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Manual Universal Mill

Model III



Table of Contents:

| | |
|-----------------------------|----|
| 1. About the Universal Mill | 3 |
| 2. How to use your Mill | 4 |
| 3. Oilseeds | 5 |
| 4. Sprouted Grain | 6 |
| 5. Auger | 7 |
| 6. Cleaning & Maintenance | 8 |
| 7. Important Hints | 9 |
| 8. Technical Specifications | 10 |
| 9. Warranty | 12 |

1. About the Universal Mill

The Universal Mill is equipped with a stone wheel grinder (sheaves), which handles not only wet, but also all oily grains. You can use your mill to grind not just the usual dry grains into coarse meal to the finest flour, but you can also mill oilseeds (e.g. linseed, poppy, sesame) – some very finely.

For bulky, poorly flowing regrind you need the small auger (e.g. Coconut, sunflower seeds, naked oats,). See below.

Note that the fineness of the flour achieved during milling depends largely on the moisture of the grain ground. Wetter grain (over 12%) already on coarser settings grinds very finely, while very dry, hard grains (e.g. 8%) only mill fine on a tight setting.

Initial Operation

Please read these instructions before using your mill for the first time. Then start milling wheat as a trial to become familiar with the machine. You will quickly become familiar with the device and its ease of use and then you can also start milling other grains and seeds.

The extremely simple construction of the grinder is the reason that this mill requires only a very short time of initial milling until it has reached its final fineness.

Adjustment

We test and run all our mills in our workshop. The adjustment mechanism is set so that you get fine flour at a 12.00 o'clock setting on the adjustment knob. This flour is very fine. Nevertheless, the mill still requires a certain period until it mills even finer. It is advisable to mill the first 5 - 10 kg of grain on a setting between 9 and 10.00 o'clock to avoid unnecessary heating of the flour.

The adjustment mechanism can be readjusted should this become necessary after years of use and the flour doesn't come out fine enough anymore.

Operation

When the mill is set to fine, please do not let it run empty, in order to avoid unnecessary wear of the milling stones. Always use clean, stone-free grain and seeds.

The stones will thank you with a long life (Approx. 2500kg – 10,000kg).

The mill is very easy to use. The on/off switch is on the top of the mill, behind the hopper.

With the adjustment knob on the front you adjust the fineness:

Turn to right –finer setting

Turn to left – coarser setting

12 is the finest setting, between 6 – 9 you will receive groats suitable for baking and between 3 – 6 you will receive coarser groats suitable e.g. for fresh muesli.

Within a short time you will have found "your" personal settings for your various whole foods. As you continuously - even during operation - can change the setting, we recommend checking the fineness of the flour after the first few seconds of grinding. Soon you will even be able to hear if your mill is set to fine or coarse.

2. How to use your mill

Particularly when milling damper wheat and rye or in the finest setting the motor of the mill has to work very hard and the temperature of your flour rises. Avoid overheating of the flour by adjusting to a coarser setting during milling, should the flour become too hot. This does not necessarily produce coarser flour, since damper grain is softer and therefore needs less pressure during the milling process. A coarser setting also unloads the motor.

Oilseeds

For the processing of common oilseeds a setting of 3 – 10 is recommended. Always begin the milling process rather on a too coarse than too fine setting to avoid the smearing of the stones.

Important: Oilseeds can also be damp. While the mill can handle damp grain it strikes when milling damp oilseeds. Therefore, use only DRY oilseeds for milling. If the stones start smearing during grinding, then it is usually sufficient to turn the mill on a very coarse setting and the stones will clean themselves. As soon as the material begins to flow again you can adjust the knob to a finer setting, but only to about two steps before the setting where the smearing began.

Manual Operation and Auger

In times of emergency or for small quantities you can drive your mill manually. On the back of the mill there are some vents. Remove the gauze above the centre hole with a pocket knife. Then you will see the underlying motor shaft with a 10mm thread. You can attach your own construction or buy a simple hand crank or chain drive, each including a large auger, through us or Flour / Power / Mills.

Note: The grinding capacity in manual mode is rather small at about 30g. In order to be able to produce about 60g fine flour per minute you will need the large auger.

3. Oilseeds

The Universal Mill allows milling oilseeds and nuts into different grades of fineness. The cone burr grinder of our grain mills can not only mill oilseeds and oil fruits (nuts) into flour but also make more or less fine pastes, without damaging heat.

The Material

Oilseeds and fruits are softer than grain. The adjustment of fineness must therefore from the outset be coarser than with grain. You will need less pressure from the outside because the so-called grinding pressure between the stones is less than with grain. The high oil content is no obstacle, but it is important that the material used is properly dried.

