The KIMSEED Multi THRESHER was designed to meet the requirements of research laboratories and seed merchants to thresh a wide variety of seedpods from cereal grains and grasses to Medics, Clovers and Acacias.

The heads or seedpods are fed via a dust controlled chute into the threshing chamber. In turns the threshed material is force through metering plates or allowed to circulate for manual release.

Features of the new model:

- NO BELTS to change VARISPEED - THRESHING at the turn of a knob
- VARIABLE AIR FLOW at the turn of a knob
- QUICK CLEANING, with a fast action toggle lock door on the threshing chamber
- NEW: DUST EXTRACTION Filter with clear collection bag to visually inspect contents.
- DROP DOWN SCREENS for Grass and Grain Threshing as well as Seeds
- 3 Inspection windows to observe the flow of seeds and trash
- Safety cut off switch when opening chamber door.
- Seed cleaning times reduced

Drop Down Screen allows seed pods to be efficiently smashed open to release the seeds within, without creating a large amount of small trash.
1. Filter
2. Loading Chute
3. Threshing Chamber
4. Air Control Quadrant
5. Air Control Lever
6. Dust Plastic Bag
7. Cyclone – Dust and Light chaff/pods
8. Seed Discharge
9. Discharge port
### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power requirement:</td>
<td>Electric 240 volt AC 10 Amp</td>
</tr>
<tr>
<td>Threshing impeller variable speed</td>
<td>200 - 1000 rpm</td>
</tr>
<tr>
<td>Fan air flow variable</td>
<td>2 x variable flaps</td>
</tr>
<tr>
<td>Vacuum collection bag</td>
<td>H 750mm x W 435mm 300 micron</td>
</tr>
<tr>
<td>Beaters rubber</td>
<td>4 x 150mm x 85mm x 10mm</td>
</tr>
<tr>
<td>Concave for Threshing chamber from durable polyurethane</td>
<td>2 x 290mm x 158mm x 12mm</td>
</tr>
<tr>
<td>Metering Screen sizes</td>
<td>3, 5, 6, 8, 10, 18 mm</td>
</tr>
<tr>
<td>Shipping Dimensions Crated</td>
<td>L 1200 x W 830 x H 1260 mm outside</td>
</tr>
<tr>
<td>Weight</td>
<td>Shipping: 295Kg Net: 220Kg</td>
</tr>
</tbody>
</table>

---

![Assembled Dimensions Diagram]
Introduction

The KIMSEED THRESHER 2005 was designed to meet the requirements of research laboratories and seed merchants to thresh a wide variety of seedpods from cereal grains and grasses to Medics, Clovers and Acacias. The heads or seedpods are fed via a dust controlled chute into the threshing chamber. In turns the threshed material is force through metering plates or allowed to circulate for manual release.

**Features of the new model:**
- NO BELTS to change VARISPEED THRESHING at the turn of a knob
- VARIABLE AIR FLOW at the turn of a knob
- QUICK CLEANING, with a fast action toggle lock door on the threshing chamber
- DUST EXTRACTION BAGS with clear collection bag to visually inspect contents.
- DROP DOWN SCREENS for Grass and Grain Threshing as well as Seeds
- 3 Inspection windows to observe the flow of seeds and trash
- Safety cut off switch when opening chamber door.

**Seed cleaning times reduced**
Drop Down Screen allows seed pods to be efficiently smashed open to release the seeds within, without creating a large amount of small trash.
Set up

Remove all components from the crate and assemble as follows.

1) Filter bag Support:

Screw On Rod making sure large washer goes in first
Tighten Nut using ½” spanner.

The Unit supplied with castors need no special assembly,
Castors have a brake lever that once thresher is in position, using foot press lever down to brake. Remember to release brake to move thresher around.

2/ Fit the Feed In Chute

- Tilt the chute vertical (90 degrees) so that the hook fits under the bar on the threshing head inlet.
- Slowly tilt the chute into the horizontal position checking that its tapered edge locates firmly into the opening on the thresher head inlet.
3. Fit Hose to Feeding Chute

3/ Check that the clamps holding the dust filter bag and the trash & dust collection bag are located securely otherwise leakage may occur during threshing. Also check the clamps holding the dust collection hoses are secured and tight. (Figure 9)
General Layout

1) Filter Bag
2) Loading Chute
3) Threshing Chamber
4) Air Control Quadrant
5) Air Control Lever
6) Dust Plastic Bag
7) Seed Discharge
8) Cyclone – Dust and Light chaff/pods
9) Discharge port

Threshing Principles
A sample of seed heads or seed pods is poured into the feed chute (Figure 11) Gently push the feeding flap to feed seeds onto threshing chamber (Figure 12) where the sample is threshed.

Rubber beaters **thresh** the heads or pods against ribbed concaves until the mixture of seeds and trash falls through the selected size metering plate. Having a Drop Down metering plate, allows the opening and dropping down of excess pods or chaff out of the threshing chamber.

Concaves (Figure 12) made from durable High Density Polyurethane are fitted to the inside of the threshing chamber. These concaves provide an excellent textured surface for efficient threshing where seed is not damaged by hard steel edges.

Metering plates can be easily changed by removing rod Standard metering plates are supplied with each machine. Sizes: 3, 4, 5, 6, 8, 10 mm diameter holes. Other sizes available by request

**Varispeed**: Threshing at the turn of a knob allows the operator to select the optimum beater speed for the sample to be threshed. New Model has graduations from # 1 onwards. The higher the number faster the speed.
Overload Protection on Varispeed protects the gearbox motor from overload. If overload occurs press reset button located under the motor see photo

Commencing Threshing

Select threshing screen to suit seeds to be threshed. Always use a screen larger than the seeds being threshed. Install screen

Replacements of Screens:

1) Loosen up holding lever
2) Using pliers Remove Supporting Rod
3) Remove Screen
4) Select a new screen and slide onto cavity
5) Replace Rod
6) Relocate holding lever onto its catch.

