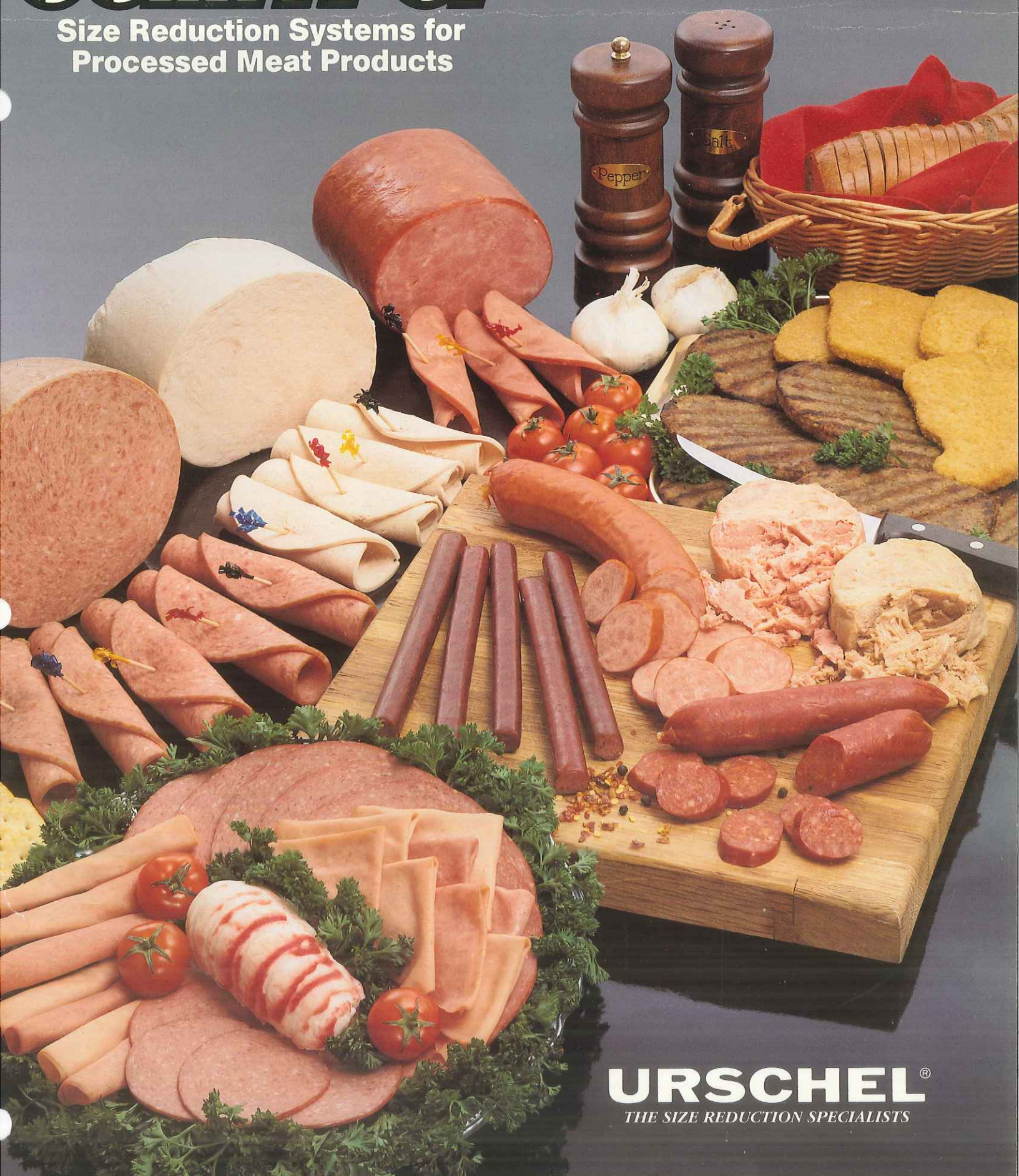


comitrol[®]

Size Reduction Systems for
Processed Meat Products



URSCHEL[®]
THE SIZE REDUCTION SPECIALISTS

What The Comitrol Versatile Processor Can Do For You

The Comitrol Processor's unique size reduction principle cleanly cuts meat into precise particles of uniform size and shape with outstanding particle definition and control to meet your criteria for texture and appearance. Additionally, the Comitrol unit cleanly cuts objectionable gristle and connective tissue into minute pieces in a single pass operation. The final particle size and shape can be easily controlled by selecting one of many cutting heads from which to choose. A complete line of Comitrol Processors is available to meet your particle size reduction requirements, including the new, Comitrol Processor Model 5600.

