MARLEN INTERNATIONAL
A DURAVANT COMPANY

Building Size Reduction Equipment for 2020 and Beyond

Convenient, value-added products. If you were to sum up all of the food trends of the past few years, this is what would stand out. The increased demand for convenient, value-added products is being fueled by Millennials, higher incomes, and an attitude toward food in which every meal is an adventure, not just a necessity.

In addition to consumers driving the industry into new culinary directions, food processors and manufacturers are facing a new set of external challenges. Competition is heating up, a reliable workforce is getting harder and harder to come by, and the Food Safety Modernization Act (FSMA) is requiring processors to tighten up their food safety ship.

What all this comes down to is that the status quo isn't working anymore. Processors need to innovate if they want to survive and thrive. To support them in this effort, OEMs need to innovate as well. In the coming decades, legacy systems and equipment will no longer be sufficient.

That's the mindset we adopted three years ago when we invited several meat and poultry processors to Kansas City for a voice of the customer event. We wanted to know what they loved, what they hated, and what they wanted in size reduction equipment. We used their input to develop the DuraKut™ 6000, a state-of-the-art continuous-flow size reduction machine that allows processors to slice and dice fresh or cooked products with less handling, improved hygiene, and reduced labor costs.

Why size (reduction) matters

While consumers want convenient, value-added products overall, there are a few trends specifically driving demand for meat and poultry products in different shapes and sizes.

Millennials prefer to eat out, grab something from the frozen or prepared foods aisle, or order delivery. Millennials really love Chipotle. That's not just a stereotype. According to Foursquare, the Tex-Mex restaurant is Millennials' favorite fast-casual chain — members of this generation are 49% more likely than average to visit a Chipotle for a meal.

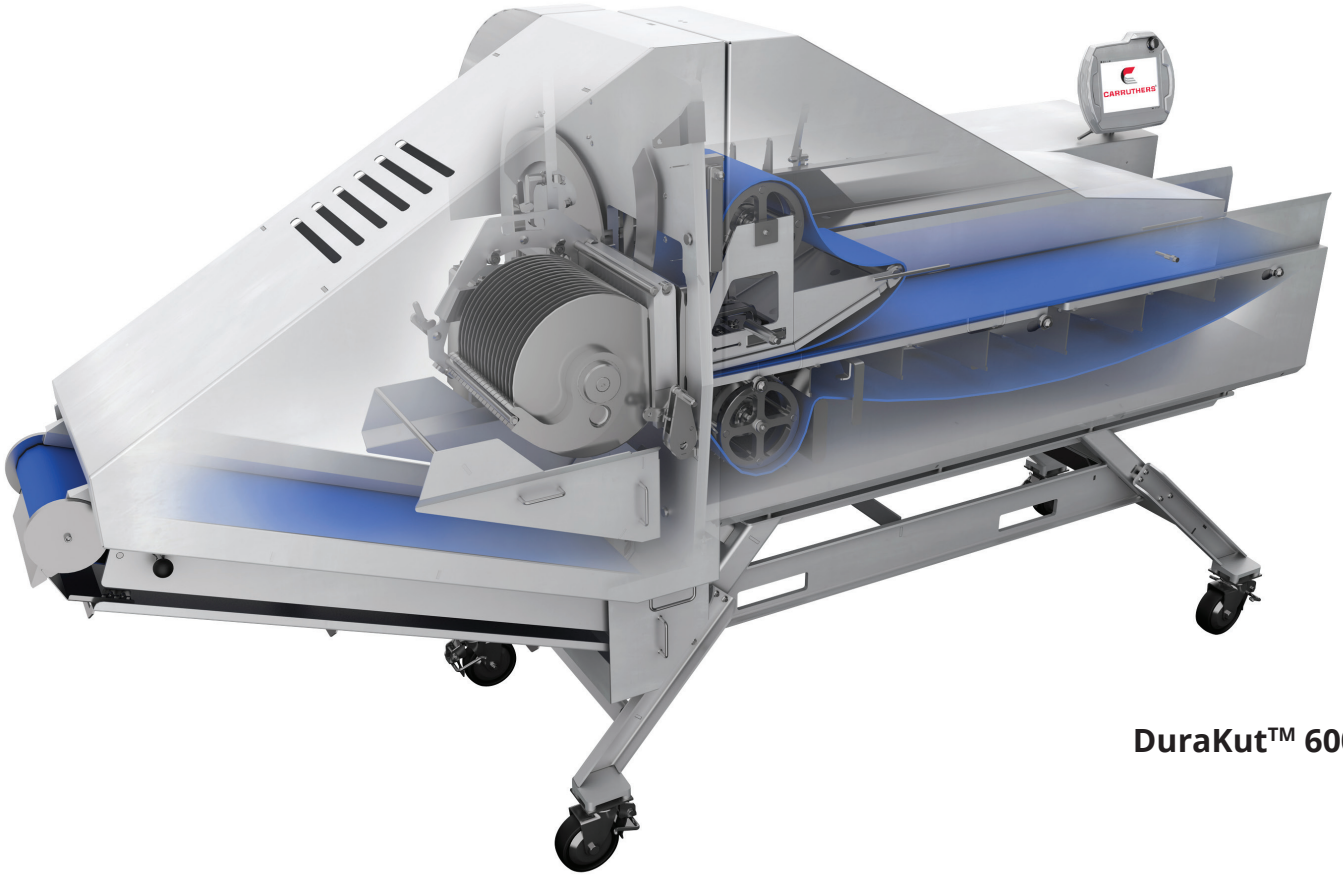
It isn't just Chipotle that's benefiting from Millennial eating preferences. Data from the USDA Economic Research Service (ERS) show that Millennials dine out 30% more than any other generation, a trend that has propelled recent growth in fast-casual and quick-service restaurants.

