of the 2 positions listed above. If removed completely during work there will be a loss of tank pressure, resulting in poor metering performance.

Working Position (A)

1. Pull plunger (1) to release the lock and slide the door rearward and remove the door from the housing
2. Rotate 180° so the short edge engages with the opening
3. Lift Plunger (1) and slide the door into position until aligned with the locking plunger



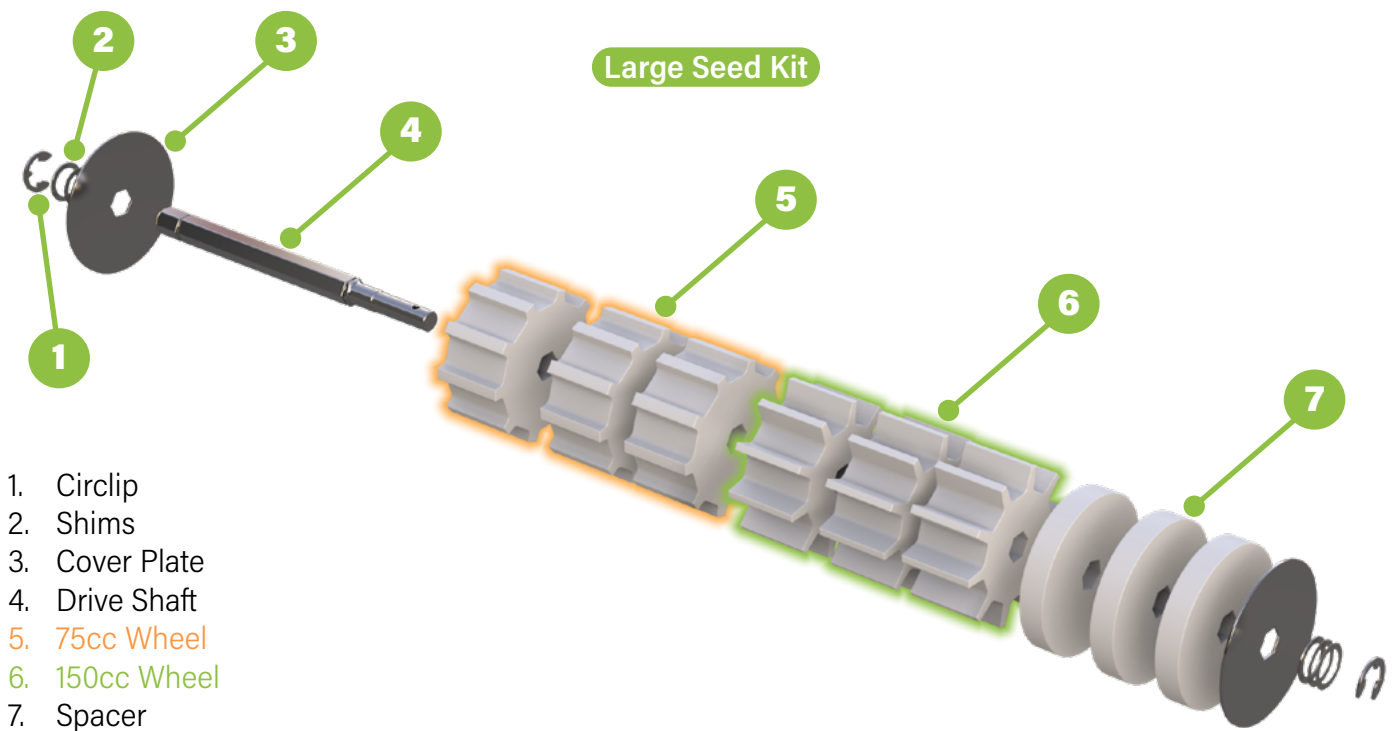
Maintenance Position (B)

1. Pull plunger (1) to release the lock and slide the door rearward and remove the door from the housing
2. Rotate 180° so the long edge engages with the opening
3. Lift Plunger (1) and slide the door into position until aligned with the locking plunger. Once fully engaged it is possible to remove the rollers with product still in the tank.

3.5.5 - Small Seed and Large Seed Rotor Kit

All meters are supplied with a small seed and large seed kit. The large seed kit comes with 3 x 75cc and 3 x 150cc metering wheels and 3 x spacer wheels as standard, allowing you to assemble a 150cc, 225cc, 300cc and 450cc metering rotor. The small seed kit is supplied with 2 x 2.5cc and 2 x 7.5cc metering wheels, allowing you to assemble a 5cc or 15cc metering rotor.

For tables with information on identifying the correct rotor for your operation see **section 4.0**. To see all the metering units with their part numbers and exploded views, see **section 13**.



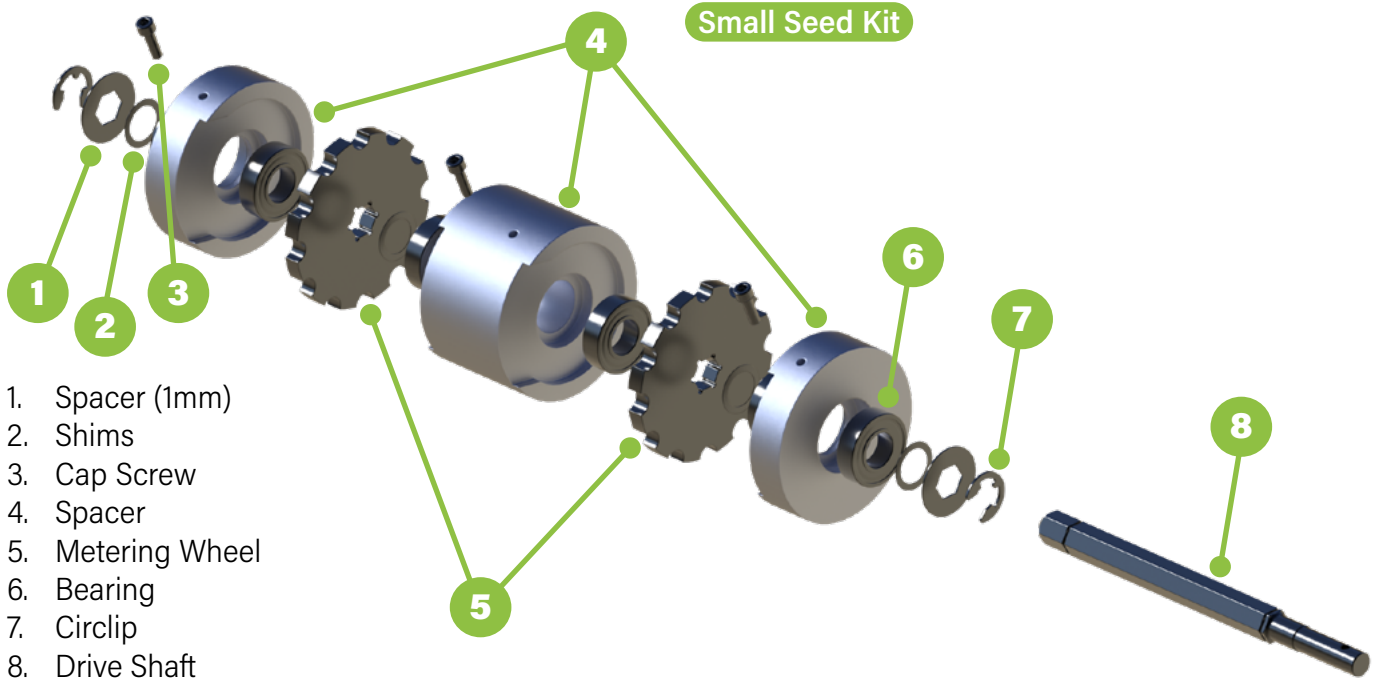
1. Circlip
2. Shims
3. Cover Plate
4. Drive Shaft
5. 75cc Wheel
6. 150cc Wheel
7. Spacer

Metering Rollers Adjustment

1. Slide guillotine to close tank outlet if tank contains product (see **section 6.5.3**).
2. Remove rotor from meter housing.
3. Carefully remove the circlip (1) and shims (2) using a flat blade screwdriver.
4. Remove the stainless-steel cover disc (3) and meter wheels off the drive shaft (4).
5. Replace the meter wheels (5) with the desired size.
6. If using two meter wheels instead of all three, use 3 x spacers in the centre position.
7. Install the cover plate (3) and enough shims (2) to ensure the circlip (1) is a tight fit.
8. Insert rotor into meter housing and secure with the two thumb screws.
9. Complete calibration (see calibration).

For a breakdown of the different rotors see **section 13**.

Note when assembling fine seed metering rotors from the small seed kit (**referencing image on the right hand side**) make sure that the shims (2) are correctly installed so that the wheels (5) turn smoothly. If the shims are not correctly installed, the wheels will rub against the spacer housing (4) causing increased wear on the drive motor and inaccurate metering, and could lead to component failure. The wheels should turn easily without any noticeable friction.



- 1. Spacer (1mm)
- 2. Shims
- 3. Cap Screw
- 4. Spacer
- 5. Metering Wheel
- 6. Bearing
- 7. Circlip
- 8. Drive Shaft

3.5.6 - Calibration

For detailed information please refer to Section 5 - Product Calibration of the supplementary Operators Manual - Calibration and Operation.



CAUTION: Rotating parts can catch on loose clothing and inflict injury.



CAUTION: Wear safety equipment to protect from seed dressing, dust and foreign material entering eyes, ears, and airways as per manufacturers instructions.



CAUTION: Implement must be parked on solid ground and secure from falling or dropping to prevent a risk of crushing.



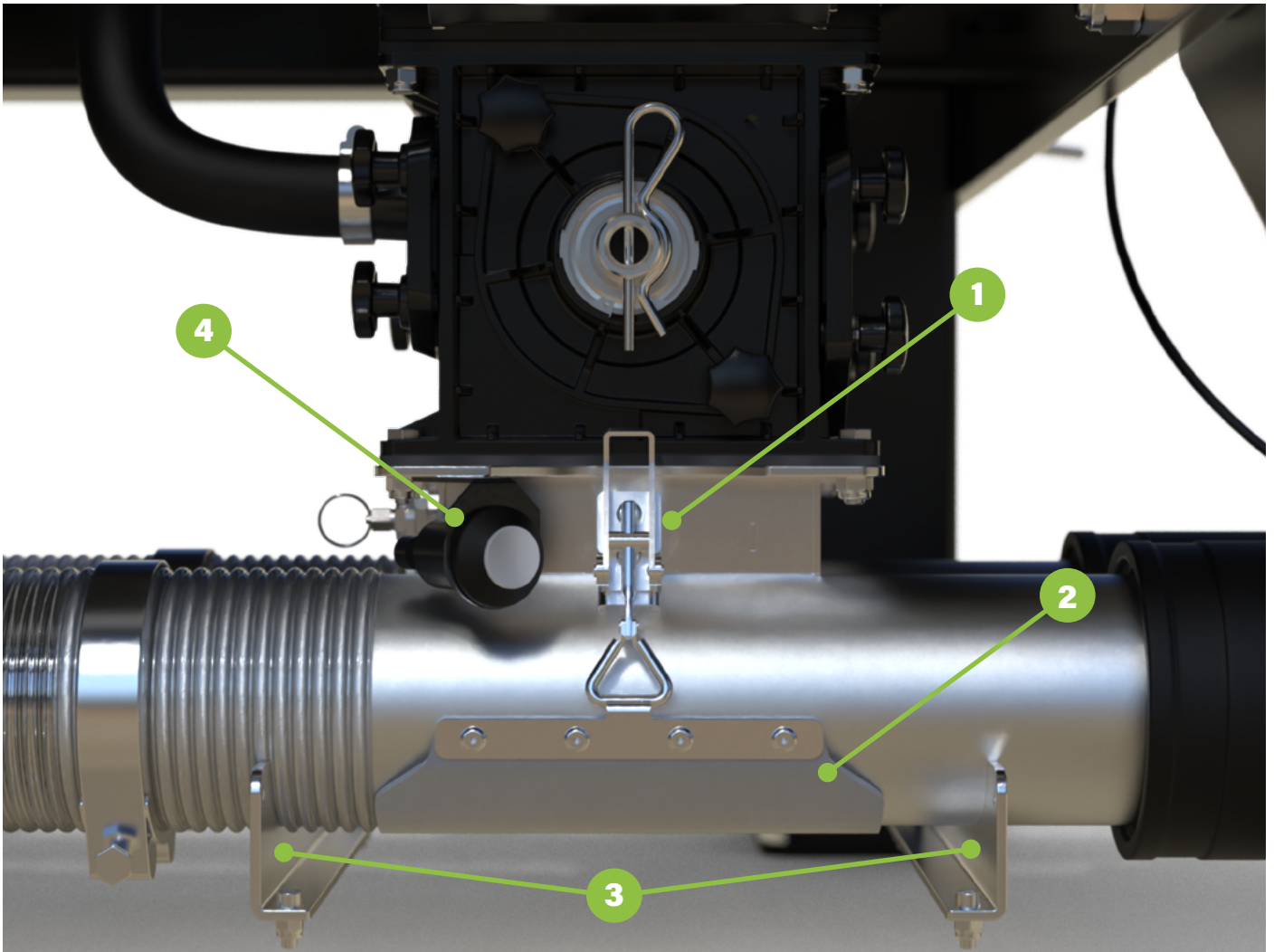
IMPORTANT: It is not necessary for the tractor to be running to complete calibration.



IMPORTANT: Some types of seed dressing can coat components in residue, which can affect calibration and meter performance.



IMPORTANT: Seed that has not been cleaned contains small lengths of straw, chaff, and other residue. This can cause metering issues and blockages.



Calibration Preparation

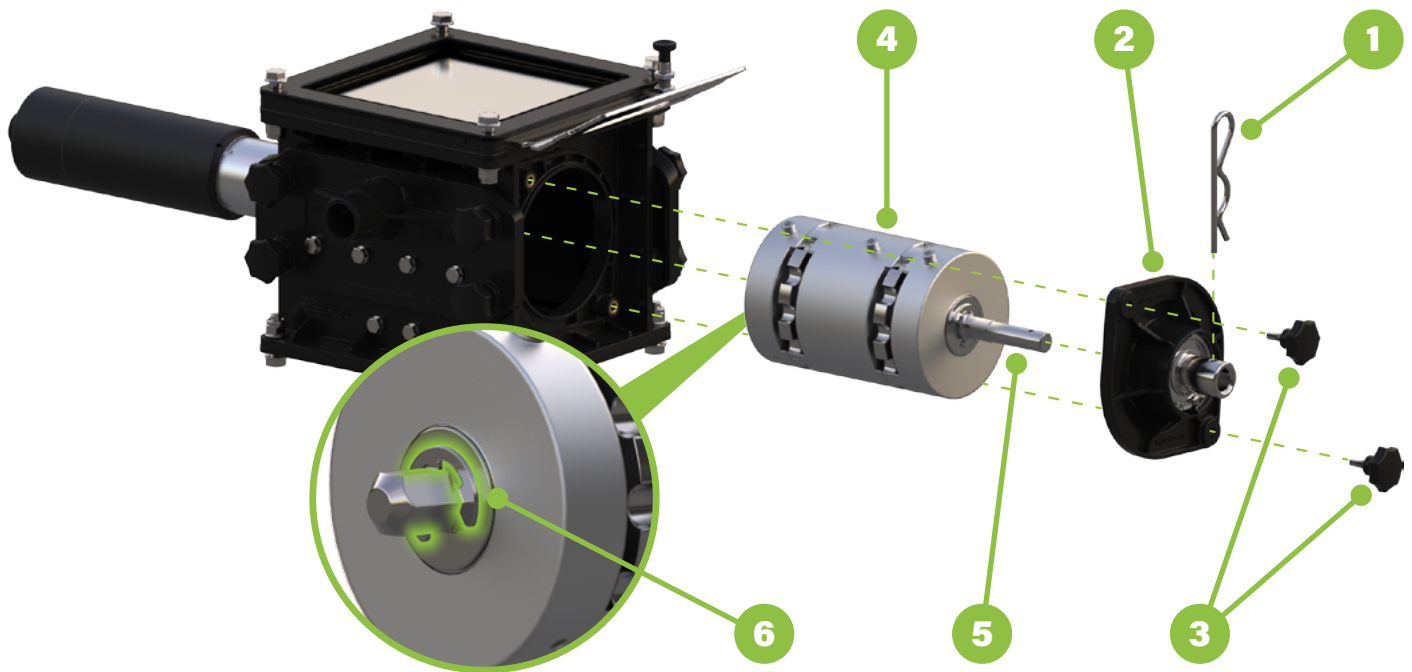
1. Make sure the implement is parked on level ground and if attached to a tractor ensure the parking brake is engaged.
2. Make sure the fan is disengaged and isolated from restarting.
3. Pull the over-centre clamps (1) to open the polyurethane flap (2) on either side of the injector box.
4. Place the calibration bag under the injector box outlets using the side rails (3).
5. Follow the RDS calibration procedure: Press calibration switch (4) for 1 second to start and stop motor.
6. Adjust metering rotor as required.
7. After a successful calibration, lock the rubber covers (2) into position.

The image above depicts a metering unit mounted on a FT2200 front tank, but the same procedure applies to DSX metering units as well.

3.5.7 - Changing Metering Wheels

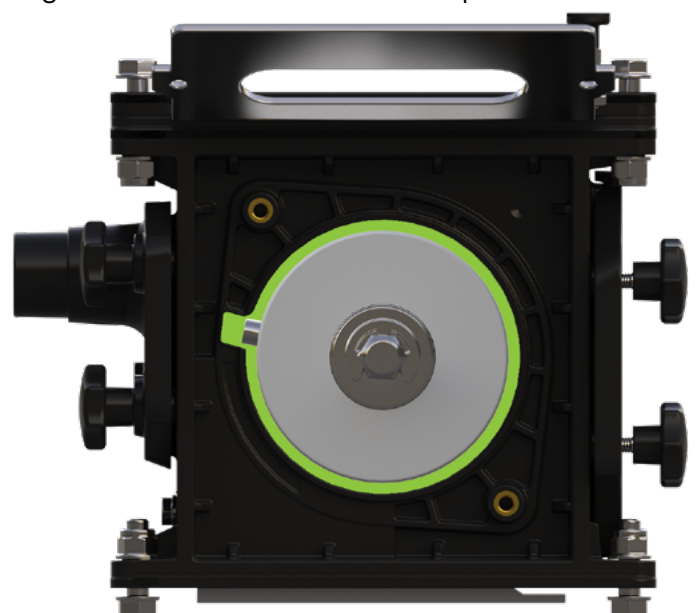
Once the appropriate metering wheel for your desired application is identified, it needs to be fitted to the metering unit. The process is simple and does not require any tools.

1. Make sure the implement is parked on level ground and if attached to a tractor ensure the parking break is engaged. Check the fan is disengaged and isolated from restarting.
2. Unscrew the two plastic knobs (3) holding the front bearing housing in place.
3. Remove the knobs and pull the front bearing housing piece away from the metering unit.
4. Remove the retaining R clip and pull the metering wheel away from the front bearing housing.
5. Pull the metering wheel assembly (4) out, using the drive-shaft (5) as a handle.



6. Remove the E-clip (6) from the shorter end of the metering wheel and pull the drive shaft through to separate the metering wheel from the drive shaft.
7. Insert the drive shaft through the required metering wheel and reattach the E-clip.
8. Seat the metering wheel back into the metering unit assembly, ensuring the short end is fitted properly into the hexagonal slot in the drive motor housing.
9. Re-attach the front bearing housing, fixing it in place with the threaded plastic knobs and insert the retaining R-clip.