Your profitable use of any fresh or frozen beef, veal, pork, poultry or fish starts with the Comitrol Processor. You can expect:

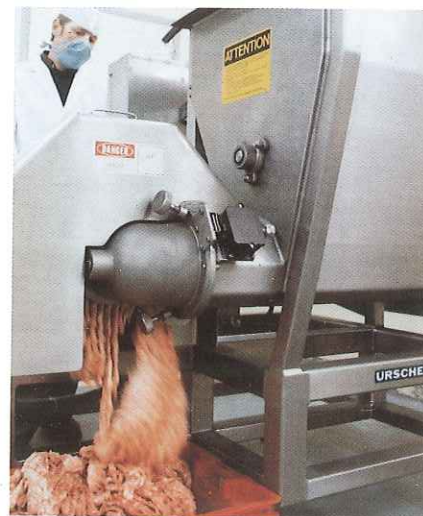
- ☐ Consistent, uniform particle size and shape, without daily quality control problems.
- ☐ Clean cutting of products with superior color, fat/lean separation, texture and appearance without loss of juices.
- ☐ Highly efficient comminution of meat products with lower product temperature rise, and no metal-to-metal contact.
- ☐ Choice of a variety of fresh or frozen tempered raw meat materials best suited to your product.
- ☐ Reduction of gristle and sinew without objectionable pellets or strings of connective tissue.
- ☐ Continuous operation, high production capacities and a single pass operation without batch processing and frequent operator attention.
- ☐ Easy clean-up, disassembly and maintenance without costly production downtime.

Applications

Here's a listing of just a few of the successful processing applications using the Comitrol Processor:

1. Emulsify poultry skin or meats with considerable connective tissue for use in further processed meat products.
2. Comminute meat for production of meat balls, dices, soup products, toddler meals and stew meat.
3. Production of superior luncheon meats such as salami, ham loaf, and summer sausage for distinct particle definition, without smearing.
4. Surimi production using Comitrol Processor to comminute fish for further processing.
5. Emulsify beef, chicken, fish, turkey and meat by-products including kidneys or lungs for processed pet-food products.
6. Particle size reduction of pork, pork skin and beef in edible or inedible rendering plants for high oil recovery and improved quality of finished tissue.
7. Comminution of a variety of meat materials for lunch and dinner entrees including salisbury steak and chopped and formed steak.

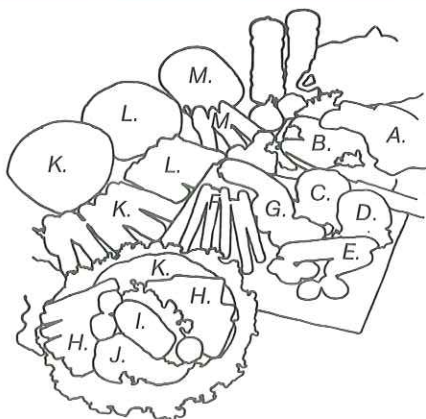
8. Reduce meat to a smooth, uniform consistency for use in gravies & sauces.
9. Flake cut meat for production of minute and wafer-cut steaks.
10. Flake cut pork. Use both lean meat, and trimmings for production of fabricated pork chops, and other processed pork products.



Key Description

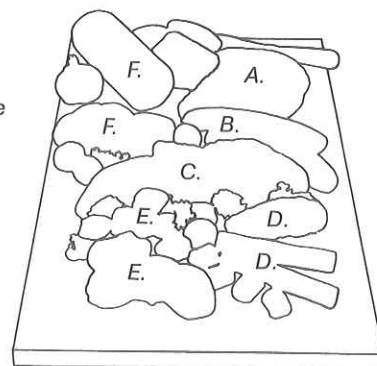
Front Cover

- A. Pork Patties
- B. Salisbury Steak
- C. Chunked Ham
- D. Chunked Turkey
- E. Pepperoni
- F. Beef Sticks
- G. Smoked Turkey Sausage
- H. Lean Turkey Beef & Ham
- I. Surimi
- J. Summer Sausage
- K. Salami
- L. Turkey Roll
- M. Turkey Ham

