How to Cut Fruit & Vegetable Products

Click on a machine

Urschel Test Cutting Facilities

Urschel Laboratories, Inc. offers a complete Product Test Cutting Facility on-site at their manufacturing headquarters in Valparaiso, Indiana, U.S.A. Other complete product test cutting facilities are located worldwide. Product test cutting facilities offer extensive, complete analysis by experienced staff to determine the best Urschel machine suited for your application. To schedule a comprehensive test at no-charge or obligation, contact your local Urschel sales representative.
Applications

The Urschel® Model RA-A is a versatile machine capable of producing a wide range of dice and strip cut sizes from a variety of fruits and vegetables. Interchangeable drive parts provide maximum versatility and optimum cutting results in the small to intermediate size range. The Model RA-A features continuous operation for uninterrupted production and simplified design for easy cleanup and maintenance. Maximum input product size is 3-1/2" (88.9 mm) in any dimension.

Types of Cuts

**DICES:** A slicing knife, circular knife spindle, and crosscut knife spindle are used for dicing. Changing the size of the cubes is done by using the required cutting spindles and adjusting the slice thickness.

- Slice thickness: 1/16 to 3/8" (1.6 to 9.5 mm)
- Circular knife cuts: 1/8 to 1" (3.2 to 25.4 mm)
- Crosscut knife cuts: .05 to 3" (1.3 to 76.2 mm)

**STRIP CUTS:** Removal of the crosscut knife spindle and shaft will enable strip cutting to produce strips of different lengths as determined by incoming product size. A circular spindle change may also be required.

Specifications

- Length: 39.32" (999 mm)
- Width: 36.56" (929 mm)
- Height: 62.68" (1592 mm)
- Net Weight: 700 lb (318 kg)
- Motor: 5 HP (3.7 kW)
Applications

The versatile Urschel Model G-A uniformly cuts dices, straight french fry strips, and slices from a variety of soft ripe fruits and brittle root vegetables. A wide selection of interchangeable cutting parts enables the user to obtain gentle, clean cutting through a wide range of sizes at high production capacities. The Model G-A features continuous operation for uninterrupted production, and simplified design for easy cleanup and maintenance. Maximum input product size is 5-1/2” (139.7 mm) in any dimension.

Types of Cuts

SLICES: By removing the crosscut knife spindle, the circular knife spindle, and the stripper plate, the Model G-A can make slices up to 3/4” (19.1 mm) with the addition of optional parts.

DICES: A slicing knife, crosscut knife spindle, and circular knife spindle are used for dicing. Changing the size of the cubes is done by using the required cutting spindles and adjusting the slice thickness. Cubes up to 3/4” (19.1 mm) may be obtained.

STRIP CUTS: To make strip cuts, only the slicing knife and the crosscut knife spindle are used. Strip cuts up to 17/32” (13.5 mm) may be obtained.

JULIENNE STRIPS: Julienne strips are also available. Contact your local Urschel sales representative for more information on the set-up for your application.

Specifications

Length: 73.73” (1873 mm)
Width: 45.94” (1167 mm)
Height: 49.25” (1251 mm)
Net Weight: 770 lb (349 kg)
Motor: 2 HP (1.5 kW)
Applications

The QuantiCut® Dicer by Urschel Laboratories uniformly dices, strip cuts, and slices a wide variety of food products at high production capacities including potatoes, carrots, turnips, rutabagas, celery, pineapple, peppers, and a variety of other products. Further engineering innovations have simplified the changing of spindles and other parts. New patented bearing design and specially designed changing tools accompany the machine including a patented crosscut spindle changing tool and a patented circular spindle changing tool which allow one person to change spindles without assistance. Maximum product input size is 10" (254 mm) in any dimension. The machine features continuous operation for uninterrupted production and simplified designed for easy cleanup and maintenance.

