

Aremco's Accu-Cut™ dicing saws are used to cut a wide range of ultra-hard materials such as ceramics, ferrites and quartz, as well as semiconductor materials including silicon, gallium arsenide and bismuth telluride. Part sizes up to 6" x 6" can be accommodated to dice chips as small as .020" square.

Two basic systems are offered which provide significant advantages with respect to ease of use, accuracy, reliability and economy...

Accu-Cut™ 5200

The Accu-Cut™ Model 5200 is a compact, semi-automatic system for laboratory and production applications on substrates up to 4" x 4" x 3/4" thick. It comes equipped with a 5,000 rpm fixed speed spindle, a manual indexing Y-stage and an air/oil in-feed for maintaining smooth, precise stage control. Parts are mounted with a pneumatic vise or vacuum manifold to a 360° theta stage for part alignment, and a monocular microscope option is offered.



Accu-Cut™ Model 5200 semi-automatic dicing saw.

Accu-Cut™ 5255

The Accu-Cut™ Model 5255 is a fully-programmable system for cutting substrates as large as 6" x 6" x 1" thick in production quantities. It is equipped with a variable speed spindle with zero to 10,000 rpm control. Menu-driven software is included to enable the operator to enter a cut profile for repetitive dicing over a 6" range. Indexing is handled in steps of .0001" and the in-feed drive is controlled by an air/oil system for maintaining smooth, precise stage control.



Accu-Cut™ Model 5255 programmable dicing saw.

TYPICAL APPLICATIONS

- Hybrid Circuits
- Resistors and Capacitors
- Read-Write Heads
- Display Glass
- Metal and Optical Crystals
- Thermoelectrics
- Advanced Ceramics
- Piezoelectrics

ACCESSORIES (Refer to Technical Bulletin A9 for more details)

Mounting Adhesives

Aremco's Crystalbond™ and Wafer-Mount™ washaway adhesives are used for bonding substrates to ceramic or glass mounting blocks. These adhesives exhibit high bond strength and adhere readily to metals, glass and ceramics by simply melting with heat. When processing is complete, these adhesives are removed by reheating and cleaning with one of Aremco's environmentally-friendly cleaning agents.

Ceramic Mounting Blocks

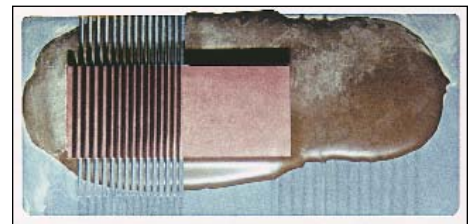
Aremcolox™ 502-1100 Alumino-Silicate, unfired machinable ceramic is an ideal mounting block for substrates. This ceramic provides a rigid mounting surface and is excellent for dressing the diamond wheel as thru-cuts are made. The ceramic's surface can be re-faced to keep operating costs to a minimum. Standard ground, flat and parallel plates are available, 1/2" x 4" x 4" and 1/2" x 6" x 6". Custom sizes are available upon request.

Diamond Wheels

Aremco offers a complete range of metal- and resin-bonded diamond wheels, custom mounting flanges and dressing sticks.

Cutting Lubricant

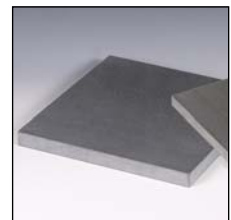
Aremco-Cool™ 558 is a translucent, water-soluble concentrate which provides exceptional lubricity and wetting of extremely abrasive materials. It improves machinability, reduces tool wear, and will not cause corrosion or buildup when diluted with clean water. Aremco-Cool™ is biodegradable, odorless and environmentally-safe to operators. A ratio of 32-parts water to 1-part concentrate is typically recommended.



Boron carbide bonded to Aremcolox™ 502-1100 mounting block using Crystalbond™ 590 and diced with Model 5255 dicing saw.







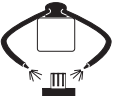



120-Series metal-bonded diamond wheel



Aremcolox™ 502-1100 ceramic mounting block.

