

Educate for the Future

ENEA

Italian national agency for new technologies,
energy and sustainable economic development



GRINDING GRAIN WITH THE SUN A PHOTOVOLTAIC MILL FOR RURAL VILLAGES

Technical Institute "Fratelli Campani" from Spoleto - Italy, in collaboration with the ENEA project "Educate for the Future", has developed a prototype of solar mill to grind grain, very useful for the improvement of living conditions of populations of rural villages, especially for women.

Thanks to the electricity generated by a photovoltaic panel that feeds two small electric engines, the mill can produce approximately 5 kg of millet flour per hour.

The mill is adjustable to any setting, from cracked wheat to fine flour, and works with a power of only 100 W (24 V, 5 A). A second engine of insignificant power activates a vibration system that, in case of millet, can remove the outer cuticle with no nutritional benefits. It is very easy to produce, simple to use, extremely reliable, needs no fuel and does not pollute.

The photovoltaic mill can liberate women of the hard and long process of grinding, which still today, in millions of rural villages spread around the world, is done by hand.



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