Types of Cuts

**SLICES:** By removing the crosscut spindle, the circular knife spindle, and the stripper plate, the machine can make slices thru the full range of slice thicknesses (optional discharge chute may be required).
- Straight slices: 1/16 to 1" (1.6 to 25.4 mm)
- Crinkle slices: 1/8 to 1" (6.4 to 25.4 mm)

**DICES:** A slicing knife, circular knife spindle, and crosscut knife spindle are used for dicing. Changing the size of the cubes is done by using the required cutting spindles and adjusting the slice thickness.
- Circular knife cuts: 5/32 to 3" (4.0 to 76.2 mm)
- Crosscut knife cuts: 1/8 to 2-5/8" (3.2 to 66.7 mm)

**STRIP CUTS:** Strip cuts in a variety of widths can be made by removing either the crosscut knife spindle or the circular knife spindle assembly.

**CRINKLE CUTS:** Any slice thickness listed may be obtained with crinkle slicing knives when measuring from peak to valley.
- Crinkle slices can be obtained by replacing the straight slicing knife with a crinkle slicing knife. Crinkle strip cuts can be made by substituting crinkle knives in place of the straight knives on the crosscut knife spindle.

### Specifications

- **Length:** 89.63" (2277 mm)
- **Width:** 80.06" (2034 mm)
- **Height:** 65.79" (1671 mm)
- **Net Weight:** 1874 lb (850 kg)
- **Motor:** 7-1/2 HP (5.6 kW)
Applications

The DiversaCut 2110® Dicer by Urschel Laboratories uniformly dices, strip cuts, and slices a wide variety of products at high production capacities including potatoes, tomatoes, bread, carrots, turnips, rutabagas, celery, pineapple, preformed boneless turkey roasts, petfood emulsions, sugar beets, and many other applications.

**Maximum product input size is 10” (254 mm) in any dimension.** The machine features continuous operation for uninterrupted production and simplified designed for easy cleanup and maintenance.

Types of Cuts

**SLICES:** By removing the crosscut spindle and the circular knife spindle, the machine can make slices thru the full range of slice thicknesses.
- Flat slices: 1/16 to 1” (1.6 to 25.4 mm)
- Crinkle slices: 1/8 to 1” (3.2 to 25.4 mm)

**STRIP CUTS:** Flat and crinkle strip cuts in a variety of widths can be made by removing either the crosscut knife spindle or the circular knife spindle assembly.

**DICES:** A slicing knife, circular knife spindle, and crosscut knife spindle are used for dicing. Changing the dice size is done by using the required cutting spindles and adjusting the slice thickness.
- Circular knife cuts: 1/8 to 3” (3.2 to 76.2 mm)
- Crosscut knife cuts: 1/8 to 1-1/2” (3.2 to 38.1 mm)
- Crosscut knife crinkle cuts: 9/32 to 5/8” (7.1 to 15.9 mm)

Specifications

- **Length:** 64.30” (1633 mm)
- **Width:** 59.61” (1514 mm) or 69.29” (1760 mm)*
- **Height:** 68.37” (1736 mm)
- **Net Weight:** 1500 lb (681 kg)
- **Motor:** 5 or 10 HP (3.7 or 7.5 kW)

*width will vary depending on style of discharge chute.

DiversaCut 2110® Dicer
Versatile Slicer, Strip Cutter & Dicer

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Urschel Model OV
Fast, Efficient Crosscut Slicer

OV Applications
The Urschel Model OV Slicer uniformly crosscut slices a wide variety of elongated food products at high production capabilities. Flat or crinkle style slices can be made from products such as carrots, celery, cucumbers, pickles, and squash. One slice is made at a time which prevents any crushing of the product. The Model OV features a wide selection of slice thicknesses from which to choose, continuous operation for uninterrupted production, and is designed for easy cleanup and maintenance. The Model OV will accommodate products up to 2-3/4" (69.9 mm) in diameter or width. The machine is not suited for slicing sticky products or products with a high concentration of sugar.

Types of Cuts

MODEL OV FLAT & CRINKLE SLICES: A wide range from 1/16" to 1-3/4" (1.6 to 44.5 mm). When using crinkle knives on the Model OV Slicer, it is necessary to change the stainless steel shear edge.