ACTUAL THRESHING OPERATION:
Starting the Thresher:

1) Set Main Switch to ON
   a. Start Fan Motor
      i. Start Thresher Motor

2) Set Variator Speed to around 6

Seeds are fed onto the feeding chute and slowly push past the top flap and onto the threshing chamber.
Controlling Threshing Action:

Air Suction and Feed rate

1) Set Air Intakes to ½ Open

During the initial minutes, check feed rate so that threshing chamber is not overfilled. This is usually determined by hearing the threshing sound which should be a uniform grinding noise. If the noise changes to a sort of intermittent noise, extra seeds may be required.

After these initial minutes review operation by checking what material is coming out of the thresher in the main four (4) areas:

- Air flow to cyclone
- Seed Discharge
- Cyclone
- Plastic bag

Depending on the seed type, these adjustments need to be trimmed, it is advisable that during the initial familiarization with seed types and the thresher itself, operator experiments with settings. The main suction port located under fan is the one the determines air volume and strength. The port located on the cyclone suction point determines air suction volumes at the cyclone end. ONLY EXPERIMENTATION WILL ASSIST IN ACHIEVING OPTIMAL SEED CLEANLINESS.
The Threshing Action is controlled in a number of ways:

1) By Increasing or decreasing the Speed of Threshing using the Rotary Knob that sets the Variator Speed. This Speed can be adjusted from 200 to 900 RPM. (See Fig 21)

2) By adjusting the Air Flows. These Air Flows are adjusted in a number of ways:

   By opening or closing the main Air Fan Vent. This Control is located on the Fan Support Post and is adjusted by moving the Knob located at the left of the Threshing Chamber. This increases or decreases suction on the Cyclone.

   By opening and closing the Quadrant. This adjusts the seed and debris strengths onto the Cyclone.

   By adjusting the air flow and suction strength to the Cyclone.
3) By changing the size of the metering plates used in threshing, the threshing rate can be accelerated. A larger screen opening will increase the speed of the material going through the thresher.

Metering Plates are designed to contain the sample in the threshing chamber long enough to separate the seeds from the pods. Care is needed in selecting the screen size. If the metering plate holes are too small the pods will be threshed too much and seed cleaning will be more difficult. Also, seeds can be damaged if they are held in the threshing chamber too long.

If the metering plate holes are too large the pods will fall through them without releasing all of the seeds contained within.

The set of plates can be stored in the basket located on the side of the thresher.

The Concept for the DROP-DOWN or OPENING metering Plates is that during threshing, specially seeds like grasses and grains have a lot of stem or hay. This material (chaff) accumulates on the Threshing Chamber, reducing the efficiency of the thresher and sometimes damaging the seeds. By having the DROP-DOWN Screens, as the operator sees accumulation of matter, the screen is opened and all or most this excess comes down the tube and most of it is picked up by the cyclone suction. To increase this suction, just prior to opening the screen, the quadrant flap can be partially closed. Once this process is finished, the quadrant is returned to its original position.
Threshing Beater / Concave clearance:

Beaters must be set and maintained at a clearance of between 4 to 5 mm from the concave inner surface. Beaters are adjusted by loosing-up mounting bolts and moving them.

Threshing Chamber Access and Cleaning:

The Threshing Chamber can be quickly accessed with a fast action toggle locking door. The toggle lock can easily be adjusted to seal the door tightly. (Figure 26) The new safety switch on the chamber door will shut the machine down if opened.
Dust Collection and Filter Cleaning:

Dust and light-weight trash is collected into a clear plastic bag. The clear plastic allows the operator to monitor the types of trash collected.

The Filter Bag (Upper bag) needs to be Removed and Cleaned regularly. If too much dust is accumulated on this bag, a substantial reduction of air flow and suction could be experienced.
Seed Collection (Figure 28)
Two Plastic Containers are supplied.

The cyclone is designed to receive larger particles and also most of the Non Viable Seeds. (light weight).

It is particularly useful when threshing grains and grasses with stork since this usually increases the volume inside the threshing chamber and using the opening screens, it is moved to the cyclone rather than added to seeds or to dust bags.

It also allows any seeds to be recovered at the cyclone rather than going onto the dust bag.
Maintenance

Electric Thresher:
Control panel fuses
Warning! switch off main switch and disconnect machine from mains supply before any maintenance.
Screw out and check and replace if necessary a) Fan 10amp fuse.  
b) Thresher 10 amp fuse

Lubrication of Varispeed gearbox.
Check gearbox oil level weekly by looking through a hole in the cover located just under the Varispeed adjustment knob. Correct oil level when the thresher is off (window is completely filled) If top up is required use an automotive automatic gearbox oil.

General Thresher Maintenance:
Thresher beater blades
Check the clearance between the beater and concave is 4 - 5 mm.
Loosen the bolts and slide the blade to the correct position. Replace the beaters when no more adjustment can be obtained to maintain the correct clearance.

Thresher Concaves
Check that the concave surface is not damaged with pieces chipped out of the corrugations.
Replace if the damage is causing inefficiency in the threshing process. Concaves should slide out of the guides with no bolts to undo. New concaves should slide into the guides.

Collection Bags
Check that the collection plastic bag is fitted properly so that no dust leakage occurs.
Check the plastic bag for holes and replace if it cannot be repaired.

Dust Filter Bag
Check when air flow is slowed by too much dust trapped in this filter. It is best to shake this bag to clear it just before you change the collection plastic bag.

Tyres on high floatation model
Check tyres for punctures every time you use the thresher. Air pressure on each wheel should be 20 psi (140 kPa).