

COMPACT GRANULATING SYSTEM

Minimizes nutmeat fines

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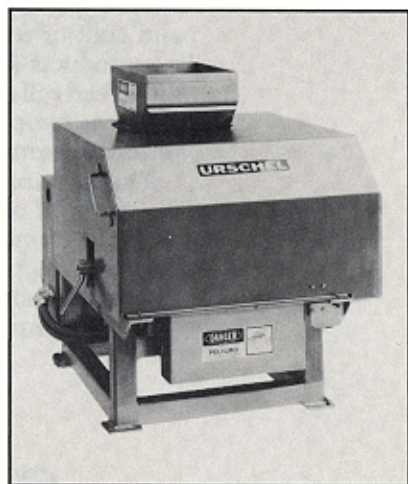
Following four years of development, a granulating system has recently been introduced for controlled particle size reduction of nutmeats with minimum fines or product waste. Unlike other machines that chop, smash, or grind, the granulating system utilizes circular knives to cut and fracture the product.

To date, the granulating unit has been installed in about six food plants for processing nutmeats. At a confectionery plant, the granulating system reduced almond

fines from 15% down to 4%. As a result of the reduced fines, the company was able to eliminate the screening out of the fines from the granulated product.

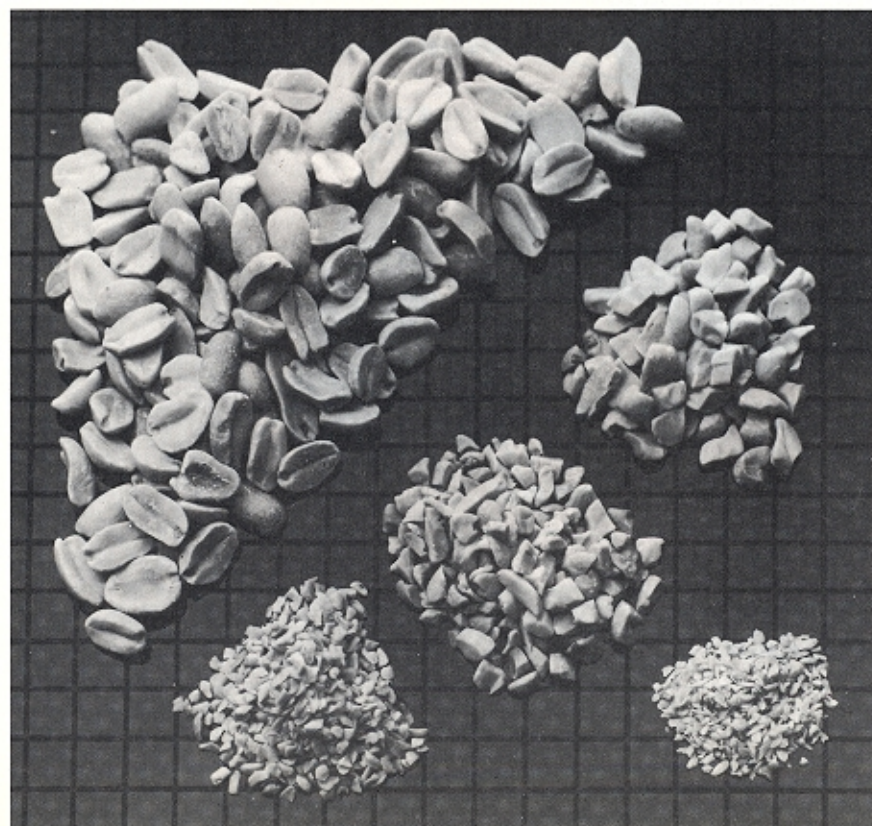
In addition to almonds, the granulator has been commercially applied to peanuts. At the supplier's pilot laboratory, granulation tests have been performed on cashews, graham crackers, dried banana chips, honey-roasted peanuts, soybeans, hazelnuts, filberts, brazil nuts, and a granola product.