Millennials have also spurred massive growth in both the fresh and frozen prepared foods sections at the grocery store. The ERS data found that Millennials are more likely than older generations to grab food from a deli or prepared foods counter, also called a "grocerant." According to NPD, this foodservice model appeals to these consumers' desire for a wide variety of fresh and healthy food. This generation has also been credited for ending the years-long pattern of decline in the frozen food aisle.

Finally, when Millennials aren't eating out or grabbing something to go, they're ordering delivery, and pizza remains the top choice. The U.S. pizza market was expected to hit $45 billion in 2018, and nearly two-thirds of that pizza is being eaten by Millennial women.

When Millennials do cook, they want a head start

It's not that Millennials don't cook at all. They do! But even then, they spend much less time in the kitchen than previous generations. The ERS data found that Millennials spend a mere 88 minutes per week on food preparation, presentation, and cleanup. That's compared to 143 minutes a week for Gen X.



DuraKut™ 6000

So, it should come as no surprise that Millennials are leading the charge in semi-homemade, or blended, cooking, i.e., meals that are cooked at home using at least some prepared ingredients. Meat and poultry processors can meet these needs with products that get the shopper "one step closer to dinner," according to Patrick Flemming, the former director of market intelligence and innovation for the National Pork Board. This includes providing value-added products like preseasoned and size-reduced cuts of meat.

Meal kits also fall into the blended meal category, and Millennials account for the largest portion of meal kit customers.

Everybody loves snacks

"Three square meals" is no longer a guiding principle. In fact, only about one-quarter of Americans still eats this way. Today, the average person is more likely to eat two meals and three snacks.

As people replace meals with snacks, they're demanding that those snacks have more nutritional value. In particular, they want protein. This has led to a huge demand for meat snacks. According to one estimate, the global meat snacks market, which was just $0.69 billion in 2017, will reach $24.54 billion in 2026. That represents a CAGR of 43% over the 10-year period.

And we're not just talking jerky. Meat snacks now come in a variety of formats and flavors, often paired with cheeses and other items for complete on-the-go nutrition.

All of these trends point to the increasing need for size reduction equipment. High-throughput continuous processing machines are required to slice and dice everything from pizza toppings (pepperoni remains the most popular) to chicken for Chipotle's popular bowls, proteins for meal kits or grab-and-go salads at grocerants, ready-to-eat and ready-to-cook items, meat snacks, and much more.

Size reduction equipment for 2020 and beyond

When we set out to design the DuraKut, our goal wasn't just to create a great size reduction machine — Marlen already had a reputation for providing best-in-class equipment. We wanted to make sure that we were meeting the needs of processors who we knew were also struggling to attract and retain a qualified workforce, meet new food safety requirements, and so on.

To make sure we met this goal, we asked our customers a key question: ***"If you were the manager of 10 of the greatest engineers on the planet, and you wanted to redesign size reduction equipment, how would you do it?"***

Based on their answers, we developed a machine that doesn't just slice and dice, but helps processors solve their big-picture challenges.

Solving workforce challenges with an icon-based HMI

"The user interface is where the rubber hits the road, so to speak," says Bill Williams, the product sales manager that led the redesign. "To build a machine for today's operator, you have to understand what's going on in today's meat plants."

