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Vacuum Separator Operating Manual 2008

So efficient is the Kimseed Vacuum Separator that most Government Agricultural Departments, Seed Producers and Research Institutions throughout Australia and overseas are using it.

As an Extra Attachment, the new 2008 model has a greatly improved Continuous Flow Attachment capable of quicker separation and larger volumes and also vastly improving its Seed Cleaning ability.

A Digital Suction Meter is also available, allowing easier suction calibration and control.

Features:

- **Quick and Easy Separation of Lighter Impurities from Seeds or Lighter Seeds from Heavy Impurities.**
- **Suited for Cleaning all kinds of Seeds**
- **Specially Suited for Canola and Linseed testing at Reception Centres.**
- **Quick cleaning of Research Quantities of Grains and Pasture Seeds.**
- **Cleans many tree, Shrub and Flower seeds specially Eucalypts, for putting through Automatic Pot Seeders.**
- **Portable – can be Free Standing or fixed to a Wall**
- **Infinitely Adjustment of both : Fan Speed and vacuum Flow using Speed Control Knob or Sliding Suction Port.**

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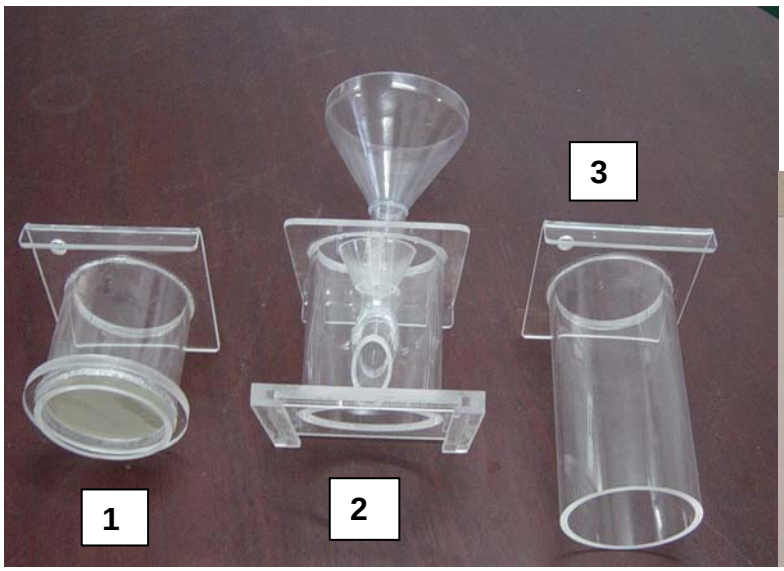
In line with constant feed back from users, Kimseed has introduced a number of changes to the Vacuum Separator Accessories that greatly improve its efficiency. These changes and photos are listed below



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1) **Modified Seed Sample Receptacle**
2) **Modified Continuous Flow Attachment**
3) **Flow Through Attachment**
4) **Larger Trash tray**

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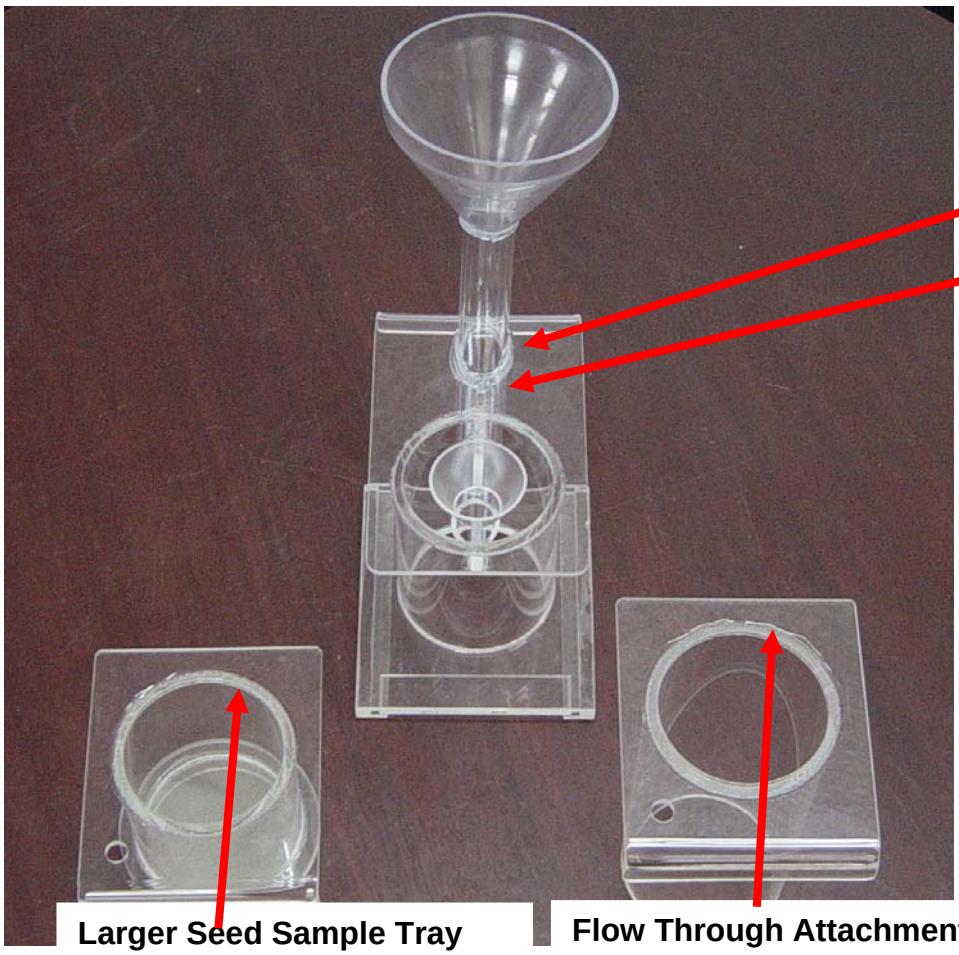
The Standard Vacuum Separator is supplied with the larger Seed Receptacle and Larger Trash tray