It is therefore essential that oilseeds and fruits are always stored in a dry place - to protect yourself from unpleasant surprises! If you encounter difficulties then you need to dry the oilseeds or fruits, for instance in the oven. With peanuts this is even essential. You can create common peanut butter from roasted peanuts. Some oil fruits have such high oil content that at the finest setting a paste is produced - with coconut cream even a liquid - that hardens soon after grinding.

The grinding process

First priority before you start the mill is to make sure that the mill is on a very coarse setting. Start the mill and check whether the oil seeds or nuts are being ground. If not, adjust to a

slightly coarser setting. Once the milling has begun you can slowly adjust to the level of fineness you desire, while taking care that the stones do not begin to smear and the milling process is interrupted.

Smaller oilseeds run through the mill like grain, but larger ones like sunflower seeds and coconut rasps can block the discharge. In order to avoid blockage you will need to rinse it in by hand bit by bit – or mount the large auger.

Cleaning: Take off the hopper and look inside the milling chamber and check whether there are larger pieces of oil-dough left. Push these down towards the stones, replace the hopper and mill a small quantity of dry grain. Smaller remains can be simply removed with a brush handle or knife.

You may also wish to consider, in case you are milling oilseeds and grain on the same day, to mill your oilseeds before you mill grain in order to avoid the cleaning process. Also consider whether you want to replace the drawer with another bowl or container when milling oilseeds or fruits, particularly coconut.

4. Sprouted Grain

Sprouted grain has many health benefits compared to non-sprouted grain and with the Universal Mill it is also possible to mill sprouted grain and seeds. No other non-WIDU mill can do this and we are proud to be able offer this feature with our mill, making the preparation of Essene bread (bread made of sprouted grain) at home easy and convenient. For delicious recipes and detailed preparation instructions simply check the internet.

Milling

It is important that the surface of the sprouted grain has been properly dried so that the grain berries will fall through the hopper into the milling chamber. Since the dough resulting from milling should not be kneaded after milling you should add spices and herbs to the sprouted grain *before* milling and add salt only very shortly before milling in order to avoid the salt drawing moisture out of the sprouted grain.

Adjust your setting to the left (3 o'clock) and give a few grain berries into the hopper while the machine is running. Then turn off the mill and check the result. You should see small "rolls" about 1mm thick and 10-15mm long. If the setting is on very coarse you will rather get "flakes". Continue milling on a 3 setting (or coarser) until the berries are milled. Move the drawer in case it begins to fill only in one area. Try to avoid touching the dough in order not to compact it.

Clean the mill by simply milling some dry grain after you have finished and clean the milling chamber with a blunt knife, small brush and/or a cleaning cloth.

5. Auger

The augers have the task to ensure a proper flow of the milling material. The mill is delivered with a mounted small auger which can be left in the mill. It can be changed to a large auger in case you intend to often mill oil fruits or sprouted grain. However, the large auger doubles the milling capacity of the mill and this increases the risk of the motor overheating. Therefore, avoid milling on a fine setting when the large auger is mounted. Only leave it mounted if you intend to mill oil fruits and sprouted grain regularly. However, then you should not use the mill on a fine setting.

Installation

When you open the milling chamber and take a look at the runner stone, you can see a small screw in the middle of the stone. Remove this screw (if mounted). If there is no screw then clean the thread in order to be able to mount the auger.

We deliver the big augers always with one or two little nuts. These can be useful in case you realise after installation that your auger does not reach far enough into the standing stone. This is necessary so that they auger can properly transport the milling material. Important: Should any of the augers be too long and touch the standing stone, then you should not use the little nuts and shorten these with a metal saw. Otherwise you won't be able to mill very fine and may also cause damage to the large auger and the milling stones! In case you have further questions, please contact us.

6. Cleaning & Maintenance

Readjust Adjustment Mechanism

For this purpose, you need two 13mm wrenches. First, remove the hopper. In the chamber between adjustment mechanism and standing stone you can see a nut made of stainless steel that pushes against the standing stone. Use one of the wrenches to fix the nut by leaning it to the right side of the milling chamber. Now turn the setting knob one whole turn to the left, make sure that the hex. nut behind it turns with it. If the hex. nut does not turn, take the second wrench and turn it. To finish the procedure you only need to hold the hex nut behind the knob and tighten the knob very hard against it, by holding the nut with the wrench. Through this procedure you can balance minimal abrasion of the stone and the movement of the wooden body.

Grinding chamber and stones

To clean the milling chamber pull off the hopper. Loosen the adjustment mechanism by turning it counter-clockwise and pulling it out upwards. With a normal 25 mm brush you can now remove flour dust and other residue. After grinding oilseeds, remove residues from the stones with a brush handle or knife. The stone surface cleans best by simply milling dry grain. The flour then takes up oil residues, moisture and odours.

