

FACT SHEET

Rigid Cylinder Hammers vs. Swing Cylinder Hammers

The W-W Grinder Corporation has manufactured hammer mills since 1910. W-W Grinder/Shredders are hammer mills.

A hammer mill is a machine with a cylinder which turns at sufficient speed so that the hammer tips will shatter, crush, break, tear or shred material induced into the machine's cylinder into fragments. The degree of fineness of the material is controlled by the length of time the material is retained in the cylinder and hit by the hammer tips at the designed RPM. A part of the cylinder has an opening and material is grated by a perforated screen. When material is reduced fine enough to go through the screen perforation it escapes from the cylinder. Thus, the smaller the screen perforation the finer the grind and the longer material will be struck by hammer tips.

W-W Grinder/Shredder cylinders have rigid hammers.

Our experience has shown that swinging hammers create some real problems.

Swinging hammers are:

- hard to balance in the cylinder - thus more vibration;

- out of balance while the cylinder comes up to speed, both starting and stopping. This causes major strain on the power train which many machine simply do not have structure and bearings to withstand;

- introducing unnecessary wear at the pivot point;

- an unnecessary drain on horsepower. (Takes more power.)

Damage: A swing hammer cylinder to be effective must be at full designed RPM to do any grinding/shredding. When full RPM is attained and foreign material is struck, these hammers make full impact and as much damage can be done as with a rigid hammer cylinder. W-W Grinder/Shredders are constructed to withstand any induced object such as large rocks, heavy steel, etc. When such material is fed into a W-W you will get a power stoppage and slipped belt but not a wrecked machine.

Those companies that make great claims for the virtue of their swinging hammers have designed a cylinder in which it is impossible to install rigid hammers. Therefore, misleading words have led some of the public to believe that swinging hammers are virtuous and rigid hammers are bad. DON'T YOU BELIEVE IT!