The KIMSEED Multi THREasher CW09 has been modified to enhance even further its ability 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. As it turns the threshed material is forced through metering screen plate. If required a blank plate can be used to keep material threshing inside the chamber until released when the plate is opened.

Features of the new model:
- NO BELTS to change VARISPEED - THRESHING at the turn of a knob
- CLEAR THRESHING CHAMBER DOOR
- 3 VARIABLE AIR FLOWS for full Cleaning control.
- QUICK CLEANING, with a fast action toggle lock door on the threshing chamber.
- DUST EXTRACTION with Filter and 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.
Specifications

Power requirement: Electric 240 volt AC 10 Amp

Threshing impeller variable speed 200 - 1000 rpm.

Fan air flow variable 3 x variable gates

Vacuum collection bag H 750mm x W 435mm 300 micron clear plastic

Beaters rubber 4 x 150mm x 85mm x 10mm

Concave for Threshing chamber from durable polyurethane 2 x 290mm x 158mm x 12mm

Metering Screen sizes 3, 4, 5, 6, 7, 8, 10, 12.5, 15 mm & blank

Shipping Dimensions Crated L 1280 x W 930 x H 1270 mm outside

Weight Shipping: 280Kg
Net: 200Kg
Introduction

The KIMSEED Multi THRESHER CW09 is the result of leading design improvements which meet the requirements of research laboratories and seed merchants. It can thresh a wide variety of Seedpods from Cereal grains and grasses to Salt Bush, Medics, Clovers and Acacias.

The heads or seedpods are fed via a dust controlled chute into the threshing chamber. As it turns the threshed material is forced through metering screen plate. If required a blank plate can be used to keep material threshing inside the chamber until it is released when the plate is opened.

Features of the redesigned model:

NO BELTS to change VARISPEED THRESHING at the turn of a knob.
Fully Adjustable Air Control Gates (3) - to trim Air Flows Accurately.
REDESIGNED CYCLONE - to better remove and control dust.
SEE THROUGH DOOR - Easy to see threshing action.
DUST EXTRACTION FILTER with Cleaning Handle – No more Bag that clogs easily.
CLEAR DUST COLLECTION BAG – Easy to inspect and remove.
DROP DOWN SCREENS – Easy to Open and Exchange – Very practical when threshing Grasses and Grains as well as Seed Pods.
3 Inspection windows to observe the flow of seeds and trash
SAFETY SWITCH THAT CUTS THE MOTOR WHEN THE DOOR IS OPENED.

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) Install castors in the plates as per image below.

2) Install Filter

Position Filter on the Plastic Rings, secure firmly with the Steel Strap Supplied, make sure the strapping is correctly placed on the rubber groove.

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.
3) Fit the Feed Inlet 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.

4) Fit the Dust Hose to the chute:

The chute hose slides into position on top of the feeding chute.

This hose controls all dust when threshing.

It also becomes useful when cleaning the threshing chamber to vacuum dust with the supplied nozzle.
Threshing Principles

A sample of seed heads or seed pods is poured into the feed chute. Gently push the feeding flap to feed seeds onto threshing chamber where the sample is thresher. Keep the feeding flap closed at all times.

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 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. Note the Right Concave is now longer than the other and giving an extra Threshing area.

Metering plates can be easily changed by removing the square pin. Standard metering plates are supplied with each machine. Sizes: 3, 4, 5, 6, 7, 8, 10, 12.5, 15mm diameter holes. Other sizes available by request

To replace the screens, rotate the screen down with the screen adjust handle and remove the square pin. Remove the existing screen and fit the new screen, refit the pin and rotate the screen back firmly.
**Threshing Control**

**Varispeed**: Threshing at the turn of a knob allows the operator to select the optimum beater speed for the sample to be threshed.

**The Gravity Gauge** has graduations from # 1 onwards.

When increasing or decreasing the threshing speed, do this slowly whilst the thresher is running.

The higher numbers mean faster speed.

**CAUTION:**
**VARISPEED KNOB SHOULD ONLY BE TURNED WHEN THRESHER IS RUNNING**

**Overload Protection** on Varispeed protects the gearbox motor from overload. If overload occurs, wait a few minutes for the motor to cool down and then press reset button located top of the motor guard. Start thresher and if this overload keeps on occurring, reduce the threshing rate.
Start Threshing Initial adjustments

CAUTION: Thresher must be disconnected from mains supply before adjustments.

Select a screen that suits the seeds size to be threshed. Always use a screen larger than the seeds being threshed. Install screen

Installing Screen:
1) Loosen up holding lever
2) Remove Supporting Pin
3) Remove Screen
4) Select a new screen and slide onto cavity
5) Replace Pin
6) Screen should look like this
7) Relocate holding lever down to the very end.

To change the screens, drop the screen a little by moving the handle a few notches, use one hand and lift the screen a bit at the opposite side to the pin and the pull the pin out/ The reverse to re install.