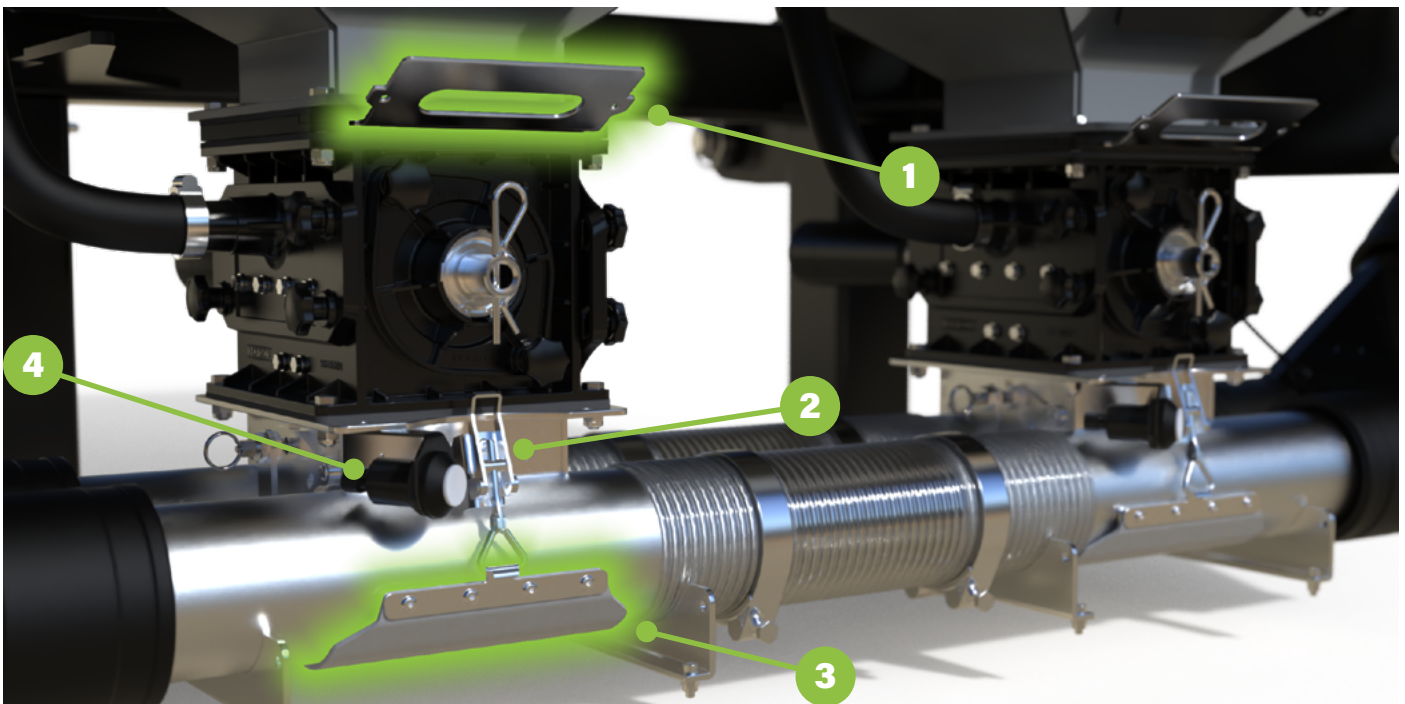
Note that for metering wheels with protruding bolts like the one shown above, the bolts must be slotted into the metering unit housing through the cut out provided. This correct orientation is shown in the graphic to the right.



3.5.8 - Changing Metering Wheels With a Full Hopper

The guillotine above the metering unit and polyurethane flap under the injector box assembly allow for metering wheels to be changed while there is still product in the tank. This process can be performed following the steps below:

1. Park the tractor on level ground and apply the park brake.
2. Make sure the fan is disengaged and isolated from restarting.
3. Remove the guillotine (1) from its working position and insert it in its maintenance position, making sure it is seated fully. If the guillotine is not seated fully, product will be spilt when attempting to change the metering wheel.
4. Pull the over-centre clamps (2) to open the polyurethane flap (3) on either side of the injector box assembly.



5. If the implement is hitched to a tractor and has its Anderson connector attached, blip the RDS calibration button (4) to turn the motor and empty out any remaining product. If the implement is not connected to a tractor or has its Anderson connector disengaged, the metering wheel will have to be removed before emptying the excess product.
6. Once all excess product has been removed from the metering unit, reattach the polyurethane flap and follow the process detailed in **section 3.5.7** to remove the previously used metering wheel and replace it with the newly selected wheel.

4.0 - Application Rate Table Guide

Our metering units ship with a variety of metering wheels that can be fitted to meet the requirements of your operation. Choosing the right metering wheel depends on the desired application rate (kg/ha), working speed (km/h) and working width (m) of your implement.


We have calculated and provided tables to help you determine the right metering wheel for your operation. These tables include a recommended minimum and maximum kg/ha, as well as a lower and upper limit based on the limitations of the fan.

We recommend operating within the recommended window for the best results. Operating outside of these parameters may lead to inconsistent metering, as the fan may hit its maximum or minimum RPM leading to the application rate varying and not meeting the operators requirements.

Our table breaks down the bulk density of seed/product into three categories:

- Light seed - Any seed weight up to and including 500kg/m³ e.g. oats and rape seed
- Heavy seed - Any seed weight more than 500kg/m³ up to and including 750kg/m³ e.g. wheat and barley
- Fertiliser - Calculated at around 1000kg/m³

Width of your DSX/Drill Density of your seed/product

4 Meter Working Width	LIGHT SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
	5	1.0	1.6	5.2	6.3
	7.5	0.7	1.0	3.5	4.2
	10	0.5	0.8	2.6	3.1
	12.5	0.4	0.6	2.1	2.5
	15	0.3	0.5	1.7	2.1

Thumbnail image of the specified metering wheel with name and part number

Recommended application rate range








Limit based application rate range


4 Meter - Section 5.0
4.8 Meter - Section 6.0
6 Meter - Section 7.0
6.4 Meter - Section 8.0

7.2 Meter - Section 9.0
7.5 Meter - Section 10.0
8 Meter - Section 11.0
9 Meter - Section 12.0



5.0 - 4m Working Width Application Rate Table









5.1 - LIGHT SEED Application Rates



4 Meter Working Width	LIGHT SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	1.0	1.6	5.2	6.3
	7.5	0.7	1.0	3.5	4.2
	10	0.5	0.8	2.6	3.1
	12.5	0.4	0.6	2.1	2.5
	15	0.3	0.5	1.7	2.1
 <p>10cc A2 1014351</p>	5	2.1	3.1	10.4	12.5
	7.5	1.4	2.1	6.9	8.3
	10	1.0	1.6	5.2	6.3
	12.5	0.8	1.3	4.2	5.0
	15	0.7	1.0	3.5	4.2
 <p>15cc A2 1014352</p>	5	3.1	4.7	15.6	18.8
	7.5	2.1	3.1	10.4	12.5
	10	1.6	2.3	7.8	9.4
	12.5	1.3	1.9	6.3	7.5
	15	1.0	1.6	5.2	6.3
 <p>30cc A2 1017875</p>	5	6.3	9.4	31.3	37.5
	7.5	4.2	6.3	20.8	25.0
	10	3.1	4.7	15.6	18.8
	12.5	2.5	3.8	12.5	15.0
	15	2.1	3.1	10.4	12.5
 <p>50cc Plastic 1017555</p>	5	10.4	15.6	52.1	62.5
	7.5	6.9	10.4	34.7	41.7
	10	5.2	7.8	26.0	31.3
	12.5	4.2	6.3	20.8	25.0
	15	3.5	5.2	17.4	20.8
 <p>100cc Plastic 1014245</p>	5	20.8	31.3	104.2	125.0
	7.5	13.9	20.8	69.4	83.3
	10	10.4	15.6	52.1	62.5
	12.5	8.3	12.5	41.7	50.0
	15	6.9	10.4	34.7	41.7
 <p>150cc Plastic 1014249</p>	5	31.3	46.9	156.3	187.5
	7.5	20.8	31.3	104.2	125.0
	10	15.6	23.4	78.1	93.8
	12.5	12.5	18.8	62.5	75.0
	15	10.4	15.6	52.1	62.5

 <p>225cc Plastic 1014250</p>	5	46.9	70.3	234.4	281.3
	7.5	31.3	46.9	156.3	187.5
	10	23.4	35.2	117.2	140.6
	12.5	18.8	28.1	93.8	112.5
	15	15.6	23.4	78.1	93.8
 <p>300cc Plastic 1014251</p>	5	62.5	93.8	312.5	375.0
	7.5	41.7	62.5	208.3	250.0
	10	31.3	46.9	156.3	187.5
	12.5	25.0	37.5	125.0	150.0
	15	20.8	31.3	104.2	125.0
 <p>450cc Plastic 1014252</p>	5	93.8	140.6	468.8	562.5
	7.5	62.5	93.8	312.5	375.0
	10	46.9	70.3	234.4	281.3
	12.5	37.5	56.3	187.5	225.0
	15	31.3	46.9	156.3	187.5
 <p>600cc Plastic 1014253</p>	5	125.0	187.5	625.0	750.0
	7.5	83.3	125.0	416.7	500.0
	10	62.5	93.8	312.5	375.0
	12.5	50.0	75.0	250.0	300.0
	15	41.7	62.5	208.3	250.0
 <p>750cc A2 1018780</p>	5	156.3	234.4	781.3	937.5
	7.5	104.2	156.3	520.8	625.0
	10	78.1	117.2	390.6	468.8
	12.5	62.5	93.8	312.5	375.0
	15	52.1	78.1	260.4	312.5

5.2 - HEAVY SEED Application Rates








4 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	1.6	2.3	7.8	9.4
	7.5	1.0	1.6	5.2	6.3
	10	0.8	1.2	3.9	4.7
	12.5	0.6	0.9	3.1	3.8
	15	0.5	0.8	2.6	3.1
 <p>10cc A2 1014351</p>	5	3.1	4.7	15.6	18.8
	7.5	2.1	3.1	10.4	12.5
	10	1.6	2.3	7.8	9.4
	12.5	1.3	1.9	6.2	7.5
	15	1.0	1.6	5.2	6.3

4 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>15cc A2 1014352</p>	5	4.7	7.0	23.4	28.1
	7.5	3.1	4.7	15.6	18.8
	10	2.3	3.5	11.7	14.1
	12.5	1.9	2.8	9.4	11.3
	15	1.6	2.3	7.8	9.4
 <p>30cc A2 1017875</p>	5	9.4	14.1	46.9	56.3
	7.5	6.3	9.4	31.3	37.5
	10	4.7	7.0	23.4	28.1
	12.5	3.8	5.6	18.8	22.5
	15	3.1	4.7	15.6	18.8
 <p>50cc Plastic 1017555</p>	5	15.6	23.4	78.1	93.8
	7.5	10.4	15.6	52.1	62.5
	10	7.8	11.7	39.1	46.9
	12.5	6.3	9.4	31.3	37.5
	15	5.2	7.8	26.0	31.3
 <p>100cc Plastic 1014245</p>	5	31.3	46.9	156.3	187.5
	7.5	20.8	31.3	104.2	125.0
	10	15.6	23.4	78.1	93.8
	12.5	12.5	18.8	62.5	75.0
	15	10.4	15.6	52.1	62.5
 <p>150cc Plastic 1014249</p>	5	46.9	70.3	234.4	281.3
	7.5	31.3	46.9	156.3	187.5
	10	23.4	35.2	117.2	140.6
	12.5	18.8	28.1	93.7	112.5
	15	15.6	23.4	78.1	93.8
 <p>225cc Plastic 1014250</p>	5	70.3	105.5	351.6	421.9
	7.5	46.9	70.3	234.4	281.3
	10	35.2	52.7	175.8	210.9
	12.5	28.1	42.2	140.6	168.8
	15	23.4	35.2	117.2	140.6
 <p>300cc Plastic 1014251</p>	5	93.8	140.6	468.8	562.5
	7.5	62.5	93.8	312.5	375.0
	10	46.9	70.3	234.4	281.3
	12.5	37.5	56.3	187.5	225.0
	15	31.3	46.9	156.3	187.5
 <p>450cc Plastic 1014252</p>	5	140.6	210.9	703.1	843.8
	7.5	93.8	140.6	468.8	562.5
	10	70.3	105.5	351.6	421.9
	12.5	56.2	84.4	281.3	337.5
	15	46.9	70.3	234.4	281.3

 <p>600cc Plastic 1014253</p>	5	187.5	281.3	937.5	1125.0
	7.5	125.0	187.5	625.0	750.0
	10	93.8	140.6	468.8	562.5
	12.5	75.0	112.5	375.0	450.0
	15	62.5	93.8	312.5	375.0
 <p>750cc A2 1018780</p>	5	234.4	351.6	1171.9	1406.3
	7.5	156.3	234.4	781.3	937.5
	10	117.2	175.8	585.9	703.1
	12.5	93.8	140.6	468.8	562.5
	15	78.1	117.2	390.6	468.8

5.3 - FERTILISER Application Rates






4 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	2.1	3.1	10.4	12.5
	7.5	1.4	2.1	6.9	8.3
	10	1.0	1.6	5.2	6.3
	12.5	0.8	1.3	4.2	5.0
	15	0.7	1.0	3.5	4.2
 <p>10cc A2 1014351</p>	5	4.2	6.3	20.8	25.0
	7.5	2.8	4.2	13.9	16.7
	10	2.1	3.1	10.4	12.5
	12.5	1.7	2.5	8.3	10.0
	15	1.4	2.1	6.9	8.3
 <p>15cc A2 1014352</p>	5	6.3	9.4	31.3	37.5
	7.5	4.2	6.3	20.8	25.0
	10	3.1	4.7	15.6	18.8
	12.5	2.5	3.8	12.5	15.0
	15	2.1	3.1	10.4	12.5
 <p>30cc A2 1017875</p>	5	12.5	18.8	62.5	75.0
	7.5	8.3	12.5	41.7	50.0
	10	6.3	9.4	31.3	37.5
	12.5	5.0	7.5	25.0	30.0
	15	4.2	6.3	20.8	25.0
 <p>50cc Plastic 1017555</p>	5	20.8	31.3	104.2	125.0
	7.5	13.9	20.8	69.4	83.3
	10	10.4	15.6	52.1	62.5
	12.5	8.3	12.5	41.7	50.0
	15	6.9	10.4	34.7	41.7

4 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>100cc Plastic 1014245</p>	5	41.7	62.5	208.3	250.0
	7.5	27.8	41.7	138.9	166.7
	10	20.8	31.3	104.2	125.0
	12.5	16.7	25.0	83.3	100.0
	15	13.9	20.8	69.4	83.3
 <p>150cc Plastic 1014249</p>	5	62.5	93.8	312.5	375.0
	7.5	41.7	62.5	208.3	250.0
	10	31.3	46.9	156.3	187.5
	12.5	25.0	37.5	125.0	150.0
	15	20.8	31.3	104.2	125.0
 <p>225cc Plastic 1014250</p>	5	93.8	140.6	468.8	562.5
	7.5	62.5	93.8	312.5	375.0
	10	46.9	70.3	234.4	281.3
	12.5	37.5	56.3	187.5	225.0
	15	31.3	46.9	156.3	187.5
 <p>300cc Plastic 1014251</p>	5	125.0	187.5	625.0	750.0
	7.5	83.3	125.0	416.7	500.0
	10	62.5	93.8	312.5	375.0
	12.5	50.0	75.0	250.0	300.0
	15	41.7	62.5	208.3	250.0
 <p>450cc Plastic 1014252</p>	5	187.5	281.3	937.5	1125.0
	7.5	125.0	187.5	625.0	750.0
	10	93.8	140.6	468.8	562.5
	12.5	75.0	112.5	375.0	450.0
	15	62.5	93.8	312.5	375.0
 <p>600cc Plastic 1014253</p>	5	250.0	375.0	1250.0	1500.0
	7.5	166.7	250.0	833.3	1000.0
	10	125.0	187.5	625.0	750.0
	12.5	100.0	150.0	500.0	600.0
	15	83.3	125.0	416.7	500.0
 <p>750cc A2 1018780</p>	5	312.5	468.8	1562.5	1875.0
	7.5	208.3	312.5	1041.7	1250.0
	10	156.3	234.4	781.3	937.5
	12.5	125.0	187.5	625.0	750.0
	15	104.2	156.3	520.8	625.0



6.0 - 4.8m Working Width Metering Wheel Guide









6.1 - LIGHT SEED Application Rates


4.8 Meter Working Width	LIGHT SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	0.9	1.3	4.3	5.2
	7.5	0.6	0.9	2.9	3.5
	10	0.4	0.7	2.2	2.6
	12.5	0.3	0.5	1.7	2.1
	15	0.3	0.4	1.4	1.7
 <p>10cc A2 1014351</p>	5	1.7	2.6	8.7	10.4
	7.5	1.2	1.7	5.8	6.9
	10	0.9	1.3	4.3	5.2
	12.5	0.7	1.0	3.5	4.2
	15	0.6	0.9	2.9	3.5
 <p>15cc A2 1014352</p>	5	2.6	3.9	13.0	15.6
	7.5	1.7	2.6	8.7	10.4
	10	1.3	2.0	6.5	7.8
	12.5	1.0	1.6	5.2	6.3
	15	0.9	1.3	4.3	5.2
 <p>30cc A2 1017875</p>	5	5.2	7.8	26.0	31.3
	7.5	3.5	5.2	17.4	20.8
	10	2.6	3.9	13.0	15.6
	12.5	2.1	3.1	10.4	12.5
	15	1.7	2.6	8.7	10.4
 <p>50cc Plastic 1017555</p>	5	8.7	13.0	43.4	52.1
	7.5	5.8	8.7	28.9	34.7
	10	4.3	6.5	21.7	26.0
	12.5	3.5	5.2	17.4	20.8
	15	2.9	4.3	14.5	17.4
 <p>100cc Plastic 1014245</p>	5	17.4	26.0	86.8	104.2
	7.5	11.6	17.4	57.9	69.4
	10	8.7	13.0	43.4	52.1
	12.5	6.9	10.4	34.7	41.7
	15	5.8	8.7	28.9	34.7
 <p>150cc Plastic 1014249</p>	5	26.0	39.1	130.2	156.3
	7.5	17.4	26.0	86.8	104.2
	10	13.0	19.5	65.1	78.1
	12.5	10.4	15.6	52.1	62.5
	15	8.7	13.0	43.4	52.1

 <p>225cc Plastic 1014250</p>	5	39.1	58.6	195.3	234.4
	7.5	26.0	39.1	130.2	156.3
	10	19.5	29.3	97.7	117.2
	12.5	15.6	23.4	78.1	93.8
	15	13.0	19.5	65.1	78.1
 <p>300cc Plastic 1014251</p>	5	52.1	78.1	260.4	312.5
	7.5	34.7	52.1	173.6	208.3
	10	26.0	39.1	130.2	156.3
	12.5	20.8	31.3	104.2	125.0
	15	17.4	26.0	86.8	104.2
 <p>450cc Plastic 1014252</p>	5	78.1	117.2	390.6	468.8
	7.5	52.1	78.1	260.4	312.5
	10	39.1	58.6	195.3	234.4
	12.5	31.3	46.9	156.3	187.5
	15	26.0	39.1	130.2	156.3
 <p>600cc Plastic 1014253</p>	5	104.2	156.3	520.8	625.0
	7.5	69.4	104.2	347.2	416.7
	10	52.1	78.1	260.4	312.5
	12.5	41.7	62.5	208.3	250.0
	15	34.7	52.1	173.6	208.3
 <p>750cc A2 1018780</p>	5	130.2	195.3	651.0	781.3
	7.5	86.8	130.2	434.0	520.8
	10	65.1	97.7	325.5	390.6
	12.5	52.1	78.1	260.4	312.5
	15	43.4	65.1	217.0	260.4

6.2 - HEAVY SEED Application Rates








4.8 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	1.3	2.0	6.5	7.8
	7.5	0.9	1.3	4.3	5.2
	10	0.7	1.0	3.3	3.9
	12.5	0.5	0.8	2.6	3.1
	15	0.4	0.7	2.2	2.6
 <p>10cc A2 1014351</p>	5	2.6	3.9	13.0	15.6
	7.5	1.7	2.6	8.7	10.4
	10	1.3	2.0	6.5	7.8
	12.5	1.0	1.6	5.2	6.3
	15	0.9	1.3	4.3	5.2

4.8 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>15cc A2 1014352</p>	5	3.9	5.9	19.5	23.4
	7.5	2.6	3.9	13.0	15.6
	10	2.0	2.9	9.8	11.7
	12.5	1.6	2.3	7.8	9.4
	15	1.3	2.0	6.5	7.8
 <p>30cc A2 1017875</p>	5	7.8	11.7	39.1	46.9
	7.5	5.2	7.8	26.0	31.3
	10	3.9	5.9	19.5	23.4
	12.5	3.1	4.7	15.6	18.8
	15	2.6	3.9	13.0	15.6
 <p>50cc Plastic 1017555</p>	5	13.0	19.5	65.1	78.1
	7.5	8.7	13.0	43.4	52.1
	10	6.5	9.8	32.6	39.1
	12.5	5.2	7.8	26.0	31.3
	15	4.3	6.5	21.7	26.0
 <p>100cc Plastic 1014245</p>	5	26.0	39.1	130.2	156.3
	7.5	17.4	26.0	86.8	104.2
	10	13.0	19.5	65.1	78.1
	12.5	10.4	15.6	52.1	62.5
	15	8.7	13.0	43.4	52.1
 <p>150cc Plastic 1014249</p>	5	39.1	58.6	195.3	234.4
	7.5	26.0	39.1	130.2	156.3
	10	19.5	29.3	97.7	117.2
	12.5	15.6	23.4	78.1	93.8
	15	13.0	19.5	65.1	78.1
 <p>225cc Plastic 1014250</p>	5	58.6	87.9	293.0	351.6
	7.5	39.1	58.6	195.3	234.4
	10	29.3	43.9	146.5	175.8
	12.5	23.4	35.2	117.2	140.6
	15	19.5	29.3	97.7	117.2
 <p>300cc Plastic 1014251</p>	5	78.1	117.2	390.6	468.8
	7.5	52.1	78.1	260.4	312.5
	10	39.1	58.6	195.3	234.4
	12.5	31.3	46.9	156.3	187.5
	15	26.0	39.1	130.2	156.3
 <p>450cc Plastic 1014252</p>	5	117.2	175.8	585.9	703.1
	7.5	78.1	117.2	390.6	468.8
	10	58.6	87.9	293.0	351.6
	12.5	46.9	70.3	234.4	281.3
	15	39.1	58.6	195.3	234.4

