

**INTEGRATED RUBBER ROLL SHELLER HULLER RICE MILL
(SINGLE PASS MILL)
[CEM – 3110]**

Rice milling is a gigantic industry in India. India produces about 120 million tones of paddy. About 80% of the produce is marketed and converted to milled rice by the industry in rice milling systems ranging from the home-scale to the large, complex modern rice processing installations. It is estimated that the huller mills handle about 30 Million tones of paddy produced in the country. Huller mill is a very small, cheap and sturdy single step rice mill, quite popular for milling small quantities of paddy, particularly in rural areas. But it has some very serious drawbacks. Not only low rice yield is obtained, but also the by-products obtained are impure, particularly bran. The low oil content of huller bran makes it uneconomical for oil extraction.

The integrated rubber roll sheller huller rice mill yields purer by-products of bran and husk, head rice yield is increased by about 2% and brokens are reduced by about 5%, as compared to commercial huller. The system can handle both raw and parboiled paddy.

The mill consists of a pre-cleaner with magnetic separator, an elevator, rubber roll sheller, cascading aspirator, huller and bran sifter. The cleaner removes both magnetic and non-magnetic impurities. The elevator conveys cleaned paddy to the rubber roll sheller. This sheller consists of a paddy feeder for even feed distribution all along the roll length. Cooling consistent hardness roll shelling. Beneath the sheller is a cascading type aspirator plates for efficient husk separation. Beneath the huller, at the outlet for bran-husk mixture, a vibratory sifter is provided to obtain oil-rich bran.

The sheller, aspirator, huller and bran sifter are mounted on a common sturdy stand. Drive to all these units is through V-belts. Gravity is made use of for flow of material after paddy is fed to the sheller through the bucket elevator. The cleaner cum magnetic separator system is mounted separately.

Capacity : 400-500 kg paddy/hour (Raw & Parboiled paddy)

Power Requirement

Mill : 20 HP
Cleaner : 1HP
Elevator : 0.5 HP

Overall Dimensions : 1.5 M.L × 3 M.B × 3 M.H (Excluding bucket elevator)

Approximate cost

Cost of the mill* : Rs. 1,50,000
Cost of bucket elevators : Rs. 30,000
Total : Rs.1,80,000

[* Excluding transportation, erection and commissioning]