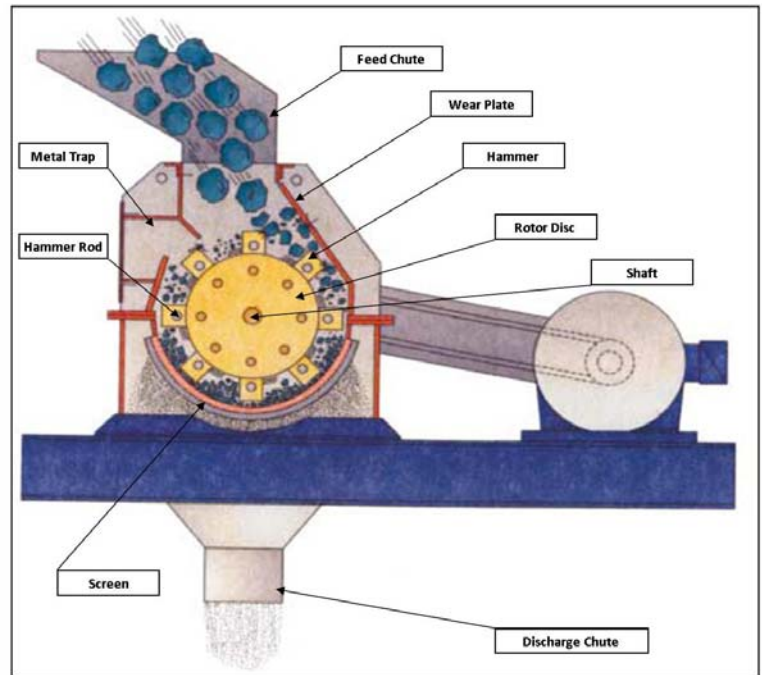


# How Does a Hammer Mill Work?

Hammer mills work on the principle that most materials will crush, shatter or pulverize upon impact:

## The Process:

- Material is fed into the mill's chamber through the feed chute, typically by gravity.
- The material is struck by **ganged hammers** (generally rectangular pieces of hardened steel) which are attached to a **shaft** that rotates at high speed inside the mill's **grinding chamber**.
- The material is crushed or shattered by a combination of repeated hammer impacts, collisions with the walls of the grinding chamber, and particle on particle impacts.
- Perforated metal screens or **bar grates** covering the **discharge opening** of the mill retain coarse material for further grinding, while allowing properly sized materials to pass as finished product.



## Mill Evacuation:

Hard, heavy materials such as **glass, stone, coarse wood** or **metals** can exit the mill via gravity. Lighter materials such as **finely ground wood, paper** and other **low density materials** require pneumatic suction to assist in the discharge.

## Finished Particle Size:

Varying the screen size, shaft speed or hammer configuration can dramatically alter the finished particle size of the material being processed.

## Generally speaking:

Fast shaft speed + small screen + large number of hammers = a **fine end product**

Slower shaft speed + larger screen + fewer hammers + = a **coarse product**.

Each of these components can be changed either individually or in combination to produce the exact desired finished particle size.