 <p>600cc Plastic 1014253</p>	5	156.3	234.4	781.3	937.5
	7.5	104.2	156.3	520.8	625.0
	10	78.1	117.2	390.6	468.8
	12.5	62.5	93.8	312.5	375.0
	15	52.1	78.1	260.4	312.5
 <p>750cc A2 1018780</p>	5	195.3	293.0	976.6	1171.9
	7.5	130.2	195.3	651.0	781.3
	10	97.7	146.5	488.3	585.9
	12.5	78.1	117.2	390.6	468.8
	15	65.1	97.7	325.5	390.6






6.3 - FERTILISER Application Rates






4.8 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	1.7	2.6	8.7	10.4
	7.5	1.2	1.7	5.8	6.9
	10	0.9	1.3	4.3	5.2
	12.5	0.7	1.0	3.5	4.2
	15	0.6	0.9	2.9	3.5
 <p>10cc A2 1014351</p>	5	3.5	5.2	17.4	20.8
	7.5	2.3	3.5	11.6	13.9
	10	1.7	2.6	8.7	10.4
	12.5	1.4	2.1	6.9	8.3
	15	1.2	1.7	5.8	6.9
 <p>15cc A2 1014352</p>	5	5.2	7.8	26.0	31.3
	7.5	3.5	5.2	17.4	20.8
	10	2.6	3.9	13.0	15.6
	12.5	2.1	3.1	10.4	12.5
	15	1.7	2.6	8.7	10.4
 <p>30cc A2 1017875</p>	5	10.4	15.6	52.1	62.5
	7.5	6.9	10.4	34.7	41.7
	10	5.2	7.8	26.0	31.3
	12.5	4.2	6.3	20.8	25.0
	15	3.5	5.2	17.4	20.8
 <p>50cc Plastic 1017555</p>	5	17.4	26.0	86.8	104.2
	7.5	11.6	17.4	57.9	69.4
	10	8.7	13.0	43.4	52.1
	12.5	6.9	10.4	34.7	41.7
	15	5.8	8.7	28.9	34.7

4.8 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>100cc Plastic 1014245</p>	5	34.7	52.1	173.6	208.3
	7.5	23.1	34.7	115.7	138.9
	10	17.4	26.0	86.8	104.2
	12.5	13.9	20.8	69.4	83.3
	15	11.6	17.4	57.9	69.4
 <p>150cc Plastic 1014249</p>	5	52.1	78.1	260.4	312.5
	7.5	34.7	52.1	173.6	208.3
	10	26.0	39.1	130.2	156.3
	12.5	20.8	31.3	104.2	125.0
	15	17.4	26.0	86.8	104.2
 <p>225cc Plastic 1014250</p>	5	78.1	117.2	390.6	468.8
	7.5	52.1	78.1	260.4	312.5
	10	39.1	58.6	195.3	234.4
	12.5	31.3	46.9	156.3	187.5
	15	26.0	39.1	130.2	156.3
 <p>300cc Plastic 1014251</p>	5	104.2	156.3	520.8	625.0
	7.5	69.4	104.2	347.2	416.7
	10	52.1	78.1	260.4	312.5
	12.5	41.7	62.5	208.3	250.0
	15	34.7	52.1	173.6	208.3
 <p>450cc Plastic 1014252</p>	5	156.3	234.4	781.3	937.5
	7.5	104.2	156.3	520.8	625.0
	10	78.1	117.2	390.6	468.8
	12.5	62.5	93.8	312.5	375.0
	15	52.1	78.1	260.4	312.5
 <p>600cc Plastic 1014253</p>	5	208.3	312.5	1041.7	1250.0
	7.5	138.9	208.3	694.4	833.3
	10	104.2	156.3	520.8	625.0
	12.5	83.3	125.0	416.7	500.0
	15	69.4	104.2	347.2	416.7
 <p>750cc A2 1018780</p>	5	260.4	390.6	1302.1	1562.5
	7.5	173.6	260.4	868.1	1041.7
	10	130.2	195.3	651.0	781.3
	12.5	104.2	156.3	520.8	625.0
	15	86.8	130.2	434.0	520.8



7 - 6m Working Width Metering Wheel Guide









7.1 - LIGHT SEED Application Rates



6 Meter Working Width	LIGHT SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	0.7	1.0	3.5	4.2
	7.5	0.5	0.7	2.3	2.8
	10	0.3	0.5	1.7	2.1
	12.5	0.3	0.4	1.4	1.7
	15	0.2	0.3	1.2	1.4
 <p>10cc A2 1014351</p>	5	1.4	2.1	6.9	8.3
	7.5	0.9	1.4	4.6	5.6
	10	0.7	1.0	3.5	4.2
	12.5	0.6	0.8	2.8	3.3
	15	0.5	0.7	2.3	2.8
 <p>15cc A2 1014352</p>	5	2.1	3.1	10.4	12.5
	7.5	1.4	2.1	6.9	8.3
	10	1.0	1.6	5.2	6.3
	12.5	0.8	1.3	4.2	5.0
	15	0.7	1.0	3.5	4.2
 <p>30cc A2 1017875</p>	5	4.2	6.3	20.8	25.0
	7.5	2.8	4.2	13.9	16.7
	10	2.1	3.1	10.4	12.5
	12.5	1.7	2.5	8.3	10.0
	15	1.4	2.1	6.9	8.3
 <p>50cc Plastic 1017555</p>	5	6.9	10.4	34.7	41.7
	7.5	4.6	6.9	23.1	27.8
	10	3.5	5.2	17.4	20.8
	12.5	2.8	4.2	13.9	16.7
	15	2.3	3.5	11.6	13.9
 <p>100cc Plastic 1014245</p>	5	13.9	20.8	69.4	83.3
	7.5	9.3	13.9	46.3	55.6
	10	6.9	10.4	34.7	41.7
	12.5	5.6	8.3	27.8	33.3
	15	4.6	6.9	23.1	27.8
 <p>150cc Plastic 1014249</p>	5	20.8	31.3	104.2	125.0
	7.5	13.9	20.8	69.4	83.3
	10	10.4	15.6	52.1	62.5
	12.5	8.3	12.5	41.7	50.0
	15	6.9	10.4	34.7	41.7

 <p>225cc Plastic 1014250</p>	5	31.3	46.9	156.3	187.5
	7.5	20.8	31.3	104.2	125.0
	10	15.6	23.4	78.1	93.8
	12.5	12.5	18.8	62.5	75.0
	15	10.4	15.6	52.1	62.5
 <p>300cc Plastic 1014251</p>	5	41.7	62.5	208.3	250.0
	7.5	27.8	41.7	138.9	166.7
	10	20.8	31.3	104.2	125.0
	12.5	16.7	25.0	83.3	100.0
	15	13.9	20.8	69.4	83.3
 <p>450cc Plastic 1014252</p>	5	62.5	93.8	312.5	375.0
	7.5	41.7	62.5	208.3	250.0
	10	31.3	46.9	156.3	187.5
	12.5	25.0	37.5	125.0	150.0
	15	20.8	31.3	104.2	125.0
 <p>600cc Plastic 1014253</p>	5	83.3	125.0	416.7	500.0
	7.5	55.6	83.3	277.8	333.3
	10	41.7	62.5	208.3	250.0
	12.5	33.3	50.0	166.7	200.0
	15	27.8	41.7	138.9	166.7
 <p>750cc A2 1018780</p>	5	104.2	156.3	520.8	625.0
	7.5	69.4	104.2	347.2	416.7
	10	52.1	78.1	260.4	312.5
	12.5	41.7	62.5	208.3	250.0
	15	34.7	52.1	173.6	208.3

7.2 - HEAVY SEED Application Rates








6 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	1.0	1.6	5.2	6.3
	7.5	0.7	1.0	3.5	4.2
	10	0.5	0.8	2.6	3.1
	12.5	0.4	0.6	2.1	2.5
	15	0.3	0.5	1.7	2.1
 <p>10cc A2 1014351</p>	5	2.1	3.1	10.4	12.5
	7.5	1.4	2.1	6.9	8.3
	10	1.0	1.6	5.2	6.3
	12.5	0.8	1.3	4.2	5.0
	15	0.7	1.0	3.5	4.2

6 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>15cc A2 1014352</p>	5	3.1	4.7	15.6	18.8
	7.5	2.1	3.1	10.4	12.5
	10	1.6	2.3	7.8	9.4
	12.5	1.3	1.9	6.3	7.5
	15	1.0	1.6	5.2	6.3
 <p>30cc A2 1017875</p>	5	6.3	9.4	31.3	37.5
	7.5	4.2	6.3	20.8	25.0
	10	3.1	4.7	15.6	18.8
	12.5	2.5	3.8	12.5	15.0
	15	2.1	3.1	10.4	12.5
 <p>50cc Plastic 1017555</p>	5	10.4	15.6	52.1	62.5
	7.5	6.9	10.4	34.7	41.7
	10	5.2	7.8	26.0	31.3
	12.5	4.2	6.3	20.8	25.0
	15	3.5	5.2	17.4	20.8
 <p>100cc Plastic 1014245</p>	5	20.8	31.3	104.2	125.0
	7.5	13.9	20.8	69.4	83.3
	10	10.4	15.6	52.1	62.5
	12.5	8.3	12.5	41.7	50.0
	15	6.9	10.4	34.7	41.7
 <p>150cc Plastic 1014249</p>	5	31.3	46.9	156.3	187.5
	7.5	20.8	31.3	104.2	125.0
	10	15.6	23.4	78.1	93.8
	12.5	12.5	18.8	62.5	75.0
	15	10.4	15.6	52.1	62.5
 <p>225cc Plastic 1014250</p>	5	46.9	70.3	234.4	281.3
	7.5	31.3	46.9	156.3	187.5
	10	23.4	35.2	117.2	140.6
	12.5	18.8	28.1	93.8	112.5
	15	15.6	23.4	78.1	93.8
 <p>300cc Plastic 1014251</p>	5	62.5	93.8	312.5	375.0
	7.5	41.7	62.5	208.3	250.0
	10	31.3	46.9	156.3	187.5
	12.5	25.0	37.5	125.0	150.0
	15	20.8	31.3	104.2	125.0
 <p>450cc Plastic 1014252</p>	5	93.8	140.6	468.8	562.5
	7.5	62.5	93.8	312.5	375.0
	10	46.9	70.3	234.4	281.3
	12.5	37.5	56.3	187.5	225.0
	15	31.3	46.9	156.3	187.5

 <p>600cc Plastic 1014253</p>	5	125.0	187.5	625.0	750.0
	7.5	83.3	125.0	416.7	500.0
	10	62.5	93.8	312.5	375.0
	12.5	50.0	75.0	250.0	300.0
	15	41.7	62.5	208.3	250.0
 <p>750cc A2 1018780</p>	5	156.3	234.4	781.3	937.5
	7.5	104.2	156.3	520.8	625.0
	10	78.1	117.2	390.6	468.8
	12.5	62.5	93.8	312.5	375.0
	15	52.1	78.1	260.4	312.5

7.3 - FERTILISER Application Rates






6 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	1.4	2.1	6.9	8.3
	7.5	0.9	1.4	4.6	5.6
	10	0.7	1.0	3.5	4.2
	12.5	0.6	0.8	2.8	3.3
	15	0.5	0.7	2.3	2.8
 <p>10cc A2 1014351</p>	5	2.8	4.2	13.9	16.7
	7.5	1.9	2.8	9.3	11.1
	10	1.4	2.1	6.9	8.3
	12.5	1.1	1.7	5.6	6.7
	15	0.9	1.4	4.6	5.6
 <p>15cc A2 1014352</p>	5	4.2	6.3	20.8	25.0
	7.5	2.8	4.2	13.9	16.7
	10	2.1	3.1	10.4	12.5
	12.5	1.7	2.5	8.3	10.0
	15	1.4	2.1	6.9	8.3
 <p>30cc A2 1017875</p>	5	8.3	12.5	41.7	50.0
	7.5	5.6	8.3	27.8	33.3
	10	4.2	6.3	20.8	25.0
	12.5	3.3	5.0	16.7	20.0
	15	2.8	4.2	13.9	16.7
 <p>50cc Plastic 1017555</p>	5	13.9	20.8	69.4	83.3
	7.5	9.3	13.9	46.3	55.6
	10	6.9	10.4	34.7	41.7
	12.5	5.6	8.3	27.8	33.3
	15	4.6	6.9	23.1	27.8

6 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>100cc Plastic 1014245</p>	5	27.8	41.7	138.9	166.7
	7.5	18.5	27.8	92.6	111.1
	10	13.9	20.8	69.4	83.3
	12.5	11.1	16.7	55.6	66.7
	15	9.3	13.9	46.3	55.6
 <p>150cc Plastic 1014249</p>	5	41.7	62.5	208.3	250.0
	7.5	27.8	41.7	138.9	166.7
	10	20.8	31.3	104.2	125.0
	12.5	16.7	25.0	83.3	100.0
	15	13.9	20.8	69.4	83.3
 <p>225cc Plastic 1014250</p>	5	62.5	93.8	312.5	375.0
	7.5	41.7	62.5	208.3	250.0
	10	31.3	46.9	156.3	187.5
	12.5	25.0	37.5	125.0	150.0
	15	20.8	31.3	104.2	125.0
 <p>300cc Plastic 1014251</p>	5	83.3	125.0	416.7	500.0
	7.5	55.6	83.3	277.8	333.3
	10	41.7	62.5	208.3	250.0
	12.5	33.3	50.0	166.7	200.0
	15	27.8	41.7	138.9	166.7
 <p>450cc Plastic 1014252</p>	5	125.0	187.5	625.0	750.0
	7.5	83.3	125.0	416.7	500.0
	10	62.5	93.8	312.5	375.0
	12.5	50.0	75.0	250.0	300.0
	15	41.7	62.5	208.3	250.0
 <p>600cc Plastic 1014253</p>	5	166.7	250.0	833.3	1000.0
	7.5	111.1	166.7	555.6	666.7
	10	83.3	125.0	416.7	500.0
	12.5	66.7	100.0	333.3	400.0
	15	55.6	83.3	277.8	333.3
 <p>750cc A2 1018780</p>	5	208.3	312.5	1041.7	1250.0
	7.5	138.9	208.3	694.4	833.3
	10	104.2	156.3	520.8	625.0
	12.5	83.3	125.0	416.7	500.0
	15	69.4	104.2	347.2	416.7



8.0 - 6.4m Working Width Metering Wheel Guide




8.1 - LIGHT SEED Application Rates



6.4 Meter Working Width	LIGHT SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	0.7	1.0	3.3	3.9
	7.5	0.4	0.7	2.2	2.6
	10	0.3	0.5	1.6	2.0
	12.5	0.3	0.4	1.3	1.6
	15	0.2	0.3	1.1	1.3
 <p>10cc A2 1014351</p>	5	1.3	2.0	6.5	7.8
	7.5	0.9	1.3	4.3	5.2
	10	0.7	1.0	3.3	3.9
	12.5	0.5	0.8	2.6	3.1
	15	0.4	0.7	2.2	2.6
 <p>15cc A2 1014352</p>	5	2.0	2.9	9.8	11.7
	7.5	1.3	2.0	6.5	7.8
	10	1.0	1.5	4.9	5.9
	12.5	0.8	1.2	3.9	4.7
	15	0.7	1.0	3.3	3.9
 <p>30cc A2 1017875</p>	5	3.9	5.9	19.5	23.4
	7.5	2.6	3.9	13.0	15.6
	10	2.0	2.9	9.8	11.7
	12.5	1.6	2.3	7.8	9.4
	15	1.3	2.0	6.5	7.8
 <p>50cc Plastic 1017555</p>	5	6.5	9.8	32.6	39.1
	7.5	4.3	6.5	21.7	26.0
	10	3.3	4.9	16.3	19.5
	12.5	2.6	3.9	13.0	15.6
	15	2.2	3.3	10.9	13.0
 <p>100cc Plastic 1014245</p>	5	13.0	19.5	65.1	78.1
	7.5	8.7	13.0	43.4	52.1
	10	6.5	9.8	32.6	39.1
	12.5	5.2	7.8	26.0	31.3
	15	4.3	6.5	21.7	26.0
 <p>150cc Plastic 1014249</p>	5	19.5	29.3	97.7	117.2
	7.5	13.0	19.5	65.1	78.1
	10	9.8	14.6	48.8	58.6
	12.5	7.8	11.7	39.1	46.9
	15	6.5	9.8	32.6	39.1

 <p>225cc Plastic 1014250</p>	5	29.3	43.9	146.5	175.8
	7.5	19.5	29.3	97.7	117.2
	10	14.6	22.0	73.2	87.9
	12.5	11.7	17.6	58.6	70.3
	15	9.8	14.6	48.8	58.6
 <p>300cc Plastic 1014251</p>	5	39.1	58.6	195.3	234.4
	7.5	26.0	39.1	130.2	156.3
	10	19.5	29.3	97.7	117.2
	12.5	15.6	23.4	78.1	93.8
	15	13.0	19.5	65.1	78.1
 <p>450cc Plastic 1014252</p>	5	58.6	87.9	293.0	351.6
	7.5	39.1	58.6	195.3	234.4
	10	29.3	43.9	146.5	175.8
	12.5	23.4	35.2	117.2	140.6
	15	19.5	29.3	97.7	117.2
 <p>600cc Plastic 1014253</p>	5	78.1	117.2	390.6	468.8
	7.5	52.1	78.1	260.4	312.5
	10	39.1	58.6	195.3	234.4
	12.5	31.3	46.9	156.3	187.5
	15	26.0	39.1	130.2	156.3
 <p>750cc A2 1018780</p>	5	97.7	146.5	488.3	585.9
	7.5	65.1	97.7	325.5	390.6
	10	48.8	73.2	244.1	293.0
	12.5	39.1	58.6	195.3	234.4
	15	32.6	48.8	162.8	195.3

8.2 - HEAVY SEED Application Rates








6.4 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	1.0	1.5	4.9	5.9
	7.5	0.7	1.0	3.3	3.9
	10	0.5	0.7	2.4	2.9
	12.5	0.4	0.6	2.0	2.3
	15	0.3	0.5	1.6	2.0
 <p>10cc A2 1014351</p>	5	2.0	2.9	9.8	11.7
	7.5	1.3	2.0	6.5	7.8
	10	1.0	1.5	4.9	5.9
	12.5	0.8	1.2	3.9	4.7
	15	0.7	1.0	3.3	3.9

6.4 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>15cc A2 1014352</p>	5	2.9	4.4	14.6	17.6
	7.5	2.0	2.9	9.8	11.7
	10	1.5	2.2	7.3	8.8
	12.5	1.2	1.8	5.9	7.0
	15	1.0	1.5	4.9	5.9
 <p>30cc A2 1017875</p>	5	5.9	8.8	29.3	35.2
	7.5	3.9	5.9	19.5	23.4
	10	2.9	4.4	14.6	17.6
	12.5	2.3	3.5	11.7	14.1
	15	2.0	2.9	9.8	11.7
 <p>50cc Plastic 1017555</p>	5	9.8	14.6	48.8	58.6
	7.5	6.5	9.8	32.6	39.1
	10	4.9	7.3	24.4	29.3
	12.5	3.9	5.9	19.5	23.4
	15	3.3	4.9	16.3	19.5
 <p>100cc Plastic 1014245</p>	5	19.5	29.3	97.7	117.2
	7.5	13.0	19.5	65.1	78.1
	10	9.8	14.6	48.8	58.6
	12.5	7.8	11.7	39.1	46.9
	15	6.5	9.8	32.6	39.1
 <p>150cc Plastic 1014249</p>	5	29.3	43.9	146.5	175.8
	7.5	19.5	29.3	97.7	117.2
	10	14.6	22.0	73.2	87.9
	12.5	11.7	17.6	58.6	70.3
	15	9.8	14.6	48.8	58.6
 <p>225cc Plastic 1014250</p>	5	43.9	65.9	219.7	263.7
	7.5	29.3	43.9	146.5	175.8
	10	22.0	33.0	109.9	131.8
	12.5	17.6	26.4	87.9	105.5
	15	14.6	22.0	73.2	87.9
 <p>300cc Plastic 1014251</p>	5	58.6	87.9	293.0	351.6
	7.5	39.1	58.6	195.3	234.4
	10	29.3	43.9	146.5	175.8
	12.5	23.4	35.2	117.2	140.6
	15	19.5	29.3	97.7	117.2
 <p>450cc Plastic 1014252</p>	5	87.9	131.8	439.5	527.3
	7.5	58.6	87.9	293.0	351.6
	10	43.9	65.9	219.7	263.7
	12.5	35.2	52.7	175.8	210.9
	15	29.3	43.9	146.5	175.8

