

CRANKANDSTEIN®

The hopper:

Some kind of box or funnel can be fastened over the mill to channel the grain to the input hole. Mount the frames to a platform that will attach to a bench or sit on a bucket, hold a hopper, and allow the grain to pass from the hopper into the roller gap and out the bottom. The usual setup positions the mill above the base and below the hopper. Side covers can easily be made of cardboard and taped across the frames to help contain the grain dust.

Frame alignment:

Provide frame adjustment clearance in the mounting holes by drilling with a 3/8" drill bit. Gradually tighten the mounting bolts, and be sure the frames are held securely by the base and hopper surfaces. The cranked roller may be snug when new. There should be a slight gap between the roller ends and the frames so that each idle roller is loose enough to turn freely and click easily when you push it side to side. This looseness is necessary to allow the roller to start spinning from the friction of the grain. The major cause of poor grain flow is improperly adjusted frames.

Maintenance:

Before using your mill the first time, run a couple handfuls of malt through it a few times to clean the rollers. Brush the grain dust off the rollers with a dry brush. Do not use water. After milling, most of the dust can be blown out. If the rollers show signs of rust, they can be cleaned with steel wool. The nearly maintenance-free bushings are impregnated with SAE-30 oil. An occasional drop wouldn't hurt. Disassemble and clean the mill, and oil the bearings if the idler roller quits turning freely.

Setting the gap:

2S: This mill is designed with a gap that can be changed from or reset to the factory setting of .045" by rotating the idler roller's eccentric bushings in the frames. Remove the rollers from the frames, loosen the setscrews, pencil in match marks on the bushings and frames, and drive out the bushings with a hammer and a socket or rod that's just smaller than 1/2" in diameter, into a 5/8"+ hole in a piece of wood. Rotate the bushings from the match mark to make the gap wider or narrower. Partially press them back in, put in the rollers and check the gap with feeler gauges. Readjust as necessary. Drive in the bushings leaving a slight offset of about .015" to the inside to act as a thrust bearing and prevent the outer diameter of the roller from dragging against the frame. Tighten the setscrews, re-assemble and mount the mill back on its base and hopper.

2A & 3E: The crossbar that connects the adjusters can be repositioned by loosening the bolts with the 1/2" heads, positioning it, and then tightening the bolts. To change the gap, loosen the setscrews with the 7/16" heads or thumbscrews, move the adjusters by means of the crossbar, and moderately tighten the setscrews. Feeler gauges help to measure and repeat the setting, but are not necessary as the crossbar provides a visual reference for positioning the adjusters and limits movement to the most commonly used range. The factory setting is .045". Raising the bar increases the gap. Lowering it reduces the gap.

2D, 3D, 320D, & 328D: The center position of the adjusters puts the pin parallel to the gap and sets it at .045". The four positions in either direction change the gap .005" with each click. Turning the long end of the pin toward the drive roller tightens the gap, away loosens it. Loosen the thumbscrews before turning and tighten them after.

Use:

Attach your drill directly to the driveshaft so that the chuck jaws clamp on the flats. The driveshaft turns clockwise. The recommended speed is anywhere around 200 rpms. Extra speed may increase the output but can cause more damage to the husks.

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