

Monster Brewing Hardware - Monster Mill MM 2/3/PRO Instructions

MM2 -- MM3 -- MM2-PRO -- MM3 PRO

Congratulations on your purchase of one of the finest home brewery grain mills available. This mill is designed for a lifetime of use, easy operation, and fantastic performance. Please read these instructions carefully, they should help you avoid any problems with the performance of your mill. The mill arrives assembled and secured with rubber bands. The bands will need to be removed, and the mill will need to be anchored to a base for smooth operation.

The Base:

The 4 included ¼ -20 bolts mount the frames to a base that will attach to a bench or sit on a bucket, and allow the grain to pass from the hopper into the roller gap and out the bottom. It is important to set up the mill on a base to keep the frames aligned properly. If the frames aren't straight, the rollers may bind. In most situations, the mill will be mounted on top of the base, but it will also work when mounted below. The text on the side of the mill "MONSTER MILL" should always be upright.

When mounting the frames to your base, finger tighten all 4 mounting bolts. Next, completely tighten one frame to the base, then feel for the center of the free play in the axles, and make sure the rollers spin freely. They should keep spinning for a few seconds after you roll them quickly with your hand. Tighten the other frame, making sure that the rollers continue to spin freely. Tighten and check until you have both frames snug to the base. You should also make sure that there isn't excessive space that will allow the rollers to slide back and forth too much. .030" is plenty.

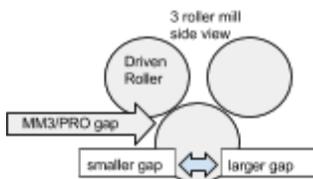
Roller Gap:

Leave the roller gap where it is to start! Most of the milling will be very close to, or a little tighter than the factory setting. The adjustable gap is set at 0.045" on all mills when they are assembled. The thumbscrews on the mm2/mm3 are tightened by hand, and should not be loose when you get the mill. The screws on the mm2-PRO/mm3-PRO should be tight. If the adjustment knobs will turn when you receive the mill, then the screws may have loosened during shipment, and you will need to check the gap setting. Feeler gauges work well. As long as the screws have not loosened during shipment, make a small mark on the frames before changing the position of the idler roller. A center punch or a sharpie work well.

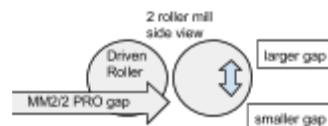
Adjusting the gap:

Once you have brewed using some grain that you crushed with the factory gap setting, you're ready to adjust the gap and turn up the efficiency of your brewery. A gap of .045" will produce a medium crush. .055" turns out a coarse crush. .038 to .040" should provide a great fine crush with great extraction efficiencies. Experimenting with different settings can improve yields. Recipes including wheat and rye sparge easier with a coarse barley crush

To adjust the gap, loosen the screws so the knobs can turn. Use a feeler gauge to measure and set the gap. Slide the feeler gauge shims into the gap on one end of the rollers. Tighten the knobs so the feeler gauge is tight in the gap. Repeat on the other end of the roller to be sure they are parallel. Tighten the screws on the



adjustment knobs. Tighten the thumbscrews on the mm2/mm3 mills by hand as tightly as you can using your fingers. The rounded end of the thumbscrew should grab the matching groove in the knob, and keep it from moving. If there are any problems with the knobs coming loose, use a small set of pliers to tighten the thumbscrews. DO NOT OVER TIGHTEN.



The gap should be measured at the bottom of the rollers for the MM2/MM2-PRO, and between the top DRIVEN roller, and the bottom roller on the MM3/MM3-PRO (as shown in the diagrams). The grain will exit this gap straight down on the MM2/MM2-PRO and at an angle when milling on the MM3/MM3-PRO. When setting the gap on the 3-roller mills it is important to make sure that you set the gap such that the bottom idler is furthest away from the top non-driven idler roller. It is possible to set the same gap spacing with the knobs in two different positions. This will not mill the grain properly, and the mill may bind.

Driving the mill:

The easiest way to drive the mill is with a corded drill. Most drills will fit on the 3/8" drive shafts. Make sure that the fingers of the drill chuck grab the mill's drive shaft on the three flats that are machined onto the shaft. As long as the chuck is tight, and lined up on the three flats, the drive shaft shouldn't slip and damage your new mill. All Monster Mills, especially the 3-roller models require a decent amount of power to turn effectively. If you have the standard 3/8" drive shaft on your mill, then a high quality corded 3/8" drill should do the job. If you opted for the larger 1/2" drive shaft for future motorization, you'll need a bigger 1/2" drill to accommodate the large shaft. It is important to use a drill that has variable speeds. Most drills today are variable speed, but some lower quality models can have a single speed, which will most likely be too fast for milling. We recommend a drive speed of between 150, and 250 rpm, with the slow end of this range considered better.

Mount the drive shaft of the mill over the center of the base. This will allow the weight of the mill to counterbalance the weight of the drill, and should allow the mill to sit on top of your grist bucket without falling over. You will need to hold the drill sideways when it is mounted to the mill drive shaft, but this is easy to do, and will make the whole assembly balance. Be careful! If your grist bucket with the mill and base on top falls over with the drill mounted to your mill, it is possible to bend the drive shaft.

A **Monster Crank Handle** can also drive the mill. Loosen the setscrew on the handle and slip it over the drive shaft. Tighten the setscrew on the flat part of the drive shaft. The crank can turn clockwise or counterclockwise when milling, as long as it turns such that the grain will be pulled down into the gap.

The Hopper:

The hopper will need to be assembled and attached to the mill. There are 2 large rectangular pieces, 2 large triangular pieces, 2 small triangular pieces, and 2 zig zag pieces. There are 2 small bags of fasteners to attach the hopper pieces together. Follow the diagram on the following page. Assemble the hopper before attaching it to the mill. Finger tighten all fasteners, then tighten completely. The larger screws and washers are used to attach the hopper to the mill.

The Extension:

The extension will need to be assembled and attached to the top of the hopper. Follow the diagram on the following page.

Maintenance:

Before using your mill the first time, run a pound or so of malt through it a few times to clean the rollers. After milling, brush the grain dust off the rollers with a dry brush or use compressed air. Do not use water. Keep the frame mounting bolts tight. The bushings are impregnated with clean oil. All moving surfaces are oiled with food grade mineral oil when your mill is assembled. If you decide to add more oil and are concerned with oil contacting the grain, then you are using an excessive amount. The rollers' surfaces may be covered with the same food grade mineral oil that we use to lubricate the axles to protect them from corrosion during storage, and shipping. It's harmless, and will come off the first time you mill. We do not oil the stainless rollers, except on the axles. If you're worried about corrosion, we offer small bottles of our food grade mineral oil for sale. It is safe for food contact, and can be used on all the mill surfaces.

Replacing bushings:

Make sure to use a press or vice, and go slowly. Do not use a hammer. Press the bushings a tiny bit through the frame to the inside so that the rollers ride on the edge of the bushing, rather than against the aluminum frame.

If you have any problems or questions please feel free to contact info@monsterbrewinghardware.com. We will work with you to make sure your mill is performing well.