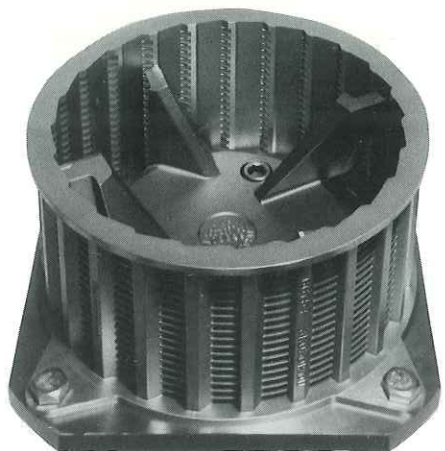


Back Cover

- A. Veal Fritter
- B. Smoked Turkey Sausage
- C. Chicken Patties
- D. Surimi
- E. Chicken Nuggets
- F. Summer Sausage



How The Comitrol Processor Works

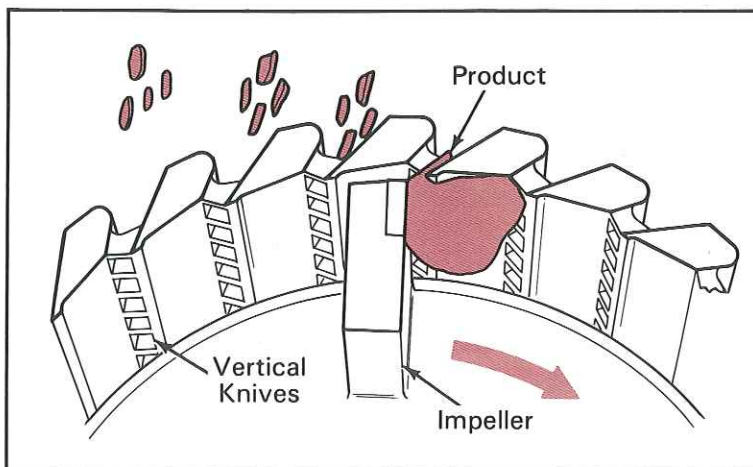


View looking into a cutting head and impeller. For use with Models 5600, 2100, 4200, 1700 & 3600.

Product enters the cutting head and is caused to rotate by the impeller. The resulting centrifugal force moves the product outward and against the knife edges on the inner periphery of the cutting head. The product is held in place by centrifugal force while the impeller pushes it past the knife edges. Small pieces are cut from the product and are thrown outward and away. This constant and unchanging force causes precise and uniform particles to be cut. The size of the head, the speed of the impeller, the number of columns or cutting blades, and the distance between the horizontal separators determines the size of the finished particle.

The Cutting Head

Uniform Particle Size Reduction Ranging from Large Cut Pieces to Pieces as Small as .020 Inches.

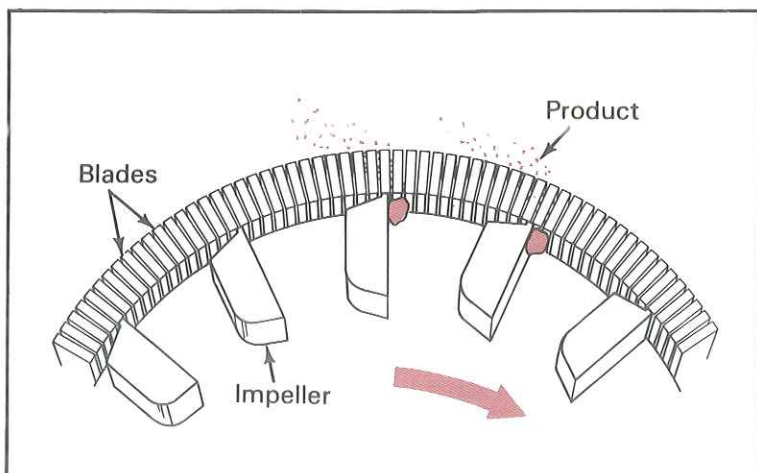


View looking into the microcut head and impeller. For use with Models 4200 and 1700.

The microcut head is formed by a ring of blades made of very hard material. When product is revolved inside this ring of blades at very high speed, the product is held against the knives at several thousand times the weight of the product. The leading edge of each blade is a sharp knife edge, and the blades are carefully positioned so that heat producing friction is minimized. The finished particle size will depend upon the opening between the knives, the depth of cut and the speed of the impeller.

The Microcut Head

Uniform Particle Size Reduction from Fine to Coarse Emulsions.