 <p>600cc Plastic 1014253</p>	5	117.2	175.8	585.9	703.1
	7.5	78.1	117.2	390.6	468.8
	10	58.6	87.9	293.0	351.6
	12.5	46.9	70.3	234.4	281.3
	15	39.1	58.6	195.3	234.4
 <p>750cc A2 1018780</p>	5	146.5	219.7	732.4	878.9
	7.5	97.7	146.5	488.3	585.9
	10	73.2	109.9	366.2	439.5
	12.5	58.6	87.9	293.0	351.6
	15	48.8	73.2	244.1	293.0








8.3 - FERTILISER Application Rates



6.4 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	1.3	2.0	6.5	7.8
	7.5	0.9	1.3	4.3	5.2
	10	0.7	1.0	3.3	3.9
	12.5	0.5	0.8	2.6	3.1
	15	0.4	0.7	2.2	2.6
 <p>10cc A2 1014351</p>	5	2.6	3.9	13.0	15.6
	7.5	1.7	2.6	8.7	10.4
	10	1.3	2.0	6.5	7.8
	12.5	1.0	1.6	5.2	6.3
	15	0.9	1.3	4.3	5.2
 <p>15cc A2 1014352</p>	5	3.9	5.9	19.5	23.4
	7.5	2.6	3.9	13.0	15.6
	10	2.0	2.9	9.8	11.7
	12.5	1.6	2.3	7.8	9.4
	15	1.3	2.0	6.5	7.8
 <p>30cc A2 1017875</p>	5	7.8	11.7	39.1	46.9
	7.5	5.2	7.8	26.0	31.3
	10	3.9	5.9	19.5	23.4
	12.5	3.1	4.7	15.6	18.8
	15	2.6	3.9	13.0	15.6
 <p>50cc Plastic 1017555</p>	5	13.0	19.5	65.1	78.1
	7.5	8.7	13.0	43.4	52.1
	10	6.5	9.8	32.6	39.1
	12.5	5.2	7.8	26.0	31.3
	15	4.3	6.5	21.7	26.0

6.4 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>100cc Plastic 1014245</p>	5	26.0	39.1	130.2	156.3
	7.5	17.4	26.0	86.8	104.2
	10	13.0	19.5	65.1	78.1
	12.5	10.4	15.6	52.1	62.5
	15	8.7	13.0	43.4	52.1
 <p>150cc Plastic 1014249</p>	5	39.1	58.6	195.3	234.4
	7.5	26.0	39.1	130.2	156.3
	10	19.5	29.3	97.7	117.2
	12.5	15.6	23.4	78.1	93.8
	15	13.0	19.5	65.1	78.1
 <p>225cc Plastic 1014250</p>	5	58.6	87.9	293.0	351.6
	7.5	39.1	58.6	195.3	234.4
	10	29.3	43.9	146.5	175.8
	12.5	23.4	35.2	117.2	140.6
	15	19.5	29.3	97.7	117.2
 <p>300cc Plastic 1014251</p>	5	78.1	117.2	390.6	468.8
	7.5	52.1	78.1	260.4	312.5
	10	39.1	58.6	195.3	234.4
	12.5	31.3	46.9	156.3	187.5
	15	26.0	39.1	130.2	156.3
 <p>450cc Plastic 1014252</p>	5	117.2	175.8	585.9	703.1
	7.5	78.1	117.2	390.6	468.8
	10	58.6	87.9	293.0	351.6
	12.5	46.9	70.3	234.4	281.3
	15	39.1	58.6	195.3	234.4
 <p>600cc Plastic 1014253</p>	5	156.3	234.4	781.2	937.5
	7.5	104.2	156.3	520.8	625.0
	10	78.1	117.2	390.6	468.8
	12.5	62.5	93.8	312.5	375.0
	15	52.1	78.1	260.4	312.5
 <p>750cc A2 1018780</p>	5	195.3	293.0	976.6	1171.9
	7.5	130.2	195.3	651.0	781.3
	10	97.7	146.5	488.3	585.9
	12.5	78.1	117.2	390.6	468.8
	15	65.1	97.7	325.5	390.6



9.0 - 7.2m Working Width Metering Wheel Guide








9.1 - HEAVY SEED Application Rates



7.2 Meter Working Width	LIGHT SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	0.6	0.9	2.9	3.5
	7.5	0.4	0.6	1.9	2.3
	10	0.3	0.4	1.4	1.7
	12.5	0.2	0.3	1.2	1.4
	15	0.2	0.3	1.0	1.2
 <p>10cc A2 1014351</p>	5	1.2	1.7	5.8	6.9
	7.5	0.8	1.2	3.9	4.6
	10	0.6	0.9	2.9	3.5
	12.5	0.5	0.7	2.3	2.8
	15	0.4	0.6	1.9	2.3
 <p>15cc A2 1014352</p>	5	1.7	2.6	8.7	10.4
	7.5	1.2	1.7	5.8	6.9
	10	0.9	1.3	4.3	5.2
	12.5	0.7	1.0	3.5	4.2
	15	0.6	0.9	2.9	3.5
 <p>30cc A2 1017875</p>	5	3.5	5.2	17.4	20.8
	7.5	2.3	3.5	11.6	13.9
	10	1.7	2.6	8.7	10.4
	12.5	1.4	2.1	6.9	8.3
	15	1.2	1.7	5.8	6.9
 <p>50cc Plastic 1017555</p>	5	5.8	8.7	28.9	34.7
	7.5	3.9	5.8	19.3	23.1
	10	2.9	4.3	14.5	17.4
	12.5	2.3	3.5	11.6	13.9
	15	1.9	2.9	9.6	11.6
 <p>100cc Plastic 1014245</p>	5	11.6	17.4	57.9	69.4
	7.5	7.7	11.6	38.6	46.3
	10	5.8	8.7	28.9	34.7
	12.5	4.6	6.9	23.1	27.8
	15	3.9	5.8	19.3	23.1
 <p>150cc Plastic 1014249</p>	5	17.4	26.0	86.8	104.2
	7.5	11.6	17.4	57.9	69.4
	10	8.7	13.0	43.4	52.1
	12.5	6.9	10.4	34.7	41.7
	15	5.8	8.7	28.9	34.7

 <p>225cc Plastic 1014250</p>	5	26.0	39.1	130.2	156.3
	7.5	17.4	26.0	86.8	104.2
	10	13.0	19.5	65.1	78.1
	12.5	10.4	15.6	52.1	62.5
	15	8.7	13.0	43.4	52.1
 <p>300cc Plastic 1014251</p>	5	34.7	52.1	173.6	208.3
	7.5	23.1	34.7	115.7	138.9
	10	17.4	26.0	86.8	104.2
	12.5	13.9	20.8	69.4	83.3
	15	11.6	17.4	57.9	69.4
 <p>450cc Plastic 1014252</p>	5	52.1	78.1	260.4	312.5
	7.5	34.7	52.1	173.6	208.3
	10	26.0	39.1	130.2	156.3
	12.5	20.8	31.3	104.2	125.0
	15	17.4	26.0	86.8	104.2
 <p>600cc Plastic 1014253</p>	5	69.4	104.2	347.2	416.7
	7.5	46.3	69.4	231.5	277.8
	10	34.7	52.1	173.6	208.3
	12.5	27.8	41.7	138.9	166.7
	15	23.1	34.7	115.7	138.9
 <p>750cc A2 1018780</p>	5	86.8	130.2	434.0	520.8
	7.5	57.9	86.8	289.4	347.2
	10	43.4	65.1	217.0	260.4
	12.5	34.7	52.1	173.6	208.3
	15	28.9	43.4	144.7	173.6

9.2 - HEAVY SEED Application Rates








7.2 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	0.9	1.3	4.3	5.2
	7.5	0.6	0.9	2.9	3.5
	10	0.4	0.7	2.2	2.6
	12.5	0.3	0.5	1.7	2.1
	15	0.3	0.4	1.4	1.7
 <p>10cc A2 1014351</p>	5	1.7	2.6	8.7	10.4
	7.5	1.2	1.7	5.8	6.9
	10	0.9	1.3	4.3	5.2
	12.5	0.7	1.0	3.5	4.2
	15	0.6	0.9	2.9	3.5

7.2 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>15cc A2 1014352</p>	5	2.6	3.9	13.0	15.6
	7.5	1.7	2.6	8.7	10.4
	10	1.3	2.0	6.5	7.8
	12.5	1.0	1.6	5.2	6.3
	15	0.9	1.3	4.3	5.2
 <p>30cc A2 1017875</p>	5	5.2	7.8	26.0	31.3
	7.5	3.5	5.2	17.4	20.8
	10	2.6	3.9	13.0	15.6
	12.5	2.1	3.1	10.4	12.5
	15	1.7	2.6	8.7	10.4
 <p>50cc Plastic 1017555</p>	5	8.7	13.0	43.4	52.1
	7.5	5.8	8.7	28.9	34.7
	10	4.3	6.5	21.7	26.0
	12.5	3.5	5.2	17.4	20.8
	15	2.9	4.3	14.5	17.4
 <p>100cc Plastic 1014245</p>	5	17.4	26.0	86.8	104.2
	7.5	11.6	17.4	57.9	69.4
	10	8.7	13.0	43.4	52.1
	12.5	6.9	10.4	34.7	41.7
	15	5.8	8.7	28.9	34.7
 <p>150cc Plastic 1014249</p>	5	26.0	39.1	130.2	156.3
	7.5	17.4	26.0	86.8	104.2
	10	13.0	19.5	65.1	78.1
	12.5	10.4	15.6	52.1	62.5
	15	8.7	13.0	43.4	52.1
 <p>225cc Plastic 1014250</p>	5	39.1	58.6	195.3	234.4
	7.5	26.0	39.1	130.2	156.3
	10	19.5	29.3	97.7	117.2
	12.5	15.6	23.4	78.1	93.8
	15	13.0	19.5	65.1	78.1
 <p>300cc Plastic 1014251</p>	5	52.1	78.1	260.4	312.5
	7.5	34.7	52.1	173.6	208.3
	10	26.0	39.1	130.2	156.3
	12.5	20.8	31.3	104.2	125.0
	15	17.4	26.0	86.8	104.2
 <p>450cc Plastic 1014252</p>	5	78.1	117.2	390.6	468.8
	7.5	52.1	78.1	260.4	312.5
	10	39.1	58.6	195.3	234.4
	12.5	31.3	46.9	156.3	187.5
	15	26.0	39.1	130.2	156.3

 <p>600cc Plastic 1014253</p>	5	104.2	156.3	520.8	625.0
	7.5	69.4	104.2	347.2	416.7
	10	52.1	78.1	260.4	312.5
	12.5	41.7	62.5	208.3	250.0
	15	34.7	52.1	173.6	208.3
 <p>750cc A2 1018780</p>	5	130.2	195.3	651.0	781.3
	7.5	86.8	130.2	434.0	520.8
	10	65.1	97.7	325.5	390.6
	12.5	52.1	78.1	260.4	312.5
	15	43.4	65.1	217.0	260.4







9.3 - FERTILISER Application Rates



7.2 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	1.2	1.7	5.8	6.9
	7.5	0.8	1.2	3.9	4.6
	10	0.6	0.9	2.9	3.5
	12.5	0.5	0.7	2.3	2.8
	15	0.4	0.6	1.9	2.3
 <p>10cc A2 1014351</p>	5	2.3	3.5	11.6	13.9
	7.5	1.5	2.3	7.7	9.3
	10	1.2	1.7	5.8	6.9
	12.5	0.9	1.4	4.6	5.6
	15	0.8	1.2	3.9	4.6
 <p>15cc A2 1014352</p>	5	3.5	5.2	17.4	20.8
	7.5	2.3	3.5	11.6	13.9
	10	1.7	2.6	8.7	10.4
	12.5	1.4	2.1	6.9	8.3
	15	1.2	1.7	5.8	6.9
 <p>30cc A2 1017875</p>	5	6.9	10.4	34.7	41.7
	7.5	4.6	6.9	23.1	27.8
	10	3.5	5.2	17.4	20.8
	12.5	2.8	4.2	13.9	16.7
	15	2.3	3.5	11.6	13.9
 <p>50cc Plastic 1017555</p>	5	11.6	17.4	57.9	69.4
	7.5	7.7	11.6	38.6	46.3
	10	5.8	8.7	28.9	34.7
	12.5	4.6	6.9	23.1	27.8
	15	3.9	5.8	19.3	23.1

7.2 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>100cc Plastic 1014245</p>	5	23.1	34.7	115.7	138.9
	7.5	15.4	23.1	77.2	92.6
	10	11.6	17.4	57.9	69.4
	12.5	9.3	13.9	46.3	55.6
	15	7.7	11.6	38.6	46.3
 <p>150cc Plastic 1014249</p>	5	34.7	52.1	173.6	208.3
	7.5	23.1	34.7	115.7	138.9
	10	17.4	26.0	86.8	104.2
	12.5	13.9	20.8	69.4	83.3
	15	11.6	17.4	57.9	69.4
 <p>225cc Plastic 1014250</p>	5	52.1	78.1	260.4	312.5
	7.5	34.7	52.1	173.6	208.3
	10	26.0	39.1	130.2	156.3
	12.5	20.8	31.3	104.2	125.0
	15	17.4	26.0	86.8	104.2
 <p>300cc Plastic 1014251</p>	5	69.4	104.2	347.2	416.7
	7.5	46.3	69.4	231.5	277.8
	10	34.7	52.1	173.6	208.3
	12.5	27.8	41.7	138.9	166.7
	15	23.1	34.7	115.7	138.9
 <p>450cc Plastic 1014252</p>	5	104.2	156.3	520.8	625.0
	7.5	69.4	104.2	347.2	416.7
	10	52.1	78.1	260.4	312.5
	12.5	41.7	62.5	208.3	250.0
	15	34.7	52.1	173.6	208.3
 <p>600cc Plastic 1014253</p>	5	138.9	208.3	694.4	833.3
	7.5	92.6	138.9	463.0	555.6
	10	69.4	104.2	347.2	416.7
	12.5	55.6	83.3	277.8	333.3
	15	46.3	69.4	231.5	277.8
 <p>750cc A2 1018780</p>	5	173.6	260.4	868.1	1041.7
	7.5	115.7	173.6	578.7	694.4
	10	86.8	130.2	434.0	520.8
	12.5	69.4	104.2	347.2	416.7
	15	57.9	86.8	289.4	347.2



10.0 - 7.5m Working Width Metering Wheel Guide

10.1 - LIGHT SEED Application Rates



7.5 Meter Working Width	LIGHT SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	0.6	0.8	2.8	3.3
	7.5	0.4	0.6	1.9	2.2
	10	0.3	0.4	1.4	1.7
	12.5	0.2	0.3	1.1	1.3
	15	0.2	0.3	0.9	1.1
 <p>10cc A2 1014351</p>	5	1.1	1.7	5.6	6.7
	7.5	0.7	1.1	3.7	4.4
	10	0.6	0.8	2.8	3.3
	12.5	0.4	0.7	2.2	2.7
	15	0.4	0.6	1.9	2.2
 <p>15cc A2 1014352</p>	5	1.7	2.5	8.3	10.0
	7.5	1.1	1.7	5.6	6.7
	10	0.8	1.3	4.2	5.0
	12.5	0.7	1.0	3.3	4.0
	15	0.6	0.8	2.8	3.3
 <p>30cc A2 1017875</p>	5	3.3	5.0	16.7	20.0
	7.5	2.2	3.3	11.1	13.3
	10	1.7	2.5	8.3	10.0
	12.5	1.3	2.0	6.7	8.0
	15	1.1	1.7	5.6	6.7
 <p>50cc Plastic 1017555</p>	5	5.6	8.3	27.8	33.3
	7.5	3.7	5.6	18.5	22.2
	10	2.8	4.2	13.9	16.7
	12.5	2.2	3.3	11.1	13.3
	15	1.9	2.8	9.3	11.1
 <p>100cc Plastic 1014245</p>	5	11.1	16.7	55.6	66.7
	7.5	7.4	11.1	37.0	44.4
	10	5.6	8.3	27.8	33.3
	12.5	4.4	6.7	22.2	26.7
	15	3.7	5.6	18.5	22.2
 <p>150cc Plastic 1014249</p>	5	16.7	25.0	83.3	100.0
	7.5	11.1	16.7	55.6	66.7
	10	8.3	12.5	41.7	50.0
	12.5	6.7	10.0	33.3	40.0
	15	5.6	8.3	27.8	33.3

 <p>225cc Plastic 1014250</p>	5	25.0	37.5	125.0	150.0
	7.5	16.7	25.0	83.3	100.0
	10	12.5	18.8	62.5	75.0
	12.5	10.0	15.0	50.0	60.0
	15	8.3	12.5	41.7	50.0
 <p>300cc Plastic 1014251</p>	5	33.3	50.0	166.7	200.0
	7.5	22.2	33.3	111.1	133.3
	10	16.7	25.0	83.3	100.0
	12.5	13.3	20.0	66.7	80.0
	15	11.1	16.7	55.6	66.7
 <p>450cc Plastic 1014252</p>	5	50.0	75.0	250.0	300.0
	7.5	33.3	50.0	166.7	200.0
	10	25.0	37.5	125.0	150.0
	12.5	20.0	30.0	100.0	120.0
	15	16.7	25.0	83.3	100.0
 <p>600cc Plastic 1014253</p>	5	66.7	100.0	333.3	400.0
	7.5	44.4	66.7	222.2	266.7
	10	33.3	50.0	166.7	200.0
	12.5	26.7	40.0	133.3	160.0
	15	22.2	33.3	111.1	133.3
 <p>750cc A2 1018780</p>	5	83.3	125.0	416.7	500.0
	7.5	55.6	83.3	277.8	333.3
	10	41.7	62.5	208.3	250.0
	12.5	33.3	50.0	166.7	200.0
	15	27.8	41.7	138.9	166.7

10.2 - HEAVY SEED Application Rates








7.5 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	0.8	1.3	4.2	5.0
	7.5	0.6	0.8	2.8	3.3
	10	0.4	0.6	2.1	2.5
	12.5	0.3	0.5	1.7	2.0
	15	0.3	0.4	1.4	1.7
 <p>10cc A2 1014351</p>	5	1.7	2.5	8.3	10.0
	7.5	1.1	1.7	5.6	6.7
	10	0.8	1.3	4.2	5.0
	12.5	0.7	1.0	3.3	4.0
	15	0.6	0.8	2.8	3.3

7.5 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>15cc A2 1014352</p>	5	2.5	3.8	12.5	15.0
	7.5	1.7	2.5	8.3	10.0
	10	1.3	1.9	6.3	7.5
	12.5	1.0	1.5	5.0	6.0
	15	0.8	1.3	4.2	5.0
 <p>30cc A2 1017875</p>	5	5.0	7.5	25.0	30.0
	7.5	3.3	5.0	16.7	20.0
	10	2.5	3.8	12.5	15.0
	12.5	2.0	3.0	10.0	12.0
	15	1.7	2.5	8.3	10.0
 <p>50cc Plastic 1017555</p>	5	8.3	12.5	41.7	50.0
	7.5	5.6	8.3	27.8	33.3
	10	4.2	6.3	20.8	25.0
	12.5	3.3	5.0	16.7	20.0
	15	2.8	4.2	13.9	16.7
 <p>100cc Plastic 1014245</p>	5	16.7	25.0	83.3	100.0
	7.5	11.1	16.7	55.6	66.7
	10	8.3	12.5	41.7	50.0
	12.5	6.7	10.0	33.3	40.0
	15	5.6	8.3	27.8	33.3
 <p>150cc Plastic 1014249</p>	5	25.0	37.5	125.0	150.0
	7.5	16.7	25.0	83.3	100.0
	10	12.5	18.8	62.5	75.0
	12.5	10.0	15.0	50.0	60.0
	15	8.3	12.5	41.7	50.0
 <p>225cc Plastic 1014250</p>	5	37.5	56.3	187.5	225.0
	7.5	25.0	37.5	125.0	150.0
	10	18.8	28.1	93.8	112.5
	12.5	15.0	22.5	75.0	90.0
	15	12.5	18.8	62.5	75.0
 <p>300cc Plastic 1014251</p>	5	50.0	75.0	250.0	300.0
	7.5	33.3	50.0	166.7	200.0
	10	25.0	37.5	125.0	150.0
	12.5	20.0	30.0	100.0	120.0
	15	16.7	25.0	83.3	100.0
 <p>450cc Plastic 1014252</p>	5	75.0	112.5	375.0	450.0
	7.5	50.0	75.0	250.0	300.0
	10	37.5	56.3	187.5	225.0
	12.5	30.0	45.0	150.0	180.0
	15	25.0	37.5	125.0	150.0

