

The invention relates to metal forming and can be used in metallurgy and engineering industry at rolling flat infinite solids of revolution, such as disks. A symmetrical circular rolling mill comprises two conical rolls creating a deformation zone. The conical rolls are made with an apex angle equal to  $130-135^\circ$ . The axles of rolls are mounted with intersection with the axis of rotation of a disk in upper and lower points respectively separated by a distance equal to the deformation zone height. The invention makes it possible to increase the stiffness of the working stand, substantially increase strength of the rolls, as well as to expand the range of rolled disks with high accuracy in thickness.