ACCU-CUT DICING SAW SYSTEMS SPECIFICATIONS

| FEATURES | MODEL 5200 | MODEL 5255 |
|--|---|---|
| Control System | <ul style="list-style-type: none"> Semi-Automatic | <ul style="list-style-type: none"> Microprocessor-Based Menu Driven Cut Profiles, Metric or English |
| X - Stage  | <ul style="list-style-type: none"> Manual Drive Travel, 4" Dial Indicator Readout, 0.001" 20 Tpi Leadscrew | <ul style="list-style-type: none"> Stepper Motor Drive Travel, 6" Resolution, 0.0001" Accuracy, +/- 0.00001" Leadscrew, 40 Tpi Rails, Fully-Supported, Pre-Loaded Water Resistant |
| Y - Stage  | <ul style="list-style-type: none"> Drive, Air/Oil, In-Out Feed Adjustable Speed, 0-3 Ips Bearings, Split Type Pre-Loaded, Corrosion Resistant | <ul style="list-style-type: none"> Drive, Air/Oil, In-Out Feed Adjustable Speed, 0-3 Ips Bearings, Split Type Pre-Loaded, Corrosion Resistant Adjustable Limit Switches |
| θ - Stage  | <ul style="list-style-type: none"> Manual Drive Range, 0-360° | <ul style="list-style-type: none"> Manual Drive Range, 0-360° |
| Depth of Cut  | <ul style="list-style-type: none"> Drive, Pneumatic Cylinder Manual Control, 20 Tpi Leadscrew Depth of Cut, Dial Indicator Readout, 0.001" | <ul style="list-style-type: none"> Drive, Pneumatic Cylinder Manual Control, 20 Tpi Leadscrew Depth of Cut, Dial Indicator Readout, 0.001" |
| Part Staging  | <ul style="list-style-type: none"> Maximum Part Size, 3/4" x 4" x 4" Mounting Blocks, Ceramic or Glass Quick Acting Air Vise (Standard) Vacuum Manifold (Optional) | <ul style="list-style-type: none"> Maximum Part Size, 1" x 6" x 6" Mounting Blocks Ceramic or Glass Quick Acting Air Vise (Standard) Vacuum Manifold (Optional) |
| Spindle Mechanism  | <ul style="list-style-type: none"> Spindle Diameter, 5/8" Cartridge, Tri-Bearing Support Blade Range, 2" - 4" OD Fixed Speed 1/4 Hp, 5000 Rpm | <ul style="list-style-type: none"> Spindle Diameter, 5/8" Cartridge, Tri-Bearing Support Blade Range, 2" - 4" OD Variable Speed, 3/4 Hp, 3 Phase, 0 - 10000 Rpm |
| Coolant System  | <ul style="list-style-type: none"> Coolant, Water Soluble Biodegradable, Corrosion Resistant, Non-Misting Lubricant Reservoir, 1 Gallon Recirculating Sediment Tank Pump Flow Rate, 20 Gph Pressure, 20 Psi | <ul style="list-style-type: none"> Coolant, Water Soluble Biodegradable, Corrosion Resistant, Non-Misting Lubricant Reservoir, 30 Gallon Recirculating Sediment Tank Pump Flow Rate, 40 Gph Pressure, 50 Psi. |
| Optics  | <ul style="list-style-type: none"> Monocular Microscope with 10x Eyepiece with Cross Hairs and Quartz High Intensity Lamp (Optional) | <ul style="list-style-type: none"> Monocular Microscope with 10x Eyepiece with Cross Hairs and Quartz High Intensity Lamp Black & White 9" Video Monitor, Electronic Cross Hairs, 100x Magnification, CCD Camera (Optional) |
| Service | <ul style="list-style-type: none"> Electrical, 120 or 240 Volt, 1 Phase, 50/60 Hz Pressure, 80-90 Psi | <ul style="list-style-type: none"> Electrical, 220/240 Volts, 1 Phase, 50/60 Hz Pressure, 80-90 Psi |
| Physical | <ul style="list-style-type: none"> Footprint, 30"L x 22-1/2"W x 27"H Approximate Weight, 150 Lbs | <ul style="list-style-type: none"> Footprint, 3'D x 4'w x 4' H Approximate Weight, 900 Lbs |

Refer to Price List for complete order information.

Aremco Products makes no warranty express or implied concerning the use of this product.

The user assumes all risk of use or handling whether or not in accordance with directions or suggestions, or used singly or in combination with other products.