OV Specifications
Length: 72.92" (1852 mm)
Width: 35.54" (903 mm)
Height: 49.18" (1249 mm)
Net Weight: 692 lb (314 kg)
Motor: 3 HP (2.2 kW)

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OC Applications

The Model OC Slicer is used to make a distinctive bias cut on elongated products. The machine cuts an included angle of 30 degrees with the long axis of the product. This causes the slices to be radically different in appearance than the standard crosscut pieces. One slice is made at a time which prevents any crushing of the product. The Model OC features a wide selection of slice thicknesses from which to choose, continuous operation for uninterrupted production, and is designed for easy cleanup and maintenance. The Model OC will accommodate products up to 2-3/4" (69.9 mm) in diameter or width. The machine is not suitable for slicing sticky products or products that have a high concentration of sugar.

Types of Cuts

MODEL OC BIAS FLAT & BIAS CRINKLE SLICES: A wide range from 1/16 to 1-3/4" (1.6 to 44.5 mm)
MODEL OC BIAS FLAT SLICES WHEN SPECIALLY EQUIPPED WITH A MICROSLICE® WHEEL: .030 to .120" (.8 to 3 mm). Consult factory. Requires a certified print.

OC Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length:</td>
<td>117.04&quot; (2973 mm)</td>
</tr>
<tr>
<td>Width:</td>
<td>31.38&quot; (797 mm)</td>
</tr>
<tr>
<td>Height:</td>
<td>44.70&quot; (1135 mm)</td>
</tr>
<tr>
<td>Net Weight:</td>
<td>770 lb (349 kg)</td>
</tr>
<tr>
<td>Motor:</td>
<td>2 HP (1.5 kW)</td>
</tr>
<tr>
<td>Feed Belt Motor:</td>
<td>3/4 HP (.56 kW)</td>
</tr>
</tbody>
</table>

CARROTS
1/8" (3.2 mm) Bias Flat Slice
Model OC

CELERY
1/8" (3.2 mm) Bias Flat Slice
Model OC
The TranSlicer 2000 Cutter † patented by Urschel Laboratories uniformly slices a wide variety of products at high production capacities. It is ideally suited for elongated products such as cucumbers, peppers, celery, potatoes, carrots, and a wide variety of fruits. The TranSlicer 2000 accepts firm products up to 4" (101.6 mm) in diameter and leafy-type products up to 6" (152.4 mm) in diameter. Three different types of cutting wheels: slicing wheels, patented MicroSlice® wheels, and julienne wheels, are available to produce a full range of slices and julienne cuts.

Types of Cuts

**SLICING WHEEL CONFIGURATIONS**
Flat and crinkle slices: 1/32 to 2" (.8 to 51 mm)

**JULIENNE WHEEL CONFIGURATIONS:** Wide range of sizes from 1/2 x 1/2" (12.7 x 12.7 mm) to 2 x 2" (50.8 x 50.8 mm).

**MICROSlice WHEEL CONFIGURATIONS:** Flat slices: .030 to .240" (.8 to 6 mm)
Crinkle slices: .069" (1.8 mm)
Oval shred: Oval-shaped cross section measuring approximately .125" (3.2 mm) thick by .250" (6.4 mm) wide.
Julienne strips: A wide range of julienne strips can be made from firm products. Contact your local representative for more information.

Specifications

- **Length:** 126.65" (3217 mm)
- **Width:** 34.12" (867 mm)
- **Height:** 55.75" (1416 mm)
- **Net Weight:** 1200 lb (544 kg)
- **Motor:** 3 HP (2.2 kW) (Stainless Steel, Fan Cooled)
- **Feed Belt Motor:** 1 HP (.75 kW) (Stainless Steel, Fan Cooled)

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The TranSlicer 2500® three-dimensional cutter patented by Urschel Laboratories is designed to meet the food processing industry’s high-speed cutting requirements for many types of large, leafy vegetables and fresh cut fruits without precutting. The machine features several Urschel® engineering innovations including one-, two-, or three-dimensional cutting in a single pass without changing product direction. The result is a clean, uniform cut at high production capacities of leafy food products such as iceberg lettuce up to 8" (203.2 mm) in diameter, or firm, round products such as cabbage up to 6-3/4" (171.5 mm) in diameter (larger cabbage heads if cut in half).