The compact granulating unit measures only 40" in length, 26" in width, and 30" in height. Major



Compact granulating system is constructed of stainless steel and corrosion resistant materials

Peanuts can be granulated into various sizes



components of the equipment include: feed hopper with adjustable gate, vibratory feeder with feed pan, feed roll, circular knife spindle, stripper plate, and 3/4-hp motor. Four interlocking safety switches stop the machine when a cover or guard is removed. The machine is constructed of stainless steel and corrosion resistant materials.

During operation, product is deposited into the feed hopper. The gate can be manually adjusted to control the amount of product dispensed onto the vibratory feeder pan, which gently and uni-

formly distributes the product across the entire length of the opening between the circular knife spindle and feed roll. Situated between the knives, the stripper plate is adjustable to control the amount of opening between it and the feed roll. The distance from the stripper plate to the feed roll is determined by the average thickness of the product.

As the product flows between the circular knife spindle and feed roll, it is cut by the knives and removed by the stripper device. Raised protrusions of the feed roll ensure positive flow of material and split or fracture the partially cut products into cube-like granules. Feed roll and spindle rotate at the same peripheral speed to minimize the formation of fines.

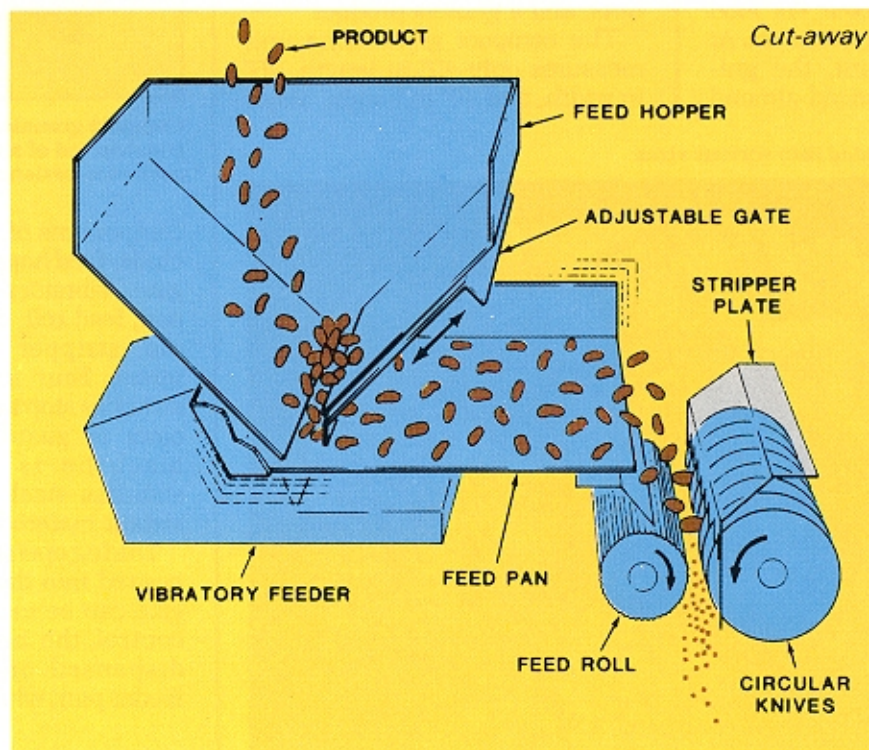
The opening between the spindle and feed roll can be manually adjusted to meet product size requirements. A calibrated lever indicates the size of the opening, which determines the degree of

knife penetration into the product. The size of the granules also can be varied through use of different circular knife spindles. Four spindles are available with circular knife spacings of $\frac{5}{32}$ ", $\frac{1}{8}$ ", $\frac{3}{16}$ ", and $\frac{1}{4}$ ". Thus, the flexible and versatile machine can handle several types of products as well as different size requirements.

Production throughputs will vary according to product and granule size specifications. In the case of peanuts, the continuous granulating system will process up to 3500 lb/hr. ♦

Additional information on Model N Granulator is available from Urschel Laboratories, Inc., P.O. Box 2200, Valparaiso, IN 46384.

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Cut-away view of granulating system