 <p>600cc Plastic 1014253</p>	5	100.0	150.0	500.0	600.0
	7.5	66.7	100.0	333.3	400.0
	10	50.0	75.0	250.0	300.0
	12.5	40.0	60.0	200.0	240.0
	15	33.3	50.0	166.7	200.0
 <p>750cc A2 1018780</p>	5	125.0	187.5	625.0	750.0
	7.5	83.3	125.0	416.7	500.0
	10	62.5	93.8	312.5	375.0
	12.5	50.0	75.0	250.0	300.0
	15	41.7	62.5	208.3	250.0








10.3 - FERTILISER Application Rates



7.5 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	1.1	1.7	5.6	6.7
	7.5	0.7	1.1	3.7	4.4
	10	0.6	0.8	2.8	3.3
	12.5	0.4	0.7	2.2	2.7
	15	0.4	0.6	1.9	2.2
 <p>10cc A2 1014351</p>	5	2.2	3.3	11.1	13.3
	7.5	1.5	2.2	7.4	8.9
	10	1.1	1.7	5.6	6.7
	12.5	0.9	1.3	4.4	5.3
	15	0.7	1.1	3.7	4.4
 <p>15cc A2 1014352</p>	5	3.3	5.0	16.7	20.0
	7.5	2.2	3.3	11.1	13.3
	10	1.7	2.5	8.3	10.0
	12.5	1.3	2.0	6.7	8.0
	15	1.1	1.7	5.6	6.7
 <p>30cc A2 1017875</p>	5	6.7	10.0	33.3	40.0
	7.5	4.4	6.7	22.2	26.7
	10	3.3	5.0	16.7	20.0
	12.5	2.7	4.0	13.3	16.0
	15	2.2	3.3	11.1	13.3
 <p>50cc Plastic 1017555</p>	5	11.1	16.7	55.6	66.7
	7.5	7.4	11.1	37.0	44.4
	10	5.6	8.3	27.8	33.3
	12.5	4.4	6.7	22.2	26.7
	15	3.7	5.6	18.5	22.2

7.5 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>100cc Plastic 1014245</p>	5	22.2	33.3	111.1	133.3
	7.5	14.8	22.2	74.1	88.9
	10	11.1	16.7	55.6	66.7
	12.5	8.9	13.3	44.4	53.3
	15	7.4	11.1	37.0	44.4
 <p>150cc Plastic 1014249</p>	5	33.3	50.0	166.7	200.0
	7.5	22.2	33.3	111.1	133.3
	10	16.7	25.0	83.3	100.0
	12.5	13.3	20.0	66.7	80.0
	15	11.1	16.7	55.6	66.7
 <p>225cc Plastic 1014250</p>	5	50.0	75.0	250.0	300.0
	7.5	33.3	50.0	166.7	200.0
	10	25.0	37.5	125.0	150.0
	12.5	20.0	30.0	100.0	120.0
	15	16.7	25.0	83.3	100.0
 <p>300cc Plastic 1014251</p>	5	66.7	100.0	333.3	400.0
	7.5	44.4	66.7	222.2	266.7
	10	33.3	50.0	166.7	200.0
	12.5	26.7	40.0	133.3	160.0
	15	22.2	33.3	111.1	133.3
 <p>450cc Plastic 1014252</p>	5	100.0	150.0	500.0	600.0
	7.5	66.7	100.0	333.3	400.0
	10	50.0	75.0	250.0	300.0
	12.5	40.0	60.0	200.0	240.0
	15	33.3	50.0	166.7	200.0
 <p>600cc Plastic 1014253</p>	5	133.3	200.0	666.7	800.0
	7.5	88.9	133.3	444.4	533.3
	10	66.7	100.0	333.3	400.0
	12.5	53.3	80.0	266.7	320.0
	15	44.4	66.7	222.2	266.7
 <p>750cc A2 1018780</p>	5	166.7	250.0	833.3	1000.0
	7.5	111.1	166.7	555.6	666.7
	10	83.3	125.0	416.7	500.0
	12.5	66.7	100.0	333.3	400.0
	15	55.6	83.3	277.8	333.3



11.0 - 8m Working Width Metering Wheel Guide









11.1 - LIGHT SEED Application Rates

8 Meter Working Width	LIGHT SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	0.5	0.8	2.6	3.1
	7.5	0.3	0.5	1.7	2.1
	10	0.3	0.4	1.3	1.6
	12.5	0.2	0.3	1.0	1.3
	15	0.2	0.3	0.9	1.0
 <p>10cc A2 1014351</p>	5	1.0	1.6	5.2	6.3
	7.5	0.7	1.0	3.5	4.2
	10	0.5	0.8	2.6	3.1
	12.5	0.4	0.6	2.1	2.5
	15	0.3	0.5	1.7	2.1
 <p>15cc A2 1014352</p>	5	1.6	2.3	7.8	9.4
	7.5	1.0	1.6	5.2	6.3
	10	0.8	1.2	3.9	4.7
	12.5	0.6	0.9	3.1	3.8
	15	0.5	0.8	2.6	3.1
 <p>30cc A2 1017875</p>	5	3.1	4.7	15.6	18.8
	7.5	2.1	3.1	10.4	12.5
	10	1.6	2.3	7.8	9.4
	12.5	1.3	1.9	6.3	7.5
	15	1.0	1.6	5.2	6.3
 <p>50cc Plastic 1017555</p>	5	5.2	7.8	26.0	31.3
	7.5	3.5	5.2	17.4	20.8
	10	2.6	3.9	13.0	15.6
	12.5	2.1	3.1	10.4	12.5
	15	1.7	2.6	8.7	10.4
 <p>100cc Plastic 1014245</p>	5	10.4	15.6	52.1	62.5
	7.5	6.9	10.4	34.7	41.7
	10	5.2	7.8	26.0	31.3
	12.5	4.2	6.3	20.8	25.0
	15	3.5	5.2	17.4	20.8
 <p>150cc Plastic 1014249</p>	5	15.6	23.4	78.1	93.8
	7.5	10.4	15.6	52.1	62.5
	10	7.8	11.7	39.1	46.9
	12.5	6.3	9.4	31.3	37.5
	15	5.2	7.8	26.0	31.3

 <p>225cc Plastic 1014250</p>	5	23.4	35.2	117.2	140.6
	7.5	15.6	23.4	78.1	93.8
	10	11.7	17.6	58.6	70.3
	12.5	9.4	14.1	46.9	56.3
	15	7.8	11.7	39.1	46.9
 <p>300cc Plastic 1014251</p>	5	31.3	46.9	156.3	187.5
	7.5	20.8	31.3	104.2	125.0
	10	15.6	23.4	78.1	93.8
	12.5	12.5	18.8	62.5	75.0
	15	10.4	15.6	52.1	62.5
 <p>450cc Plastic 1014252</p>	5	46.9	70.3	234.4	281.3
	7.5	31.3	46.9	156.3	187.5
	10	23.4	35.2	117.2	140.6
	12.5	18.8	28.1	93.8	112.5
	15	15.6	23.4	78.1	93.8
 <p>600cc Plastic 1014253</p>	5	62.5	93.8	312.5	375.0
	7.5	41.7	62.5	208.3	250.0
	10	31.3	46.9	156.3	187.5
	12.5	25.0	37.5	125.0	150.0
	15	20.8	31.3	104.2	125.0
 <p>750cc A2 1018780</p>	5	78.1	117.2	390.6	468.8
	7.5	52.1	78.1	260.4	312.5
	10	39.1	58.6	195.3	234.4
	12.5	31.3	46.9	156.3	187.5
	15	26.0	39.1	130.2	156.3

11.2 - HEAVY SEED Application Rates








8 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	0.8	1.2	3.9	4.7
	7.5	0.5	0.8	2.6	3.1
	10	0.4	0.6	2.0	2.3
	12.5	0.3	0.5	1.6	1.9
	15	0.3	0.4	1.3	1.6
 <p>10cc A2 1014351</p>	5	1.6	2.3	7.8	9.4
	7.5	1.0	1.6	5.2	6.3
	10	0.8	1.2	3.9	4.7
	12.5	0.6	0.9	3.1	3.8
	15	0.5	0.8	2.6	3.1

8 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>15cc A2 1014352</p>	5	2.3	3.5	11.7	14.1
	7.5	1.6	2.3	7.8	9.4
	10	1.2	1.8	5.9	7.0
	12.5	0.9	1.4	4.7	5.6
	15	0.8	1.2	3.9	4.7
 <p>30cc A2 1017875</p>	5	4.7	7.0	23.4	28.1
	7.5	3.1	4.7	15.6	18.8
	10	2.3	3.5	11.7	14.1
	12.5	1.9	2.8	9.4	11.3
	15	1.6	2.3	7.8	9.4
 <p>50cc Plastic 1017555</p>	5	7.8	11.7	39.1	46.9
	7.5	5.2	7.8	26.0	31.3
	10	3.9	5.9	19.5	23.4
	12.5	3.1	4.7	15.6	18.8
	15	2.6	3.9	13.0	15.6
 <p>100cc Plastic 1014245</p>	5	15.6	23.4	78.1	93.8
	7.5	10.4	15.6	52.1	62.5
	10	7.8	11.7	39.1	46.9
	12.5	6.3	9.4	31.3	37.5
	15	5.2	7.8	26.0	31.3
 <p>150cc Plastic 1014249</p>	5	23.4	35.2	117.2	140.6
	7.5	15.6	23.4	78.1	93.8
	10	11.7	17.6	58.6	70.3
	12.5	9.4	14.1	46.9	56.3
	15	7.8	11.7	39.1	46.9
 <p>225cc Plastic 1014250</p>	5	35.2	52.7	175.8	210.9
	7.5	23.4	35.2	117.2	140.6
	10	17.6	26.4	87.9	105.5
	12.5	14.1	21.1	70.3	84.4
	15	11.7	17.6	58.6	70.3
 <p>300cc Plastic 1014251</p>	5	46.9	70.3	234.4	281.3
	7.5	31.3	46.9	156.3	187.5
	10	23.4	35.2	117.2	140.6
	12.5	18.8	28.1	93.7	112.5
	15	15.6	23.4	78.1	93.8
 <p>450cc Plastic 1014252</p>	5	70.3	105.5	351.6	421.9
	7.5	46.9	70.3	234.4	281.3
	10	35.2	52.7	175.8	210.9
	12.5	28.1	42.2	140.6	168.8
	15	23.4	35.2	117.2	140.6

 <p>600cc Plastic 1014253</p>	5	93.8	140.6	468.8	562.5
	7.5	62.5	93.8	312.5	375.0
	10	46.9	70.3	234.4	281.3
	12.5	37.5	56.3	187.5	225.0
	15	31.3	46.9	156.3	187.5
 <p>750cc A2 1018780</p>	5	117.2	175.8	585.9	703.1
	7.5	78.1	117.2	390.6	468.8
	10	58.6	87.9	293.0	351.6
	12.5	46.9	70.3	234.4	281.3
	15	39.1	58.6	195.3	234.4

11.3 - FERTILISER Application Rates






8 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	1.0	1.6	5.2	6.3
	7.5	0.7	1.0	3.5	4.2
	10	0.5	0.8	2.6	3.1
	12.5	0.4	0.6	2.1	2.5
	15	0.3	0.5	1.7	2.1
 <p>10cc A2 1014351</p>	5	2.1	3.1	10.4	12.5
	7.5	1.4	2.1	6.9	8.3
	10	1.0	1.6	5.2	6.3
	12.5	0.8	1.3	4.2	5.0
	15	0.7	1.0	3.5	4.2
 <p>15cc A2 1014352</p>	5	3.1	4.7	15.6	18.8
	7.5	2.1	3.1	10.4	12.5
	10	1.6	2.3	7.8	9.4
	12.5	1.3	1.9	6.3	7.5
	15	1.0	1.6	5.2	6.3
 <p>30cc A2 1017875</p>	5	6.3	9.4	31.3	37.5
	7.5	4.2	6.3	20.8	25.0
	10	3.1	4.7	15.6	18.8
	12.5	2.5	3.8	12.5	15.0
	15	2.1	3.1	10.4	12.5
 <p>50cc Plastic 1017555</p>	5	10.4	15.6	52.1	62.5
	7.5	6.9	10.4	34.7	41.7
	10	5.2	7.8	26.0	31.3
	12.5	4.2	6.3	20.8	25.0
	15	3.5	5.2	17.4	20.8

8 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>100cc Plastic 1014245</p>	5	20.8	31.3	104.2	125.0
	7.5	13.9	20.8	69.4	83.3
	10	10.4	15.6	52.1	62.5
	12.5	8.3	12.5	41.7	50.0
	15	6.9	10.4	34.7	41.7
 <p>150cc Plastic 1014249</p>	5	31.3	46.9	156.3	187.5
	7.5	20.8	31.3	104.2	125.0
	10	15.6	23.4	78.1	93.8
	12.5	12.5	18.8	62.5	75.0
	15	10.4	15.6	52.1	62.5
 <p>225cc Plastic 1014250</p>	5	46.9	70.3	234.4	281.3
	7.5	31.3	46.9	156.3	187.5
	10	23.4	35.2	117.2	140.6
	12.5	18.8	28.1	93.8	112.5
	15	15.6	23.4	78.1	93.8
 <p>300cc Plastic 1014251</p>	5	62.5	93.8	312.5	375.0
	7.5	41.7	62.5	208.3	250.0
	10	31.3	46.9	156.3	187.5
	12.5	25.0	37.5	125.0	150.0
	15	20.8	31.3	104.2	125.0
 <p>450cc Plastic 1014252</p>	5	93.8	140.6	468.8	562.5
	7.5	62.5	93.8	312.5	375.0
	10	46.9	70.3	234.4	281.3
	12.5	37.5	56.3	187.5	225.0
	15	31.3	46.9	156.3	187.5
 <p>600cc Plastic 1014253</p>	5	125.0	187.5	625.0	750.0
	7.5	83.3	125.0	416.7	500.0
	10	62.5	93.8	312.5	375.0
	12.5	50.0	75.0	250.0	300.0
	15	41.7	62.5	208.3	250.0
 <p>750cc A2 1018780</p>	5	156.3	234.4	781.3	937.5
	7.5	104.2	156.3	520.8	625.0
	10	78.1	117.2	390.6	468.8
	12.5	62.5	93.8	312.5	375.0
	15	52.1	78.1	260.4	312.5



12.0 - 9m Working Width Metering Wheel Guide









12.1 - LIGHT SEED Application Rates



9 Meter Working Width	LIGHT SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	0.5	0.7	2.3	2.8
	7.5	0.3	0.5	1.5	1.9
	10	0.2	0.3	1.2	1.4
	12.5	0.2	0.3	0.9	1.1
	15	0.2	0.2	0.8	0.9
 <p>10cc A2 1014351</p>	5	0.9	1.4	4.6	5.6
	7.5	0.6	0.9	3.1	3.7
	10	0.5	0.7	2.3	2.8
	12.5	0.4	0.6	1.9	2.2
	15	0.3	0.5	1.5	1.9
 <p>15cc A2 1014352</p>	5	1.4	2.1	6.9	8.3
	7.5	0.9	1.4	4.6	5.6
	10	0.7	1.0	3.5	4.2
	12.5	0.6	0.8	2.8	3.3
	15	0.5	0.7	2.3	2.8
 <p>30cc A2 1017875</p>	5	2.8	4.2	13.9	16.7
	7.5	1.9	2.8	9.3	11.1
	10	1.4	2.1	6.9	8.3
	12.5	1.1	1.7	5.6	6.7
	15	0.9	1.4	4.6	5.6
 <p>50cc Plastic 1017555</p>	5	4.6	6.9	23.1	27.8
	7.5	3.1	4.6	15.4	18.5
	10	2.3	3.5	11.6	13.9
	12.5	1.9	2.8	9.3	11.1
	15	1.5	2.3	7.7	9.3
 <p>100cc Plastic 1014245</p>	5	9.3	13.9	46.3	55.6
	7.5	6.2	9.3	30.9	37.0
	10	4.6	6.9	23.1	27.8
	12.5	3.7	5.6	18.5	22.2
	15	3.1	4.6	15.4	18.5
 <p>150cc Plastic 1014249</p>	5	13.9	20.8	69.4	83.3
	7.5	9.3	13.9	46.3	55.6
	10	6.9	10.4	34.7	41.7
	12.5	5.6	8.3	27.8	33.3
	15	4.6	6.9	23.1	27.8

 <p>225cc Plastic 1014250</p>	5	20.8	31.3	104.2	125.0
	7.5	13.9	20.8	69.4	83.3
	10	10.4	15.6	52.1	62.5
	12.5	8.3	12.5	41.7	50.0
	15	6.9	10.4	34.7	41.7
 <p>300cc Plastic 1014251</p>	5	27.8	41.7	138.9	166.7
	7.5	18.5	27.8	92.6	111.1
	10	13.9	20.8	69.4	83.3
	12.5	11.1	16.7	55.6	66.7
	15	9.3	13.9	46.3	55.6
 <p>450cc Plastic 1014252</p>	5	41.7	62.5	208.3	250.0
	7.5	27.8	41.7	138.9	166.7
	10	20.8	31.3	104.2	125.0
	12.5	16.7	25.0	83.3	100.0
	15	13.9	20.8	69.4	83.3
 <p>600cc Plastic 1014253</p>	5	55.6	83.3	277.8	333.3
	7.5	37.0	55.6	185.2	222.2
	10	27.8	41.7	138.9	166.7
	12.5	22.2	33.3	111.1	133.3
	15	18.5	27.8	92.6	111.1
 <p>750cc A2 1018780</p>	5	69.4	104.2	347.2	416.7
	7.5	46.3	69.4	231.5	277.8
	10	34.7	52.1	173.6	208.3
	12.5	27.8	41.7	138.9	166.7
	15	23.1	34.7	115.7	138.9

12.2 - HEAVY SEED Application Rates








9 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	0.7	1.0	3.5	4.2
	7.5	0.5	0.7	2.3	2.8
	10	0.3	0.5	1.7	2.1
	12.5	0.3	0.4	1.4	1.7
	15	0.2	0.3	1.2	1.4
 <p>10cc A2 1014351</p>	5	1.4	2.1	6.9	8.3
	7.5	0.9	1.4	4.6	5.6
	10	0.7	1.0	3.5	4.2
	12.5	0.6	0.8	2.8	3.3
	15	0.5	0.7	2.3	2.8

9 Meter Working Width	HEAVY SEED				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>15cc A2 1014352</p>	5	2.1	3.1	10.4	12.5
	7.5	1.4	2.1	6.9	8.3
	10	1.0	1.6	5.2	6.3
	12.5	0.8	1.3	4.2	5.0
	15	0.7	1.0	3.5	4.2
 <p>30cc A2 1017875</p>	5	4.2	6.3	20.8	25.0
	7.5	2.8	4.2	13.9	16.7
	10	2.1	3.1	10.4	12.5
	12.5	1.7	2.5	8.3	10.0
	15	1.4	2.1	6.9	8.3
 <p>50cc Plastic 1017555</p>	5	6.9	10.4	34.7	41.7
	7.5	4.6	6.9	23.1	27.8
	10	3.5	5.2	17.4	20.8
	12.5	2.8	4.2	13.9	16.7
	15	2.3	3.5	11.6	13.9
 <p>100cc Plastic 1014245</p>	5	13.9	20.8	69.4	83.3
	7.5	9.3	13.9	46.3	55.6
	10	6.9	10.4	34.7	41.7
	12.5	5.6	8.3	27.8	33.3
	15	4.6	6.9	23.1	27.8
 <p>150cc Plastic 1014249</p>	5	20.8	31.3	104.2	125.0
	7.5	13.9	20.8	69.4	83.3
	10	10.4	15.6	52.1	62.5
	12.5	8.3	12.5	41.7	50.0
	15	6.9	10.4	34.7	41.7
 <p>225cc Plastic 1014250</p>	5	31.3	46.9	156.3	187.5
	7.5	20.8	31.3	104.2	125.0
	10	15.6	23.4	78.1	93.8
	12.5	12.5	18.8	62.5	75.0
	15	10.4	15.6	52.1	62.5
 <p>300cc Plastic 1014251</p>	5	41.7	62.5	208.3	250.0
	7.5	27.8	41.7	138.9	166.7
	10	20.8	31.3	104.2	125.0
	12.5	16.7	25.0	83.3	100.0
	15	13.9	20.8	69.4	83.3
 <p>450cc Plastic 1014252</p>	5	62.5	93.8	312.5	375.0
	7.5	41.7	62.5	208.3	250.0
	10	31.3	46.9	156.3	187.5
	12.5	25.0	37.5	125.0	150.0
	15	20.8	31.3	104.2	125.0