8

A large industrial meat grinder, model URSCHEL, mounted on a sturdy metal frame. The machine features a large hopper for meat at the top, a grinding plate, and a motor unit with a "CAUTION" label. The frame has four legs and a control panel on the left side.

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4

Applications

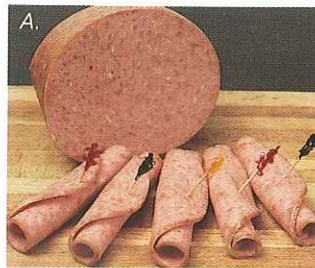
Our newest engineering development, the Model 5600, has all of the advantages of the unique Comitrol size reduction principle, plus closer cutting tolerances at increased impeller speed of 5,600 revolutions per minute. The unit offers the greatest degree of particle size control to meet your product specifications and texture requirements. The Model 5600 has a positive feed and will deliver precise, cleanly cut particles from a variety of fresh or frozen tempered raw meat materials with little temperature rise. The unit is equipped with a cutting head to make large cut pieces or pieces as small as .020 inch. The Model 5600 will produce consistent, high quality particles without the variance experienced using typical screw or pump fed grinder-plate, or chopper-bowl style machines. Constructed of stainless steel and other carefully selected alloys, the Model 5600 features continuous operation for uninterrupted production, and simplified design for easy clean up and maintenance.

The Model 5600 opens up a new array of product opportunities with excellent appearance and texture. Traditional products such as dry sausage, hamburger, fresh pork sausage, wafer-thin sandwich meats, luncheon meats and a host of new

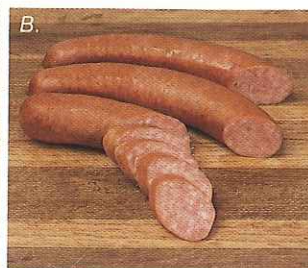
products can now be improved to your specifications with the Comitrol Processor Model 5600.

The Model 5600 can be easily integrated into your production line and features:

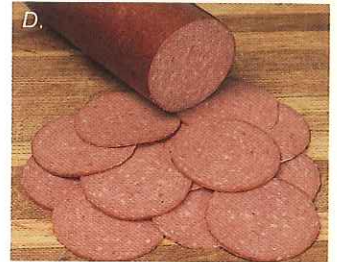
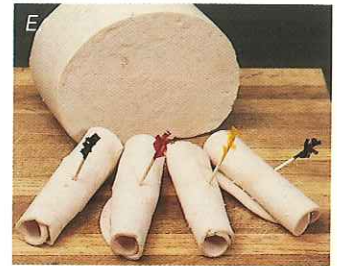
- ☐ Accurate particle size reduction of a wide range of fresh or frozen tempered raw meat products with consistent, uniform results.
- ☐ A full range of particle sizes that can be varied by making a quick, easy change of cutting heads.
- ☐ Continuous operation for uninterrupted production and high capacities.
- ☐ Disassembly in minutes for easy clean up and maintenance.
- ☐ Convenient start/stop station with safety system that stops the machine when a cover or guard is removed.



A. Salami – Excellent fat/lean particle identity for quality luncheon meat products.



B. Smoked Turkey Sausage – Superior color and texture for sausage products with excellent uniformity.



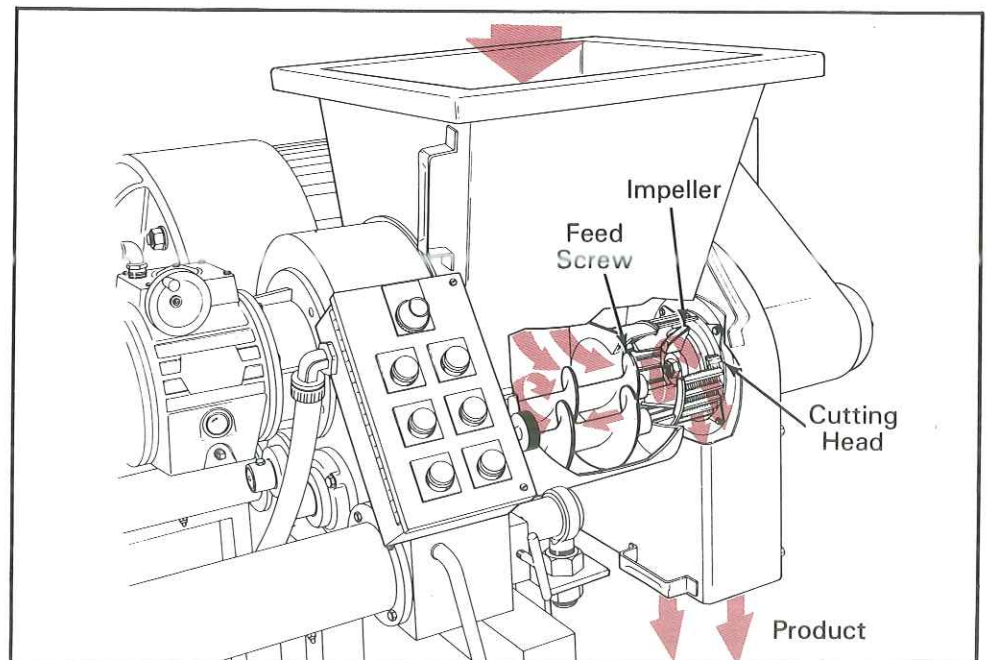
C. Lean Meats – Uniform particle size distribution for production of wafer-thin turkey, beef and ham products.

