

ASKco.

Mining & Mineral
Processing Machines

BALL MILL FOR GRINDING OF MATERIALS

NO. 859, 13th Andisheh, 2nd phase, Toos industrial town, Mashhad, Iran
Tell: (+95)5135412580-7 / Fax: (+95)5135412405 / Cell: (+98)9155131185
www.ASKco.org / info@ASKco.org / elyas2064@icloud.com

A ball mill is a type of grinder used to grind and blend materials for use in mineral dressing processes, paints, pyrotechnics, ceramics and selective laser sintering.

A ball mill consists of a hollow cylindrical shell rotating about its axis. The ball mills rotary part is driven at reducing speed by motor through speed reducer and gearwheel or by low-speed synchronous motor through gearwheel. Inside the cylinder feed proper grinding medium-steel balls. The medium will be lifted to certain height under the action of centrifugal force and friction and drop or fall. The material to grind is fed to the cylinder in succession and crushed by grinding medium, then discharged through overflow and continual feeding force, and enter the next procedure.

Mill Speed

No matter how large or small a mill, ball mill, ceramic lined mill, pebble mill, jar mill or laboratory jar rolling mill, its rotational speed is important to proper and efficient mill operation. Too low a speed and little energy is imparted on the product. Too fast and inefficient media movement (known as cataracting) will generate high impact but also greatly increase mill wear. Even faster speed will result in the media centrifuging inside the mill and virtually no milling or movement of media or product will occur. In most cases, the ideal mill speed will have the media tumbling from the top of the pile (the shoulder) to the bottom (the toe) with many impacts along the way. The ideal mill speed is usually somewhere between 55% to 75% of critical speed.