Types of Cuts

SLICES: Choose from a variety of slice thicknesses on firm products ranging from 1/32 to 3-1/2" (.8 to 88.9 mm).

SHREDS: Wide variety available for cutting leafy vegetables. Thicknesses ranging from 1/32 to 9/32" (.8 to 7.1 mm), and lengths ranging from 3/8 to 3" (9.5 to 76.2 mm) or length of product.

JULIENNE: Many combinations of julienne sizes are available for cutting leafy vegetables ranging from 3/8 x 3/8" (9.5 x 9.5 mm) to 1-3/8 x 1-1/2" (34.9 x 38 mm) to 3 x 2" (76.2 x 50.8 mm). Julienne sizes on fresh fruits such as cantaloupe and honeydew, and vegetables such as potatoes and tomatoes include 1/2 x 1/2 x 1" (12.7 x 12.7 x 25.4 mm) to 1 x 1 x 1" (25.4 x 25.4 x 25.4 mm). Consult Urschel representative for more information.
Applications

The Urschel Model CC uniformly slices, strip cuts, shreds and granulates a wide variety of fruits and vegetables at high production capabilities with excellent results. The versatile machine features interchangeable cutting heads that enable the processor to change the type of cut in just minutes. Specially designed throwaway knives do not require sharpening and are inexpensive to replace. The Model CC features continuous operation for uninterrupted production and simplified design for easy cleanup and maintenance. Maximum input product size is 3-1/2” (88.9 mm) in any dimension when using stainless steel impellers, 4” (101.6 mm) in any dimension when using manganese bronze impellers.

Types of Cuts

**FLAT SLICES:** Slice thicknesses .030 to .500” (0.8 to 12.7 mm).

**STANDARD CRINKLE SLICES:** 3-1/3 waves to the inch, .080” (2.0 mm) depth of crinkle.

**.175” CRINKLE SLICES:** 5.7 waves to the inch, .084” (2.1 mm) depth of crinkle.

**“V” SLICES:** .125” (3.2 mm) slices have 8 complete “V”s to the inch. Depth of “V” is .050” (1.3 mm). Slice thickness of .040 to .100” (1.0 to 2.5 mm).

**.212” (5.4 mm) slices have 4.7 “V”s to the inch. Depth of “V” is .084” (2.1 mm). Slice thickness of .040 to .100” (1.0 to 2.5 mm).**

**OVALL SHREDS:** Approximately 1/8” (3.2 mm) thick and somewhat oval-shaped in cross section.

**CRESCENT SHRED:** Crescent-shaped cross section.

.070” (1.8 mm) Full Shred, .097” (2.5 mm) Full Shred, and .125” (3.2 mm) Full Shred: Diamond in shape.

**“V” SHRED:** “V”-shaped cross section.

**STRIP CUTS:** Square or rectangular in cross section: 3/32” (2.4 mm), 3/16” (4.8 mm), 1/4” (6.4 mm), 3/8” (9.5 mm), 3/4” (19.1 mm)

Specifications

- **Length:** 48.07” (1221 mm)
- **Width:** 35.26” (896 mm)
- **Height:** 31.47” (799 mm)
- **Net Weight:** 554 lb (251 kg)
- **Motor:** 2 HP (1.5 kW), 5 HP (3.7 kW), or 10 HP (7.5 kW) (shown with optional floor stand)
Applications

The patented Urschel Model VSC produces a wide variety of cuts including segments, crinkle or flat slabs, and square or rectangular strips from many food products including carrots, pickles, zucchini, and potatoes. The Model VSC features a variable speed drive, hinged access panel for easy access, quick changeover of cutting heads, and simplified design for easy cleanup and maintenance. The Model VSC will accept product up to 4” (101.6 mm) in diameter and is easily adapted to automated belt feeding. The machine can be sold equipped with a feed pan and chute for hand-fed operations. For added versatility, several different cutting heads are available including the standard cutting head, slab cutting head, and the patented Velocicut® cutting head. Consult your local Urschel sales representative for the cutting head best-suited for your application.