D. Summer Sausage – Excellent color and fat/lean particle identity with no smearing.

E. Turkey Roll – Clean cutting of skin and trimmings with whole pieces produces uniform appearance.

Operating Principle

Product is uniformly fed to the Model 5600, and delivered to the cutting head from a live – bottom feeder. Once in the cutting head, centrifugal force moves the product outward to the impeller tips, which carry the product past the cutting edges of the stationary reduction head – the heart of the Comitrol unit. The product is reduced in precise increments, and discharged into your receiving chamber or conveying system.





The Model 2100 is approved for use in plants operating under U.S.D.A. inspection.

Applications

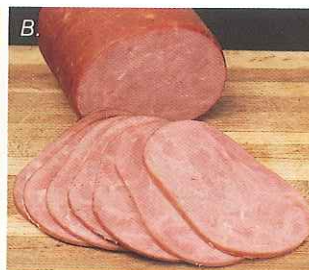
The Model 2100 has revolutionized the way flaked and formed meat products are produced in the meat industry today. Many units have been successfully used in the production of portion control products, canned stew meats, fabricated steaks and beef rolls, and countless other formed meat applications. The Model 2100 has an impeller speed of 3600 revolutions per minute, and offers processors positive product feeding for making large cut pieces and pieces as small as .020 inch. Constructed of stainless steel and other carefully selected alloys, The Model 2100 features continuous operation for uninterrupted production, and simplified design for easy clean up and maintenance.

The Model 2100 can be easily integrated into your production line and features:

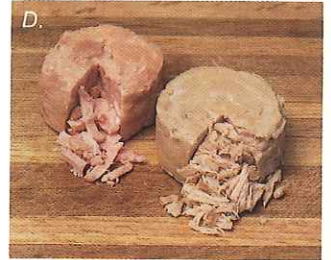
- ☐ Unique Comitrol size reduction principle for cutting a wide range of fresh or frozen tempered meats.
- ☐ A full range of particle sizes that can be varied by making a quick easy change of cutting heads.
- ☐ Positive product feeding and large hopper capacity.
- ☐ Continuous operation for uninterrupted production and high capacities.
- ☐ Easy disassembly, clean up and maintenance.
- ☐ Safety system stops the machine when a cover or guard is removed.