 <p>600cc Plastic 1014253</p>	5	83.3	125.0	416.7	500.0
	7.5	55.6	83.3	277.8	333.3
	10	41.7	62.5	208.3	250.0
	12.5	33.3	50.0	166.7	200.0
	15	27.8	41.7	138.9	166.7
 <p>750cc A2 1018780</p>	5	104.2	156.3	520.8	625.0
	7.5	69.4	104.2	347.2	416.7
	10	52.1	78.1	260.4	312.5
	12.5	41.7	62.5	208.3	250.0
	15	34.7	52.1	173.6	208.3

12.3 - FERTILISER Application Rates

9 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>5cc A2 1014350</p>	5	0.9	1.4	4.6	5.6
	7.5	0.6	0.9	3.1	3.7
	10	0.5	0.7	2.3	2.8
	12.5	0.4	0.6	1.9	2.2
	15	0.3	0.5	1.5	1.9
 <p>10cc A2 1014351</p>	5	1.9	2.8	9.3	11.1
	7.5	1.2	1.9	6.2	7.4
	10	0.9	1.4	4.6	5.6
	12.5	0.7	1.1	3.7	4.4
	15	0.6	0.9	3.1	3.7
 <p>15cc A2 1014352</p>	5	2.8	4.2	13.9	16.7
	7.5	1.9	2.8	9.3	11.1
	10	1.4	2.1	6.9	8.3
	12.5	1.1	1.7	5.6	6.7
	15	0.9	1.4	4.6	5.6
 <p>30cc A2 1017875</p>	5	5.6	8.3	27.8	33.3
	7.5	3.7	5.6	18.5	22.2
	10	2.8	4.2	13.9	16.7
	12.5	2.2	3.3	11.1	13.3
	15	1.9	2.8	9.3	11.1
 <p>50cc Plastic 1017555</p>	5	9.3	13.9	46.3	55.6
	7.5	6.2	9.3	30.9	37.0
	10	4.6	6.9	23.1	27.8
	12.5	3.7	5.6	18.5	22.2
	15	3.1	4.6	15.4	18.5

9 Meter Working Width	FERTILISER				
	Speed (km/h)	Lower Limit (kg/ha)	Rec. Min. (kg/ha)	Rec. Max. (kg/ha)	Upper Limit (kg/ha)
 <p>100cc Plastic 1014245</p>	5	18.5	27.8	92.6	111.1
	7.5	12.3	18.5	61.7	74.1
	10	9.3	13.9	46.3	55.6
	12.5	7.4	11.1	37.0	44.4
	15	6.2	9.3	30.9	37.0
 <p>150cc Plastic 1014249</p>	5	27.8	41.7	138.9	166.7
	7.5	18.5	27.8	92.6	111.1
	10	13.9	20.8	69.4	83.3
	12.5	11.1	16.7	55.6	66.7
	15	9.3	13.9	46.3	55.6
 <p>225cc Plastic 1014250</p>	5	41.7	62.5	208.3	250.0
	7.5	27.8	41.7	138.9	166.7
	10	20.8	31.3	104.2	125.0
	12.5	16.7	25.0	83.3	100.0
	15	13.9	20.8	69.4	83.3
 <p>300cc Plastic 1014251</p>	5	55.6	83.3	277.8	333.3
	7.5	37.0	55.6	185.2	222.2
	10	27.8	41.7	138.9	166.7
	12.5	22.2	33.3	111.1	133.3
	15	18.5	27.8	92.6	111.1
 <p>450cc Plastic 1014252</p>	5	83.3	125.0	416.7	500.0
	7.5	55.6	83.3	277.8	333.3
	10	41.7	62.5	208.3	250.0
	12.5	33.3	50.0	166.7	200.0
	15	27.8	41.7	138.9	166.7
 <p>600cc Plastic 1014253</p>	5	111.1	166.7	555.6	666.7
	7.5	74.1	111.1	370.4	444.4
	10	55.6	83.3	277.8	333.3
	12.5	44.4	66.7	222.2	266.7
	15	37.0	55.6	185.2	222.2
 <p>750cc A2 1018780</p>	5	138.9	208.3	694.4	833.3
	7.5	92.6	138.9	463.0	555.6
	10	69.4	104.2	347.2	416.7
	12.5	55.6	83.3	277.8	333.3
	15	46.3	69.4	231.5	277.8

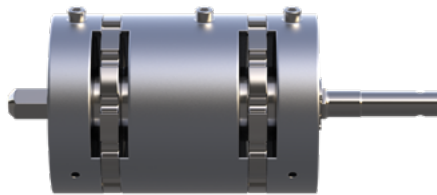
13.0 - Rotor Assemblies

Supplied with each metering unit is a small seed and large seed kit. These kits can be disassembled and reconfigured to make a variety of wheel sizes. The small seed kit contains 2 x 2.5cc and 2 x 7.5cc metering wheels, allowing you to assemble a 5cc and 15cc metering rotor. The large seed kit contains 3 x 75cc, 3 x 150cc and 3 x spacer wheels, allowing you to assemble a 150cc, 225cc, 300cc and 450cc metering rotor.

If required, additional parts can be supplied to allow for more rotors to be assembled. The rotors that require additional parts are the 10cc, 30cc, 50cc, 100cc, 600cc and 750cc metering rotors.



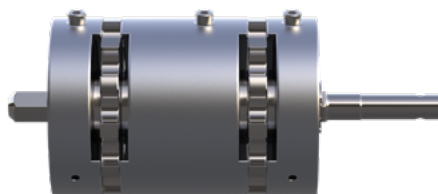
5cc A2 1014350
Section 13.1



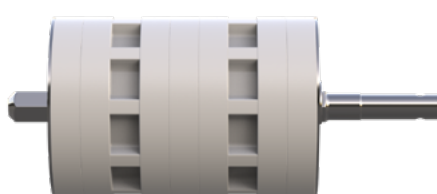
10cc A2 1014351
Section 13.2



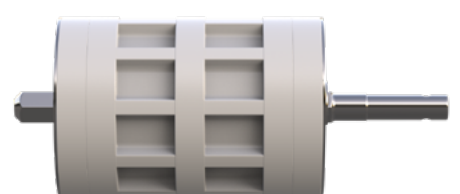
15cc A2 1014352
Section 13.3



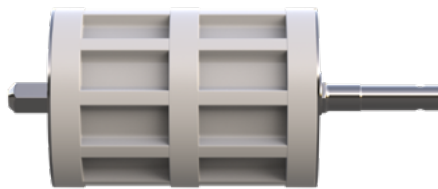
30cc A2 1017875
Section 13.4



50cc Plastic 1017555
Section 13.5



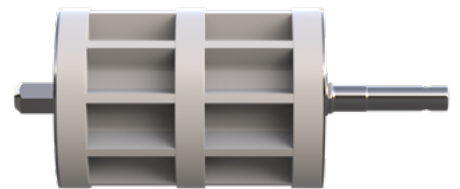
100cc Plastic 1014245
Section 13.6



150cc Plastic 1014249
Section 13.7



225cc Plastic 1014250
Section 13.8



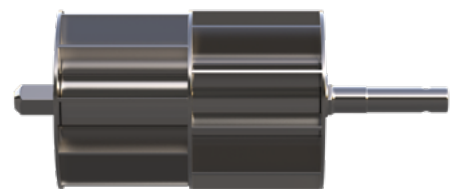
300cc Plastic 1014251
Section 13.9



450cc Plastic 1014252
Section 13.10

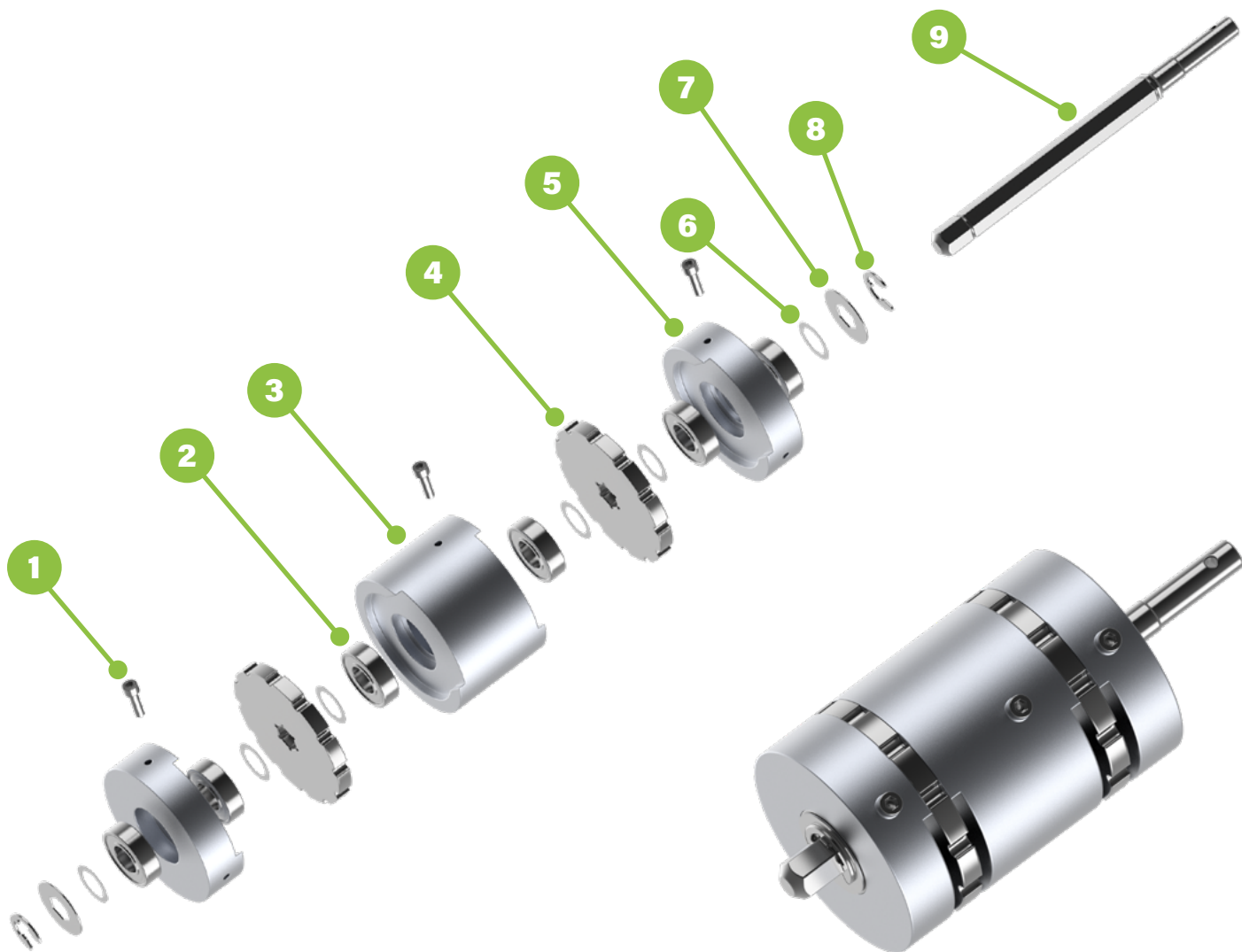


600cc 1014253
Section 13.11



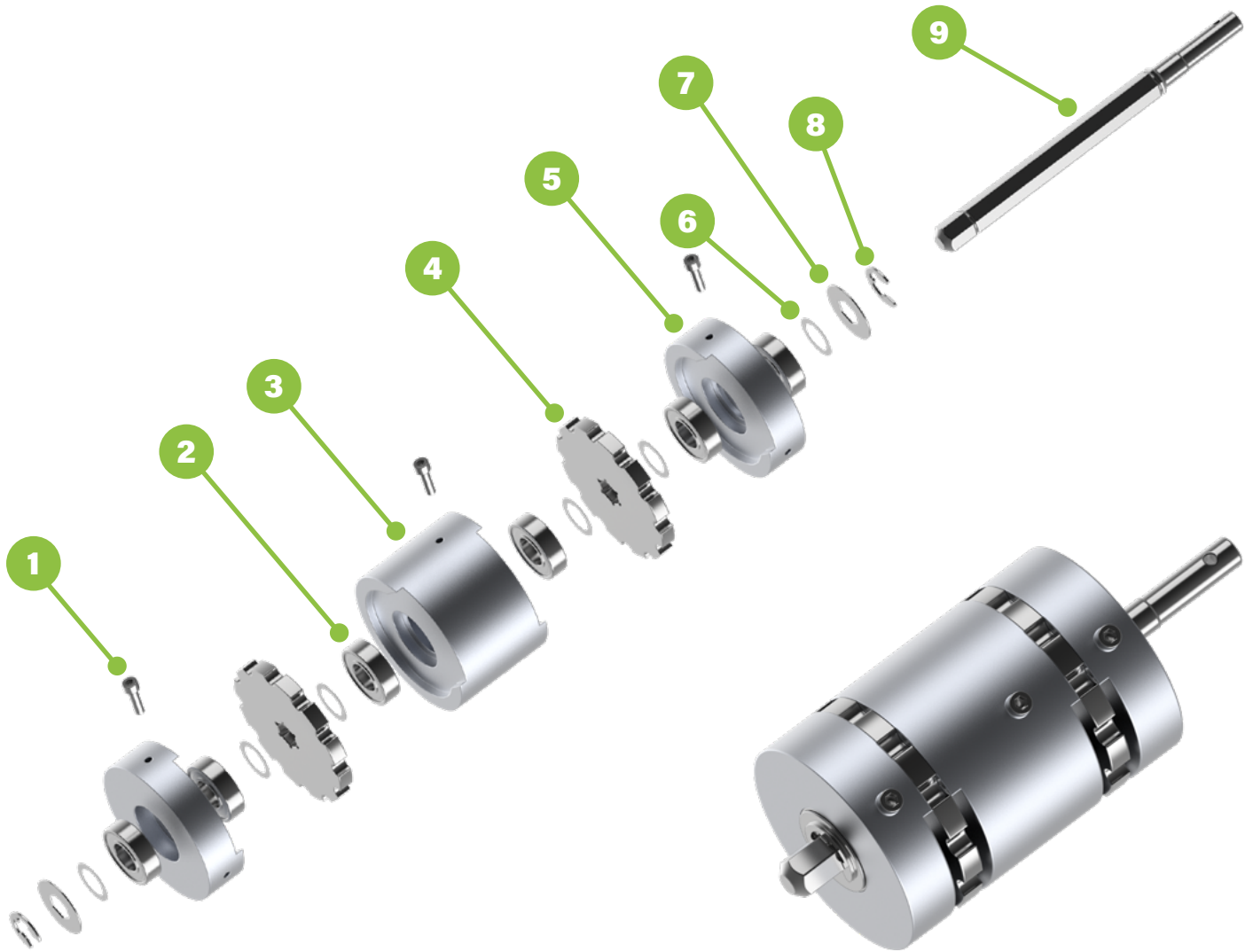
750cc A2 1018780
Section 13.12

13.1 - 1014350 5cc A2 Rotor Assembly



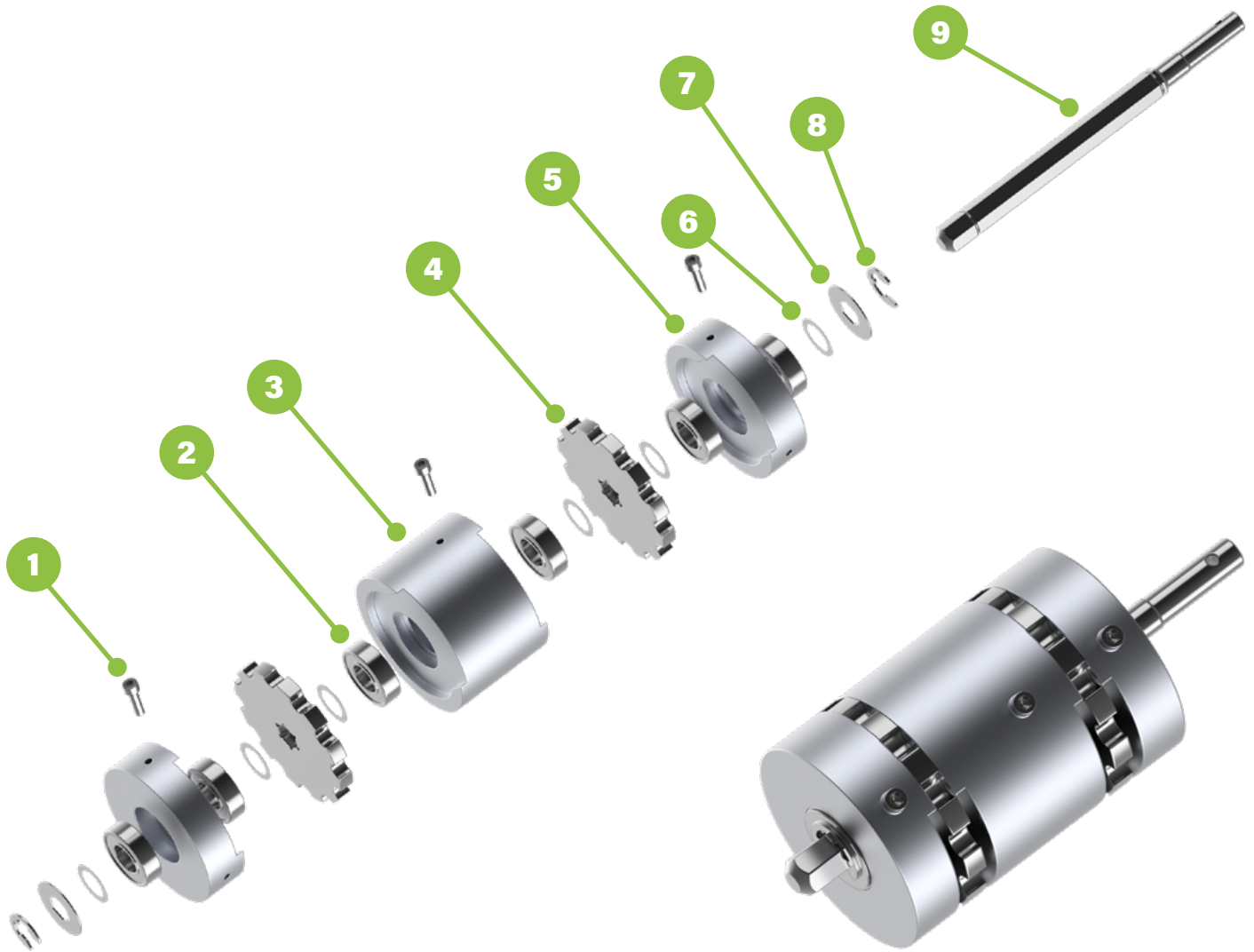
ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY
1	1011791	CAP SCREW M6x20 A2	3
2	1010359	BALL BEARING 6004 2RS A2	6
3	1014357	SPACER Ø100x70	1
4	1014344	METERING WHEEL 2.5cc Ø100x10 A2	2
5	1014356	SPACER Ø100x28	2
6	1014243	SHIM WASHER Ø20/28x0.2 A2	6
7	1014358	SPACER Ø40x1	2
8	1010228	LOCK WASHER Ø15 A2	2
9	1014229	ROTOR SHAFT 17mm HEXAGONAL	1