Modified Continuous Flow Attachment : Part #
1MVACSEPCFA
It incorporates a Small Venturi Type Inner Funnel that Accelerates the Air Flow around it and Decelerates the flow in the centre of it, allowing seeds to drop through.

It is a much more efficient way of separating the light particles the from heavies

Larger Seed Sample Tray
Part # 1MVACSEPSTL

Flow Through Attachment
Part # 1MVACSEPFTH

Larger Trash Tray or Draw
Part # 1MVACSEPLTT

These attachments together with a 150mm Trash Tray, increase the efficiency of the Vacuum Separator resulting in Cleaner Seeds, Larger Quantities being processed and Easier Settings. It allows also the use of the venturi effect attachment even in small samples using the larger seed receptacle. These Accessories are all fully compatible with existing Kimseed Vacuum Separators. Effective today all new Kimseed Vacuum Separators will be supplied with the larger sample Tray and a Larger Trash Tray/Draw.

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New Attachment showing funnel shaped air venturi. Air accelerates on the sides of the funnel and the air speed is reduced in the middle of the funnel creating a swirl that helps in removing impurities.

Impurities

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Swirling Action on Funnel Note Concentration At the Centre Of the Funnel

Clean Sample

Digital Flow Meter

The digital flow meter is useful to record the suction strength. With practice, the different settings can be related to seeds, their weight and size.
A table can then be configured that relates suction strength to fan speed and suction control flap.

SET UP:

1) Install Vacuum Separator on the Stand Supplied or attach it to the wall using the mounting perforations

2) Plug Unit making sure the main switch is Off

The Unit is now ready to be used.

Operation:

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1) Using the Sample Tray:

If a small sample testing is required, this tray should be used.

For First Testing to Calibrate the Unit

a) **Place a small quantity of Seed on the tray.**
b) **With Speed Setting on "0" turn Vac Sep "ON"**
c) **Make sure top adjustment is closed**

Gradually bring the Speed up by increasing the Vacuum or Speed of the Suction Motor towards "10". The Type of seed (Heavy or Light) will determine how fast or slow the motor has to turn.

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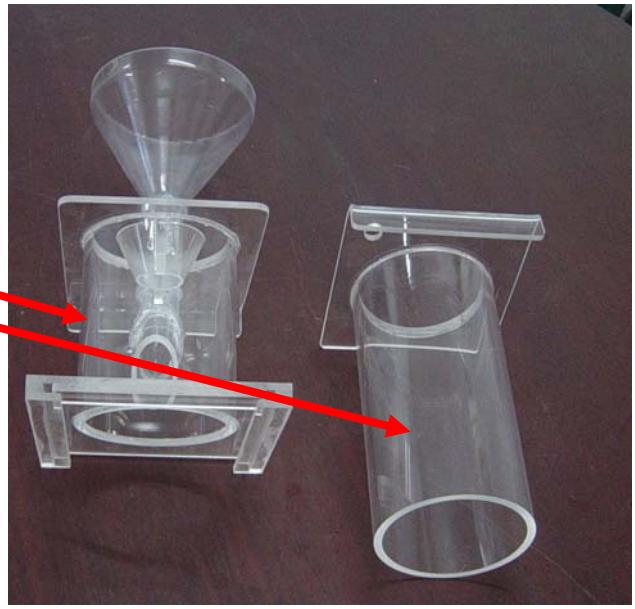
2) Using the Continuous Flow Attachment Feeder:

This attachment can be used with the Sample Seed Tray to gradually feed seeds onto the container without them flowing through.

Its ideal to calibrate the suction of the Vac Sep before using the Flow Through Attachment

3) Using both the Continuous Flow Attachment and the Flow Through Attachment

Once the Vac Sep has been preliminary calibrated, if large amounts of seeds need processing, the complete Continuous Flow attachments should be used. These are: the Feeding Attachment and the Flow Through Attachment



Further Trimming may be required to both the Speed Control and the Top Vent located at the top of the Vac Sep body.

Only trials will assist in obtaining the proper settings for different seeds

In Summary:

Vacuum is adjusted in 2 ways:

1) **By the Speed of the motor**
2) **By the opening and closing of the Top Vent.**

Seed Flow:

A) **By using the Sample Tray or Container.**
B) **By using the Continuous Flow Middle Unit**
C) **By using the Continuous Flow and Flow Through Attachments**

Finally, the Vacuum Separator works in 2 different ways:

- **Heavy Seeds require removal of trash into the Trash Tray**

- **Light Seeds require the removal of the Seeds and very light impurities first onto the Trash tray and then go back to Step 1 above.**