A. Salisbury Steak – Portion control products with excellent flavor and texture.



B. Turkey Ham – Tender, juicy formed poultry products with superior color and appearance.



D. Chunked Turkey & Ham – Distinct texture and appearance for a variety of canned meat products.

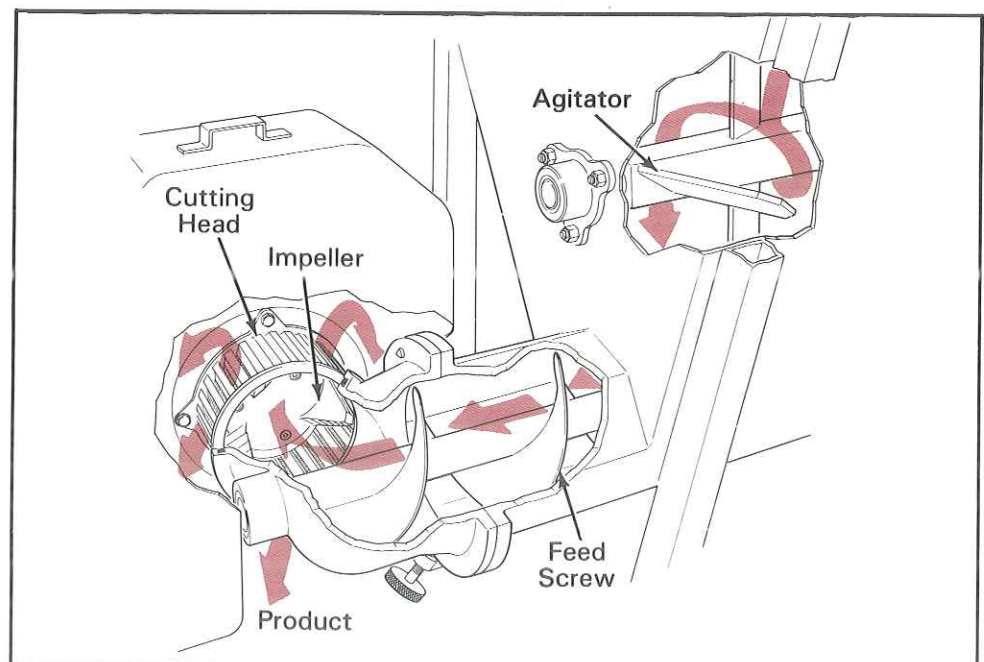


C. Chicken Patties – Commute thigh or breast meat for production of a wide range of processed poultry products.

E. Chicken Nuggets – Emulsify poultry skin for use in further processed poultry products.

Operating Principle

Product is fed to the hopper of the Model 2100, and distributed to the feed screw via an agitator. The feed screw delivers the product to the cutting head and impeller. Once in the cutting head, centrifugal force moves the product outward to the impeller tips, which carry the product past the cutting edges of the stationary reduction head – the heart of the Comitrol unit. The product is reduced in precise increments, and discharged into your receiving chamber or conveying system.



Comitrol Processor Model 4200

Size Reduction of Fluid, Semi-Fluid, and Viscous Meat Materials
Using a Cutting Head or Microcut Head



Specifications:

Length: 63.41" (1,611 mm)
Width: 54.77" (1,391 mm)
Height: 47.50" (1,206 mm)
Net Weight: 2,296 lbs. (1,042 kg.)
Motor: 100 H.P., with brake.

The Model 4200 is approved for use in plants operating under
U.S.D.A. inspection.

Applications

The versatile Comitrol Processor Model 4200 is designed for products with a high moisture content or viscous, pumpable products including coarse meat emulsions, moist petfoods, ointments, slurries, rendering applications, purees and dispersions. The Model 4200 can be equipped with either a cutting head or microcut head, and offers a choice of impeller speeds depending on the application. Removable sanitary enclosures are manufactured with a variety of feed and discharge fittings to meet your specifications. Constructed of stainless steel and other carefully selected alloys, the Model 4200 features continuous operation for uninterrupted production, and simplified design for easy clean up and maintenance.

The Model 4200 can be easily integrated into your production line and features:

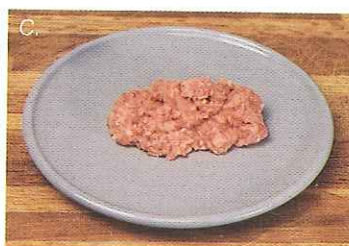
- ☐ Accurate particle size control with consistent, uniform results.
- ☐ A full range of particle sizes that can be varied by making a quick easy change of reduction heads.
- ☐ Continuous operation for uninterrupted production and high production capacities.
- ☐ Disassembly in minutes for easy clean up and maintenance.
- ☐ Safety system stops the machine when a cover or guard is removed.