13.2 - 1014351 10cc A2 Rotor Assembly



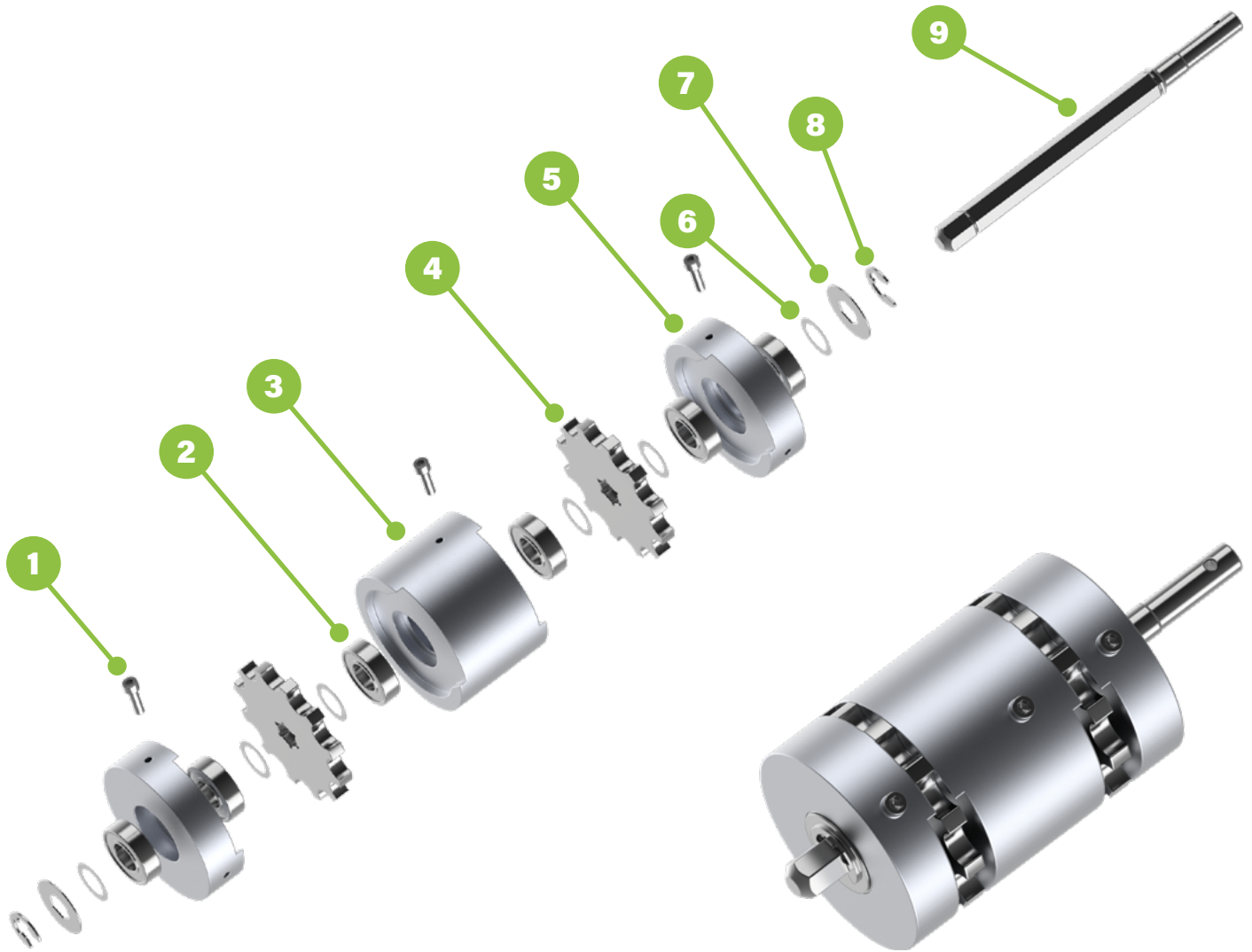
ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY
1	1011791	CAP SCREW M6x20 A2	3
2	1010359	BALL BEARING 6004 2RS A2	6
3	1014357	SPACER Ø100x70	1
4	1014345	METERING WHEEL 5cc Ø100x10 A2	2
5	1014356	SPACER Ø100x28	2
6	1014243	SHIM WASHER Ø20/28x0.2 A2	6
7	1014358	SPACER Ø40x1	2
8	1010228	LOCK WASHER Ø15 A2	2
9	1014229	ROTOR SHAFT 17mm HEXAGONAL	1

13.3 - 1014352 15cc A2 Rotor Assembly



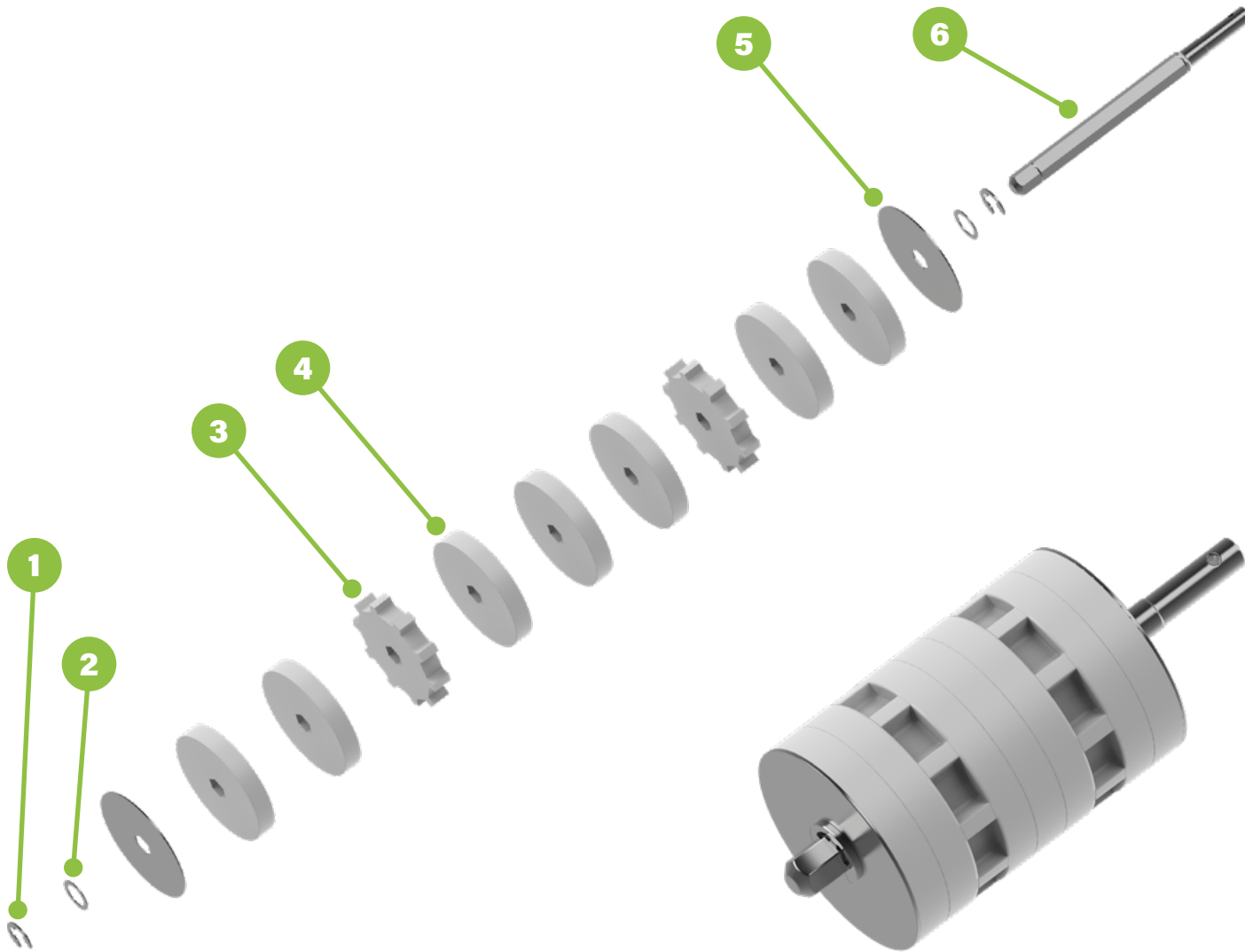
ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY
1	1011791	CAP SCREW M6x20 A2	3
2	1010359	BALL BEARING 6004 2RS A2	6
3	1014357	SPACER Ø100x70	1
4	1014346	METERING WHEEL 7.5cc Ø100x10 A2	2
5	1014356	SPACER Ø100x28	2
6	1014243	SHIM WASHER Ø20/28x0.2 A2	6
7	1014358	SPACER Ø40x1	2
8	1010228	LOCK WASHER Ø15 A2	2
9	1014229	ROTOR SHAFT 17mm HEXAGONAL	1

13.4 - 1017875 30cc A2 Rotor Assembly



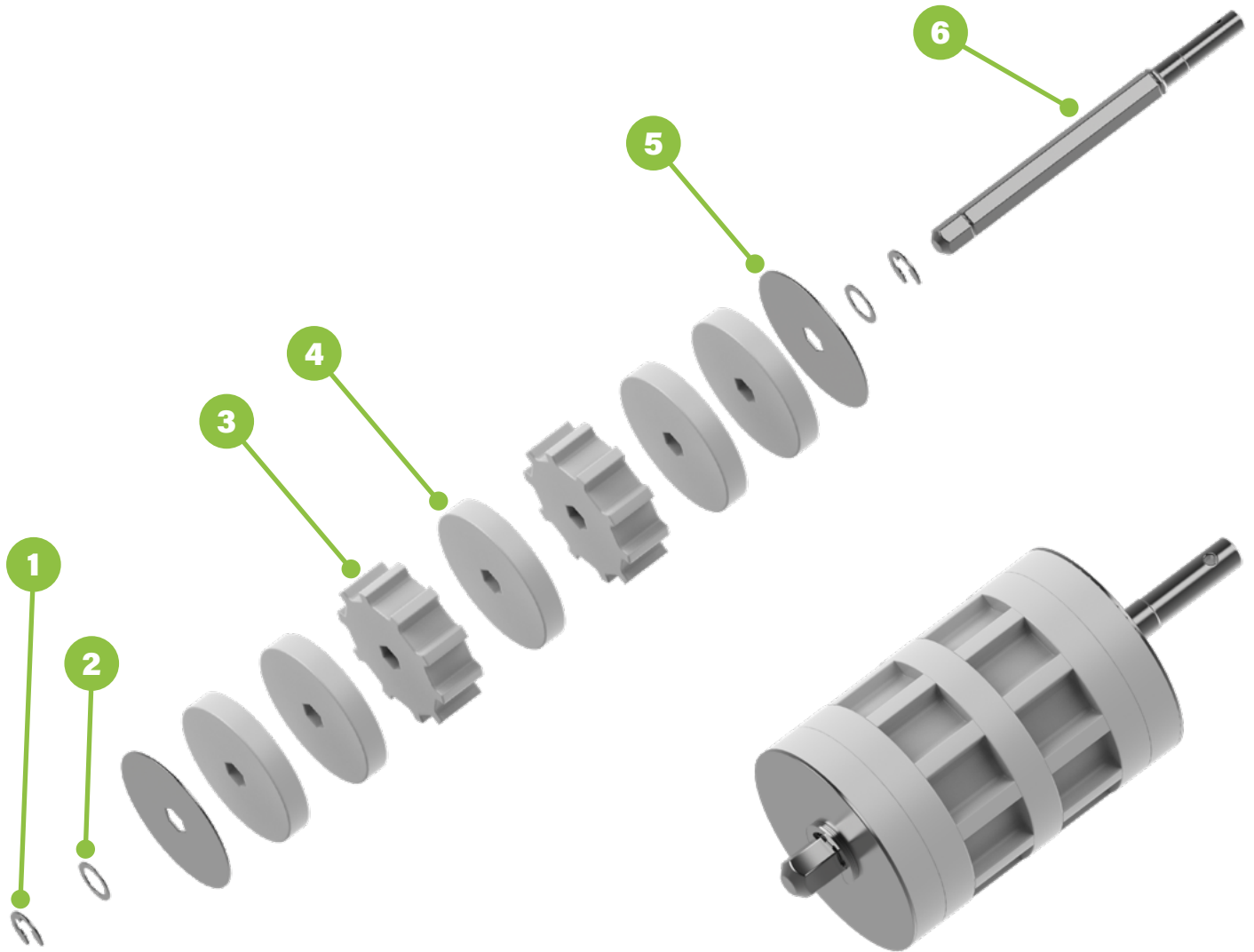
ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY
1	1011791	CAP SCREW M6x20 A2	3
2	1010359	BALL BEARING 6004 2RS A2	6
3	1014357	SPACER Ø100x70	1
4	1017866	METERING WHEEL 15cc Ø100x10 A2	2
5	1014356	SPACER Ø100x28	2
6	1014243	SHIM WASHER Ø20/28x0.2 A2	6
7	1014358	SPACER Ø40x1	2
8	1010228	LOCK WASHER Ø15 A2	2
9	1014229	ROTOR SHAFT 17mm HEXAGONAL	1

13.5 - 1017555 50cc Plastic Rotor Assembly



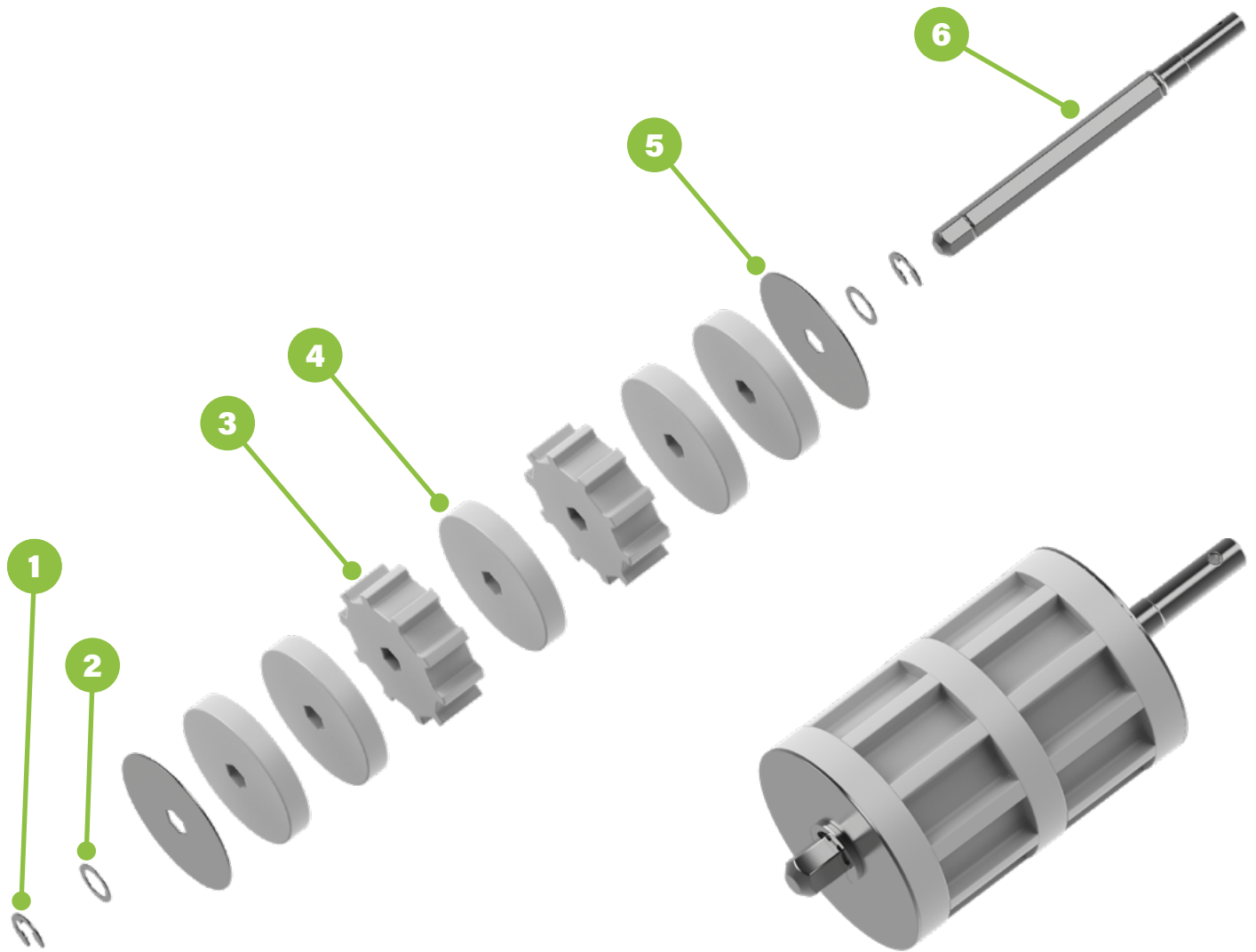
ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY
1	1010228	LOCK WASHER Ø15 A2	2
2	1014242	SHIM WASHER Ø20/28x1 A2	2
3	1014702	METERING WHEEL 25cc Ø100x16 PLASTIC	2
4	1014241	SPACER WHEEL Ø100x16 PLASTIC	7
5	1014240	DISC Ø100x1.5	2
6	1014229	ROTOR SHAFT 17mm HEXAGONAL	1

13.6 - 1014245 100cc Plastic Rotor Assembly



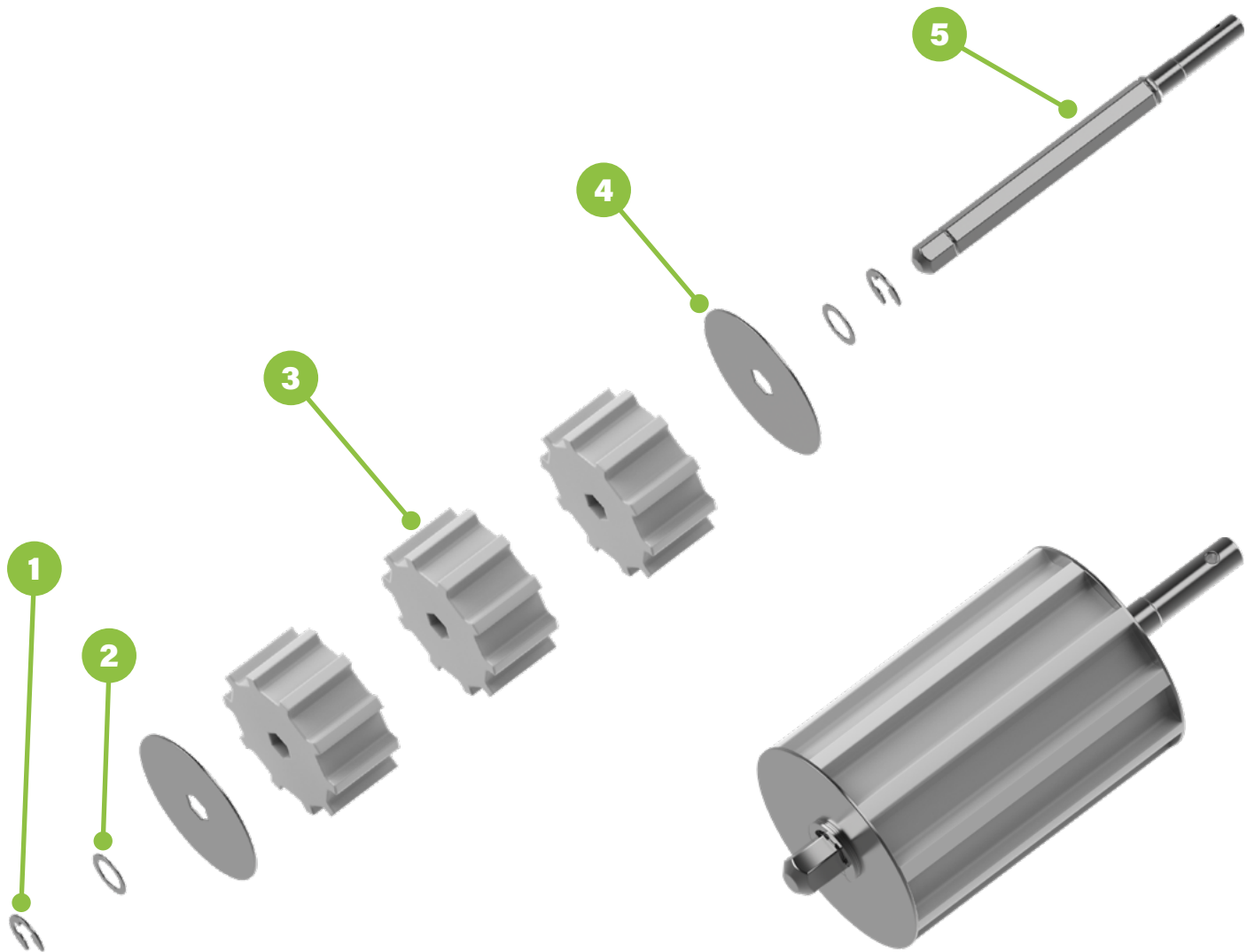
ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY
1	1010228	LOCK WASHER Ø15 A2	2
2	1014242	SHIM WASHER Ø20/28x1 A2	2
3	1014701	METERING WHEEL 50cc Ø100x32 PLASTIC	2
4	1014241	SPACER WHEEL Ø100x16 PLASTIC	5
5	1014240	DISC Ø100x1.5	2
6	1014229	ROTOR SHAFT 17mm HEXAGONAL	1