Harder crusts and smudges can be solved by grinding a small handful of rice. Please clean the milling chamber, drawer and drawer space several times a year.

Engine compartment

Every few years, you can blow out the engine compartment with compressed air.

The motor attracts flour and dust that can accumulate over the years in the engine compartment. After long periods of non-use of your mill vermin can breed here.

To blow out the engine compartment simply unfasten the cover (unscrew the side screws) and carefully push it to the rear. Be careful with the connections of the switch. Then you can give the compartment a good air blow, best outdoors. Then re-tighten the cover.

Wooden cabinet

The wooden housing can be sanded by hand with medium sandpaper (e.g. 120 grit) to remove dirt and stains. Then you can oil the mill with natural linseed oil and/or turpentine oil. Preferably, do not oil the milling chamber and the drawer inside.

A neat mill should do its service for more than 30 years!

Replacement stones

Experience has shown that after 15 years the stones can be worn. The wear is dependent on the amount and the hardness of the material milled. The stones usually keep for over 20 years. You can install new stones yourself, with a little skill. Replacement stones are available through us or Flour / Power / Mills. But we are happy to take over this job for you. We can then also maintain and clean the mill and run-in the new stones. For further information visit our website or call us.

7. Important Hints

Start-up Problems

The motor has a very high torque. If it still won't start, turn the power switch to off. Then loosen the adjustment knob by turning it to the left about a $\frac{3}{4}$ turn - and start again. After start-up, turn the adjustment knob to the desired setting.

When the hopper of the mill has been ground half empty, you should at least once shake the drawer so that the pile of flour is distributed and cannot jam up into the milling chamber. In extreme cases, the motor can be blocked.

Smear

If you often have problems with smudging, please note the following information: With the adjustment knob you do not directly adjust the fineness but decrease the distance between the milling stones and increase the pressure during milling. When the setting is too high for a certain grain, oil seed or fruit the milling material cannot leave the milling chamber and the stones begin to smudge. Therefore, for soft milling material have the stones touch each other

only slightly before you begin milling.

Site

Best suited is a dry, not too hot or too cold area (i.e. not near heating devices, ovens, garage etc.). Wood is durable, but it "works" also, so avoid temperature or humidity "shocks".

Contamination of the case - or scratches, etc. - can be easily handled with fine sandpaper.

Wiped with a little linseed oil and turpentine, the wood looks like new again.

8. Technical Specifications

Grinding capacity (wheat):

Fine: 15kg per hour / 260g per minute.

Coarse: 30kg per hour / 500g per minute.

Engine:

with motor protection

100% duty cycle

Dimensions:

Length 37 cm / Height 46 cm / Width 21 cm

Weight:

c.a. 15 Kg

Hopper capacity:

Approx. 2kg

Drawer contents:

Approx. 2kg

Wood Type:

solid beech or birch

Engine details:

Industrial grade motor, no gear - so very quiet, Speed: 1380 r / min., 100% duty cycle, Thermal Protection

Power:

Input 600 Watt, 370 Watt output

Grinder:

conical discs, 90 mm in diameter, Rotational Speed 6.5 m / sec, Material: Brown fused alumina, magnesia cement (Sorell-cement).

Milling temperature:

30 to 40 C

Operation:

The fineness is infinitely variable - both stationary and in operation (knob operation). The grinding process can be interrupted.

Mechanical transmission:

In times without electricity, the mill can also be driven manually either by hand crank, bike or other power source. Hand cranks and chain pinions are available through us or Flour / Power / Mills.

Milling Material:

All conventional grain crops can be processed, including oats, spelt and all fine oil seeds (poppy, sesame, linseed, etc.) as well as sunflower seeds and grated coconut. With the large auger you can also process non-free-flowing milling material such as chopped nuts, almonds, spices, coffee and mustard.

We hope you will enjoy your new mill, so that it will soon become the centre of your kitchen. Should you have any difficulties, please call or email us.

9. Warranty

We provide an eight year manufacturer warranty, for electrical parts the warranty is valid for five years. Please keep your receipt or invoice - otherwise you won't be able to submit a warranty claim.

During the period of warranty we will repair all faults or failures that are due to manufacture or faulty materials.

The warranty includes free shipping within the EU, out of the EU we charge for shipping.

Negligible deficiencies that do not impact upon the operation of the mill are exempt from warranty.

The warranty assumes that you use the mill according to its specifications. The warranty is void for expendable parts, for unwarranted interference with the machine, or faults due to external influences such as transport or weather conditions.

WIDU mills are available in Aotearoa / New Zealand, Australia and the South Pacific region through **Flour / Power / Mills**. For further information contact



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