A. *Petfoods – Emulsify beef, chicken, fish, turkey and meat by-products for processed petfoods.*



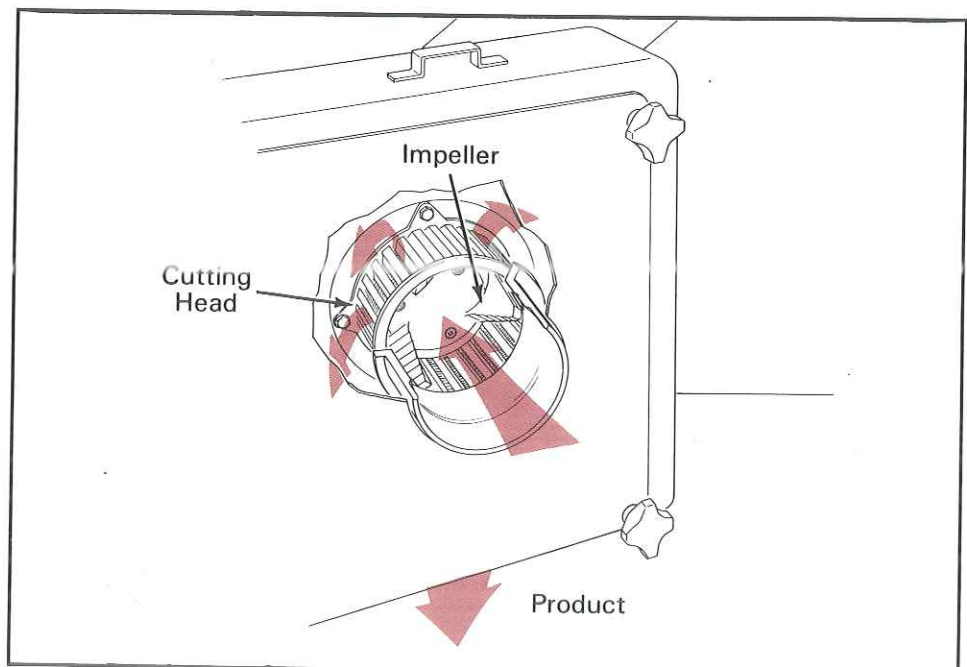
B. *Beef Sticks – Uniform particle size and shape with excellent texture and flavor.*



C. *Beef Tissue – Improved quality of finished tissue and high oil recovery in edible and inedible rendering applications.*

Operating Principle

Product is fed to the center of a high speed rotating impeller. Once in the reduction head, centrifugal force moves the product outward to the impeller tips, which carry the product past the cutting edges of the stationary reduction head – the heart of the Comitrol unit. The product is reduced in precise increments, and discharged into your receiving chamber or conveying system.



Comitrol Processor Model 1700

For Pilot Plant, Laboratory or High
Production Operations



Specifications

Length: 49.94" (1,268 mm)
Width: 32.92" (836 mm)
Height: 71.20" (1,808 mm)
Net Weight: 1,100 lbs (499 kg.)
Motor: 15, 30, or 40 H.P., with brake.

The Model 1700 is approved for use in plants operating under U.S.D.A. inspection.

Applications

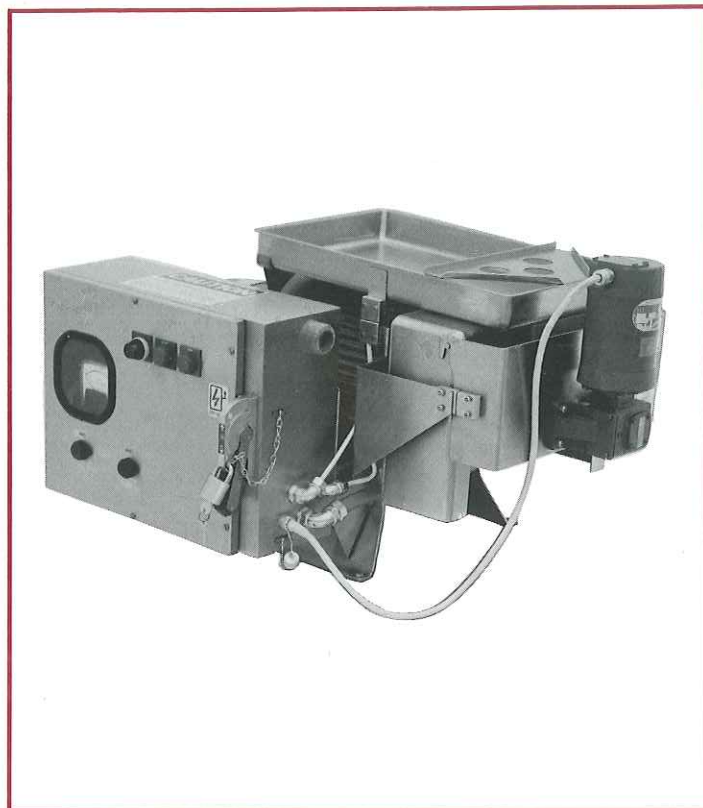
The Comitrol Processor Model 1700 provides accurate size reduction with uniform particle size control using either a cutting head or microcut head. Processors benefit from the wide variety of cutting configurations that are available for diverse processing applications. The unit features continuous operation for uninterrupted production and simplified design for easy clean up and maintenance.