13.7 - 1014249 150cc Plastic Rotor Assembly



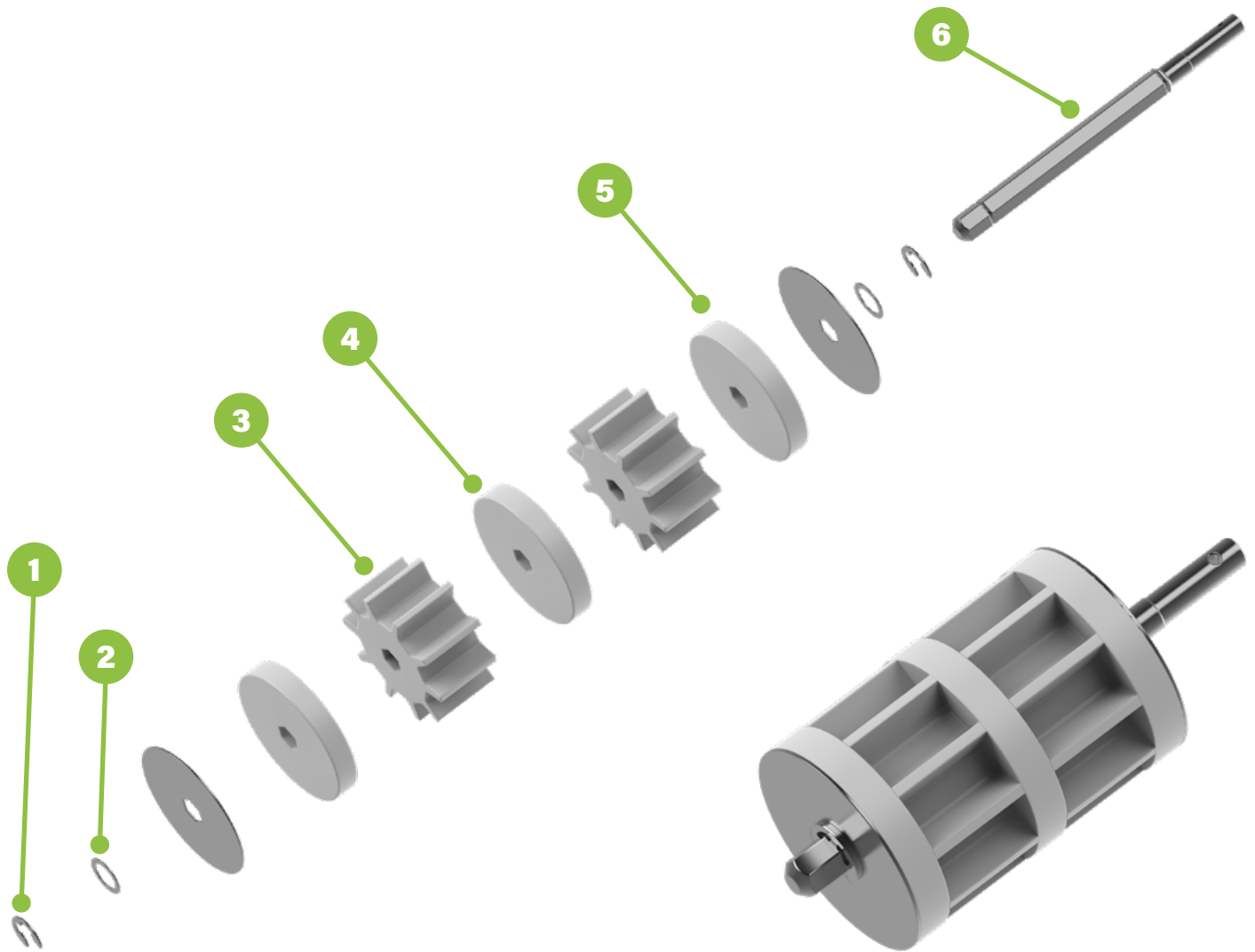
ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY
1	1010228	LOCK WASHER Ø15 A2	2
2	1014242	SHIM WASHER Ø20/28x1 A2	2
3	1014230	METERING WHEEL 75cc Ø100x48 PLASTIC	2
4	1014241	SPACER WHEEL Ø100x16 PLASTIC	3
5	1014240	DISC Ø100x1.5	2
6	1014229	ROTOR SHAFT 17mm HEXAGONAL	1

13.8 - 1014250 225cc Plastic Rotor Assembly



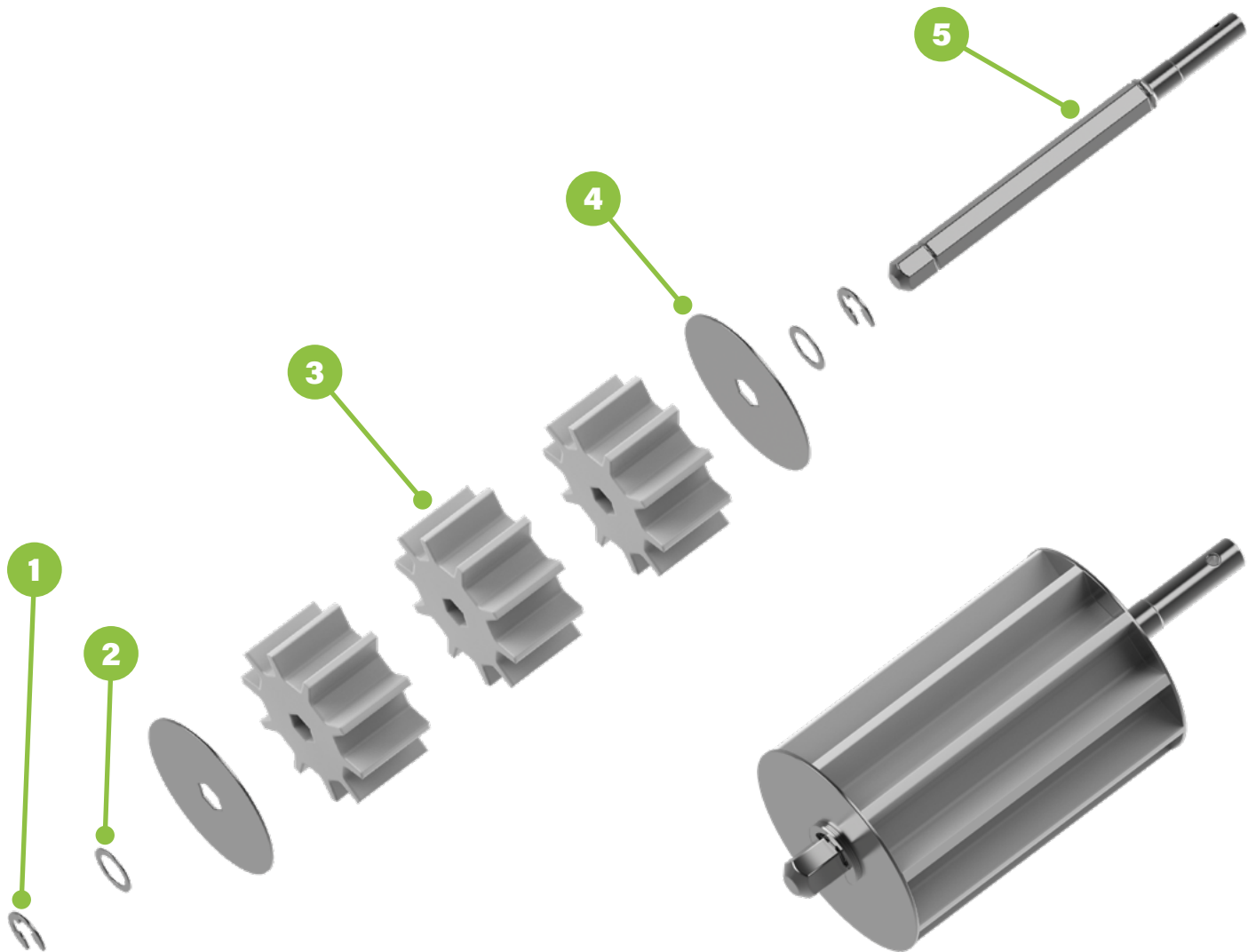
ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY
1	1010228	LOCK WASHER Ø15 A2	2
2	1014242	SHIM WASHER Ø20/28x1 A2	2
3	1014230	METERING WHEEL 75cc Ø100x48 PLASTIC	3
4	1014240	DISC Ø100x1.5	2
5	1014229	ROTOR SHAFT 17mm HEXAGONAL	1

13.9 - 1014251 300cc Plastic Rotor Assembly



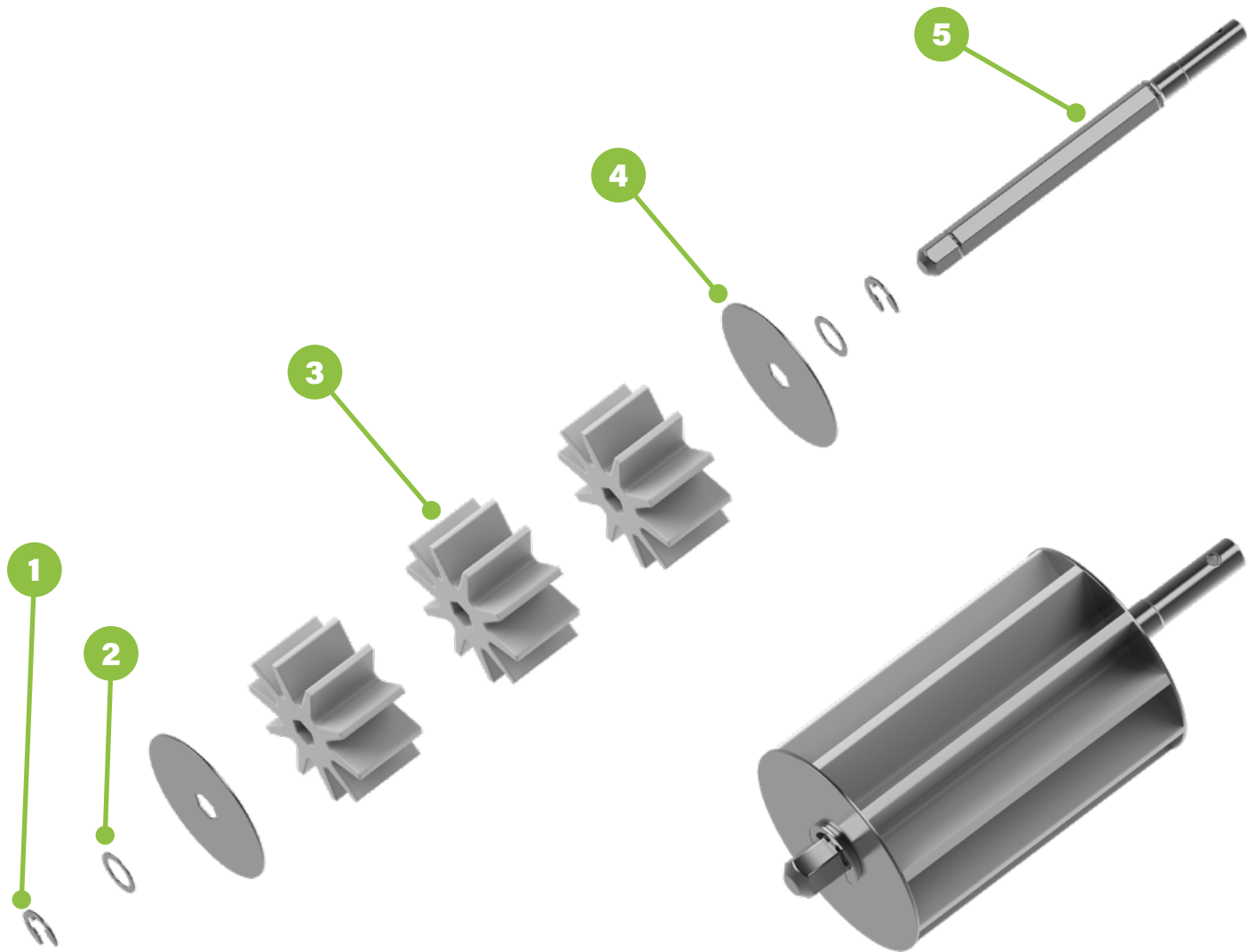
ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY
1	1010228	LOCK WASHER Ø15 A2	2
2	1014242	SHIM WASHER Ø20/28x1 A2	2
3	1014232	METERING WHEEL 150cc Ø100x48 PLASTIC	2
4	1014241	SPACER WHEEL Ø100x16 PLASTIC	3
5	1014240	DISC Ø100x1.5	2
6	1014229	ROTOR SHAFT 17mm HEXAGONAL	1

13.10 - 1014252 450cc Plastic Rotor Assembly



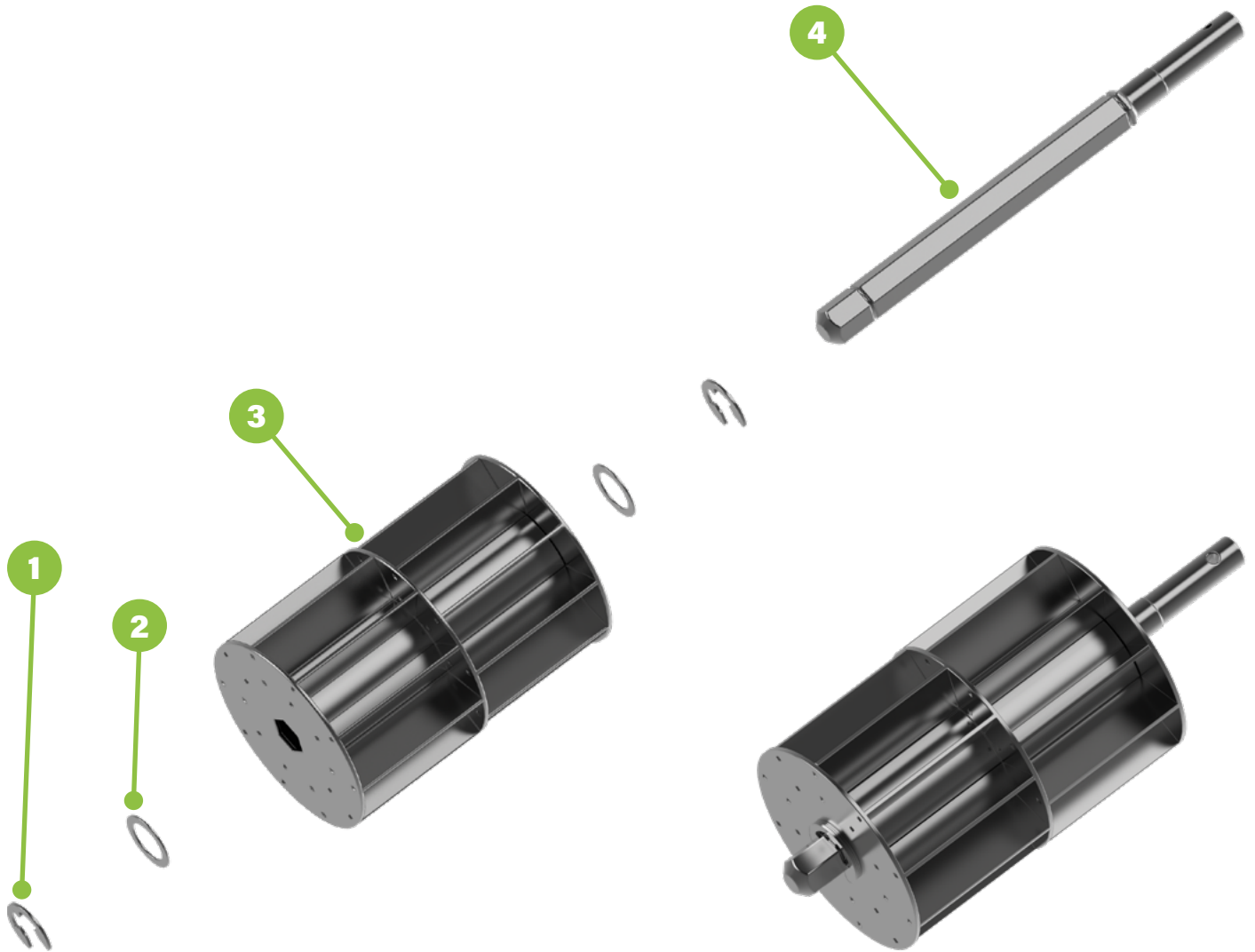
ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY
1	1010228	LOCK WASHER Ø15 A2	2
2	1014242	SHIM WASHER Ø20/28x1 A2	2
3	1014232	METERING WHEEL 150cc Ø100x48 PLASTIC	3
4	1014240	DISC Ø100x1.5	2
5	1014229	ROTOR SHAFT 17mm HEXAGONAL	1

13.11 - 1014253 600cc Plastic Rotor Assembly



ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY
1	1010228	LOCK WASHER Ø15 A2	2
2	1014242	SHIM WASHER Ø20/28x1 A2	2
3	1014233	METERING WHEEL 200cc Ø100x48 PLASTIC	3
4	1014240	DISC Ø100x1.5	2
5	1014229	ROTOR SHAFT 17mm HEXAGONAL	1

13.12 - 1018780 750cc A2 Rotor Assembly



ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY
1	1010228	LOCK WASHER Ø15 A2	2
2	1014242	SHIM WASHER Ø20/28x1 A2	2
3	1018785	ROTOR 750cc A2	1
4	1014229	ROTOR SHAFT 17mm HEXAGONAL	1

14.0 - Machine Maintenance & Care



WARNING: It is highly recommended that the implement is parked on a hard surface prior to any maintenance working being undertaken on the metering unit. The implement and tractor should be secured from restarting, and measures should be taken to make sure the implement is secure from dropping if hitched and raised.

14.1 - Cleaning

Clean the metering unit thoroughly at regular intervals throughout the sowing season and after the end of the sowing season.



IMPORTANT: High pressure cleaning jets should not be directed at electrical components, fans, hydraulic cylinders, or bearings. These components and their housings are not waterproof under high pressure.

The outside of the machine should be cleaned with water. Sluices under the meter should be opened so any water can flow out.

The insides of the metering units can be cleaned with compressed air. Make sure to wear appropriate PPE as per manufacturer's instructions as the meter will be contaminated with seed dressings and fertiliser.

Hoppers and distribution lines can also be cleaned with compressed air. Make sure to wear appropriate PPE as per manufacturers recommendations.

When using fertiliser, components should be cleaned and rinsed thoroughly. Fertilisers are aggressive and can cause corrosion on your machine.

14.2 - Storage

If the machine is to be stored for a prolonged period, such as between sowing seasons, follow the instructions below:

1. Hoppers and metering units should be emptied of any product (see **section 3.2**).
2. Machine should be cleaned as per **section 14.1**, following all steps.



IMPORTANT: Do not apply corrosion protection agents or oils to any plastic or rubber components. These components can be affected by these products, and can become brittle or may break.

14.3 - Performance Checks

Once the metering system is configured, we recommend the operator checks the machines output at regular intervals when drilling to ensure correct application rate.

Appendix

Metric Screw Torques

Metric Screw Tightening Torques - Nm							
Size Ø (mm)	Pitch (mm)	Bolt Class					Wheel Nuts
		4.8	5.8	8.8	10.9	12.9	
3	0.5	0.9	1.1	1.8	2.6	3.0	
4	0.7	1.6	2.0	3.1	4.5	5.3	
5	0.8	3.2	4.0	6.1	8.9	10.4	
6	1.0	5.5	6.8	10.4	15.3	17.9	
7	1.0	9.3	11.5	17.2	25	30	
8	1.25	13.6	16.8	25	37	44	
8	1.0	14.5	18	27	40	47	
10	1.5	26.6	33	50	73	86	
10	1.25	28	35	53	78	91	
12	1.75	46	56	86	127	148	
12	1.25	50	62	95	139	163	
14	2.0	73	90	137	201	235	
14	1.5	79	96	150	220	257	
16	2	113	141	214	314	369	
16	1.5	121	150	229	336	393	
18	2.5	157	194	306	435	509	
18	1.5	178	220	345	491	575	300
20	2.5	222	275	432	615	719	
20	1.5	248	307	482	687	804	
22	2.5	305	376	502	843	987	
22	1.5	337	416	654	932	1090	510
24	3.0	383	474	744	1080	1240	
24	2.0	420	519	814	1160	1360	
27	3.0	568	703	1000	1570	1840	
27	2.0	615	760	1200	1700	1990	
30	3.50	772	995	1500	2130	2500	
30	2.0	850	1060	1670	2370	2380	

Hydraulic Fitting Torques

Hydraulic Fitting Tightening Torques	
Size Ø (Inches)	Torque (Nm)
3/8	47
1/2	100
3/4	150

Imperial Screw Torques

Imperial Screw Tightening Torques - Nm							
Size Ø		Strength 2 (No Marks on head)		Strength 5 (3 Marks on head)		Strength 8 (6 Marks on head)	
Inches	mm	Coarse Thread	Fine Thread	Coarse Thread	Fine Thread	Coarse Thread	Fine Thread
1/4	6.4	5.6	6.3	8.6	9.8	12.2	13.5
5/16	7.9	10.8	12.2	17.6	19.0	24.4	27.1
3/8	9.5	20.3	23.0	31.2	35.2	44.7	50.2
7/16	11.1	33.9	36.6	50.2	55.6	70.5	78.6
1/2	12.7	47.5	54.2	77.3	86.8	108.5	122.0
9/16	14.3	67.8	81.3	108.5	122	156	176.3
5/8	15.9	95	108.5	149.1	169.5	216	244
3/4	19.1	169.5	189.8	271.1	298.3	380	427
7/8	22.2	176.3	196.6	433.9	474.5	610	678
1	25.4	257.6	278	650.8	718.6	915.2	1017
1 1/8	28.6	359.3	406.8	813.5	908.4	1302	1458
1 1/4	31.8	508.8	562.7	1139	1261	1844	2034
1 3/8	34.9	664.4	759.3	1491	1695	2414	2753
1 1/2	38.1	881.3	989.8	1966	2237	3128	3602



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