Types of Cuts

<table>
<thead>
<tr>
<th>SQUARE STRIPS</th>
<th>RECTANGULAR STRIPS</th>
<th>SEGMENT CUTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>.156&quot; (4.0 mm)</td>
<td>.281 x .406&quot; (7.1 x 10.3 mm)</td>
<td>3, 4, 5, 6, 8, 10, or 12</td>
</tr>
<tr>
<td>.188&quot; (4.7 mm)</td>
<td>.281 x .594&quot; (7.1 x 15.1 mm)</td>
<td>SLABS: Crinkle and flat slab cut sizes are available to meet your product requirements.</td>
</tr>
<tr>
<td>.216&quot; (5.5 mm)</td>
<td>.290 x .313&quot; (7.4 x 8.0 mm)</td>
<td></td>
</tr>
<tr>
<td>.250&quot; (6.4 mm)</td>
<td>.313 x .750&quot; (9.5 x 19.1 mm)</td>
<td></td>
</tr>
<tr>
<td>.276&quot; (7.0 mm)</td>
<td>.315 x .385&quot; (8.0 x 9.8 mm)</td>
<td></td>
</tr>
<tr>
<td>.281&quot; (7.1 mm)</td>
<td>.344 x .750&quot; (19.1 mm)</td>
<td></td>
</tr>
<tr>
<td>.300&quot; (7.6 mm)</td>
<td>.330 x .395&quot; (8.4 x 10.0 mm)</td>
<td></td>
</tr>
<tr>
<td>.344 x .469&quot; (8.7 x 11.9 mm)</td>
<td>.375 x .750&quot; (9.5 x 19.1 mm)</td>
<td></td>
</tr>
<tr>
<td>.375 x .750&quot; (11.1 x 19.1 mm)</td>
<td>.438 x .750&quot; (11.1 x 19.1 mm)</td>
<td></td>
</tr>
<tr>
<td>.429 x .875&quot; (11.1 x 22.2 mm)</td>
<td></td>
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</table>

Specifications

- **Length:** 116.48" (2959 mm)
- **Width:** 32.61" (828 mm)
- **Height:** 54.81" (1392 mm)
- **Net Weight:** 1028 lb (466 kg)
- **Motor:** 3 or 5 HP (2.2 or 3.7 kW)

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Comminution is the process of reducing a product to a smaller size. Conventional methods of comminution employ some type of grinding, smashing, or tearing action which can produce excessive heat and degrade the quality of the finished product. This can also generate a higher percentage of particles which fall outside the target range of the desired particle size and negatively impact the yield, quality, and final particle size.

Controlled Comminution

The word “Comitrol” means controlled comminution. The "Comitrol" processor uses the principle of incremental shear to ensure highly efficient comminution by rotating the product inside a stationary reduction head at high rotational speeds. In addition, continuous single pass operation achieves consistently uniform particle size reduction at high capacities. The result is the most efficient type of comminution available today. The versatile Comitrol processor has been used in thousands of processing applications throughout the world on a variety of food, chemical, and pharmaceutical products. Twelve Comitrol models are available to meet your processing requirements.

Comitrol Versatility

• Various consistencies from dry to paste to liquids
• Precision particle size reduction down to microdimensions
• Wide spectrum of product applications
• Standard operations include:

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<th>Shredding</th>
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<td>Emulsifying</td>
</tr>
<tr>
<td>Blending</td>
<td>Pureeing</td>
<td>Dispersing</td>
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