Operating Principle

Product is fed to the center of a high speed rotating impeller. Once in the reduction head, centrifugal force moves the product outward to the impeller tips, which carry the product past the cutting edges of the stationary reduction head – the heart of the Comitrol unit. The product is reduced in precise increments, and discharged into your receiving chamber or conveying system.

Comitrol Processor Model 3600

For Pilot Plant & Laboratory Operation



Specifications

(With 3" Cutting Parts)

Length: 38.73" (984 mm)
Width: 27.13" (700 mm)
Height: 23.62" (600 mm)
Net Weight: (10 H.P. unit) 400 lbs (181 kg.)
Motor: Impeller 10, 40, 60 or 75 H.P., with brake.
Feed Screw 1/6 H.P.

The Model 3600 is approved for use in plants operating under U.S.D.A. inspection.

Applications

The Model 3600 is designed for pilot plant and laboratory operation. The unit features continuous operation for uninterrupted production and simplified design for easy clean up and maintenance.

Operating Principle

Depending on the model, product reaches the impeller via the feed screw, gravity feed or suitable feeder provided by the customer. Once the product reaches the impeller, centrifugal force moves the product outward to the impeller tips which carry the product past the cutting edges of the stationary cutting head – the heart of the Comitrol unit. The product is reduced in precise increments and discharged into your receiving chamber or conveying system.

The Size Reduction Specialists Since 1910

At Urschel Laboratories, we concentrate on one thing: the design and manufacture of precision-engineered size reduction equipment — slicers, dicers, strip cutters, granulators, comminutors and shredders . . . over 40 models in all. Urschel equipment is used by every major food processor in the United States and in over 100 countries worldwide to uniformly cut food products into a wide variety of sizes and shapes at high production capacities. Designed for continuous operation, all Urschel machines are constructed of stainless steel and other carefully selected alloys for easy clean up and maintenance. Urschel Laboratories manufactures machines to answer today's food cutting applications with built-in flexibility for the future.

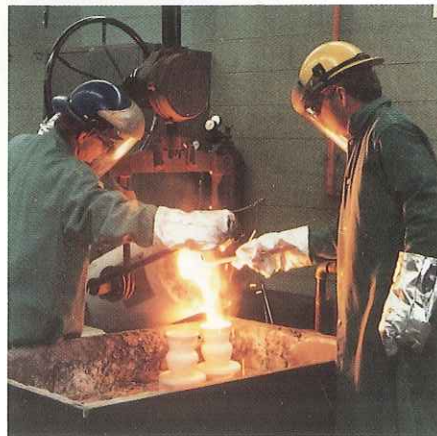
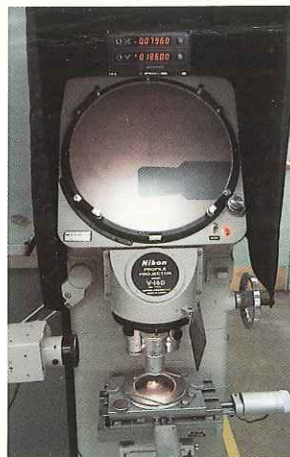
Precision-Engineered

Urschel machines are built to last. Many parts are machined to $\pm .0001$ inch tolerance to improve performance. Urschel customers benefit from the company's high standards of close tolerance with improved product quality, high capacities lower capital investment and reduced maintenance costs. All raw materials used in the manufacture of Urschel

equipment are carefully selected to provide the very best material available for each application.

Customer Commitment

Our commitment to your business means that we're ready to serve your needs with spare part deliveries anywhere in the world in hours, not days. A highly qualified customer service department, a staff of trained Urschel Sales Engineers located around the world, detailed machine operating manuals and videotapes, and a detailed knowledge of size reduction processing applications are the vital ways we help to keep your Urschel machine in operation.



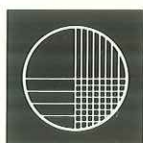
Your Product Can Be Test Cut

Urschel Laboratories has a complete testing facility ready to work for you on any size reduction application. In the test center, our trained staff can furnish complete test results and recommend the type of machine best suited to your needs. Processors are encouraged to be present to discuss product requirements in detail. Test results are confidential, and there is no charge or obligation. Call or write to arrange for your test.



Additional Information





URSCHEL

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**Designers and manufacturers of
precision size reduction equipment.**

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