What's going on is a severe shortage of employees. "Meat processors find that they're training operators on Monday only to find them gone by the following Monday," Williams says. "To keep this turnaround from impacting production too drastically, the HMI needs to be extremely user-friendly and intuitive."

The DuraKut HMI is similar to an iPad screen — it contains icons rather than words. This makes the interface extremely easy to learn and use, no matter what language the operator speaks.

Solving food safety challenges with hygienic design

As of this writing, 2018 has seen 18 recalls of meat or poultry products due to possible contamination by Listeria, Salmonella, or E. coli alone. Some of these recalls have been huge, involving hundreds of thousands of pounds of product.

The increasing frequency and cost of recalls, coupled with FSMA, is putting even more pressure on processors to do everything possible to guarantee the safety of their products. In a meat plant, this starts with ensuring the cleanliness of their equipment.

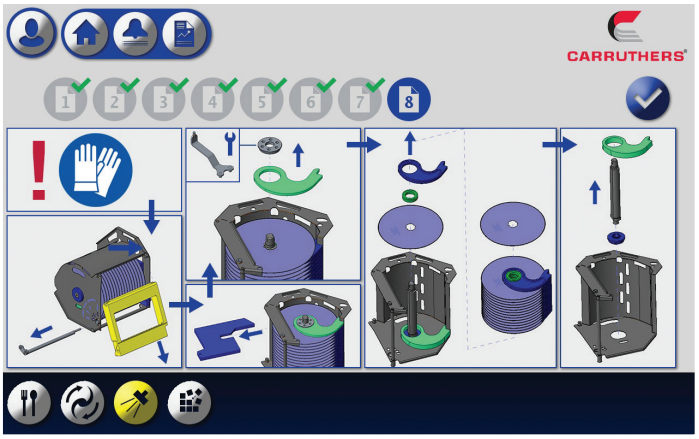
"The DuraKut is designed to be easy to take apart and clean," Williams says. "We've eliminated as best as possible the threat of bacteria harborage locations on this machine." The surfaces are sloped, not flat, and there are no external hinges on the covers or door handles.

Cleanability is particularly important when processing ready-to-eat products like beef jerky, Williams explains. "If an RTE product is going to go through your machine right into the package, that machine must be perfectly clean. This requires following the principles of hygienic design to ensure the equipment meets the highest standards."

Solving maintenance challenges with easy-to-service equipment

This feature is related to both of the ones above. Many processors find properly servicing their equipment challenging because of the difficulty of finding qualified technicians, as well as the difficulty of taking apart older equipment.

The DuraKut solves both of these problems with tool-free disassembly and an innovative design. "Any part that comes off of the machine or needs to be removed is either hinged or has a place to be stored safely so that it can be thoroughly cleaned," Williams



explains. “As an example, there’s a takeaway conveyor system on the machine that consists of a belt, some plastic guides, and a roller. We’ve put attachment points right there where the parts can be stored for cleaning. The operator doesn’t even have to move to take off a dirty part and place it on the attachment point. Then, when the clean-up crew comes in, they blast it with high-pressure water and cleansers to clean it inside and out. When the operator arrives the next day, the part is clean, dry, and ready to go.”

Solving changeover challenges with flexible design

As consumers continue to demand a wider variety of products, processors are responding by making their processes more flexible. That means the equipment they use must be more flexible as well.

Williams describes the DuraKut as a Swiss Army knife of size reduction because it can do both 2D slicing and 3D dicing. “We have a horizontal slicing attachment that processors can put on the front of the machine to enable 3D dicing. When they’re done, they can roll the attachment away and continue to do 2D dicing.” This is a common requirement, he notes, in poultry plants that process chicken breasts and thighs destined for restaurants or salad bars.

The attachment works seamlessly with the HMI as well. As soon as you plug in the attachment, the HMI calls up the 3D functions for the horizontal slicer. When you unplug the slicer, the HMI reverts to the 2D settings.

With its flexible, user-friendly, and sanitation-focused design, DuraKut 6000 represents a new advancement in size reduction equipment. It provides not only a robust solution for slicing and dicing a variety of meat and poultry products, but also helps processors solve the biggest challenges facing their operations today.

Would you like to learn more about the next generation of size reduction equipment? Watch our video introducing the DuraKut 6000. Explore our product page for more information and to download the DuraKut brochure.

CARRUTHERS®

MARLEN INTERNATIONAL
A DURAVANT COMPANY