Beaters may require adjustments to suit seeds. Place impeller in the position shown, loosen up bolts and using a spacer, reposition beater rubbers closer or away from concaves. A minimum clearance of 3 to 4 mm is suggested and a maximum of 10-12 mm is advisable.
THRESHING OPERATION:

Starting the Thresher:

1) Set Emergency Stop Switch to ON position.
2) Start Fan
3) Start Thresher
4) When thresher motor is running slowly adjust speed dial to 6 to begin with

Feed inlet chute:
Seed in pods are fed onto the feeding chute and slowly push past the top flap and onto the threshing chamber.
Air and Suction Controls in Detail:

1) Cyclone Air Control Gate:

The Suction Air Control gate is located on the side of the thresher and set the **Air Flow Volume**. Opening will increase the volume and Closing it will reduce the volume of air going to the filter and dust bag. Very light seed will need a reduce volume and Heavier Seeds will tolerate a high volume.

To assist in the Air Control Settings we have incorporated a number of slots.

This way you can make note of different setting that relate to specific seed threshing requirements.

Note: When cleaning out the threshing Chamber you can get more vacuum through the cleaning nozzle by closing the cyclone gate fully and opening the inlet chute suction gate fully.
2) Fan Main Suction Control gate

The Main Suction Control gate sets the Volume of Air being sucked by the Fan. Opening the gate decreases the suction of the cyclone and the material inlet chute dust duct. Closing it fully will increase the suction & air volume through the Cyclone and chute dust duct.

Also to assist in the main Air Control, slots have been cut.

This will make adjustments easier and a database with settings can easily be established.

3) Directional Air Control at the Seed Discharge Point:

The Discharge Air Control is operated via a quadrant and closing it will direct a higher volume of chaff and dust into the Cyclone. Open Setting is advised when threshing Light Seeds that could be sucked onto the Cyclone. To set the flap properly, check the dust for seeds and adjust accordingly.
Air Suction and Feed rate

Set Air Intake gates to ¼ 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 an intermittent noise, extra material can be fed into the threshing chamber through the inlet chute.

After these initial minutes review operation by checking what material is coming out of the thresher in the main 3 areas:

1/ Cyclone
2/ Dust Flap Quadrant
3/ Seed Discharge

Depending on the seed type, these adjustments may need to be trimmed. It is advisable that during the initial familiarization with seed types and the thresher itself, the operator experiments with settings. The main suction port located under fan is the one that 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.
Controlling Threshing Action:

The Threshing Action is controlled in a number of ways:

1) **CAUTION:** Varispeed Knob should only be slowly turned when thresher is running.
   By increasing or decreasing the Speed of Threshing by rotating the Knob that sets the Variator Speed. This Speed can be adjusted slowly from 200 to 900 RPM.

2) **By adjusting the Air Flows** as per previous page details.

3) **By changing the size of the metering screen 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 Screen 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 screen plate holes are too large the pods will fall through them without releasing all of the seeds contained within. The set of screens can be stored in the basket located on the side of the thresher.
The Concept for the DROP-DOWN or OPENING metering screen 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.

4) By adjusting the Clearance of the Rubber Beaters

![Beaters Image]

Threshing Beater / Concave clearance:

Beaters must be set and maintained at a clearance of between 4 to 5 mm from the concave inner surface. This Clearance should be increased if large seeds are to be threshed to say 7 or more mm. Beaters are adjusted by loosing-up mounting bolts and moving them.
Threshing Chamber Access and Cleaning:

1/ The Threshing Chamber is accessed opening the clear door. A suction brush is supplied. This is to be connected to the chute suction hose. Pull & Push onto hose without using clamps.

2/ Close fully the Cyclone Gate

3/ Start the Fan Only vacuum Dust away.

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 needs to be Cleaned regularly. to Clean, STOP the Fan and rotate handle a number of times.

When a clean Plastic bag is fitted make sure all clamps are tight and in the right position.
Seed Collection

Two Plastic Containers are supplied.

Cyclone:

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

It is particularly useful when threshing grains and grasses with stalk 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 CW09:

Warning! switch off main switch and disconnect machine from mains supply before any maintenance.

Lubrication of Varispeed gearbox.
Check gearbox oil level regularly by looking through a hole in the cover located just under the Varispeed adjustment knob. Check oil level when the thresher is not running.(window is completely filled) If top up is required use an automotive automatic gearbox oil.

General Thresher Maintenance:
Thresher rubber beater blades
Check regularly the clearance between the beater and concave and adjust if required. 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. Loosen mounting bolts and replace.

Collection Bag
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
Clean Regularly as per previous instructions. Remove every so often and clean with air to maintain its efficiency.

Tyres on high floatation model
Check tyres for punctures every time you use the thresher. Air pressure on each wheel should be 15 psi (140 kPa).