A WIDE SELECTION OF BLADES FOR A VARIETY OF DICING APPLICATIONS

Resin-bond Blades

The best choice for hard and brittle material applications

A Comprehensive Dicing Solution

- Self-sharpening matrix to expose new diamonds
- Superior cut quality
- Best performing matrix for hard, brittle and composite materials
- The widest variety of combinations for your most challenging applications
- High precision dicing
- Attractive cost-of-ownership

ADT = Dicing

Advanced Dicing Technologies

A wide selection of annular blades

Our blade selection is comprised of three product families distinguished by the type of binder: Resin-bond Blades, Nickel-bond Blades and Metal-bond (Sintered) Blades. Nickel-bond and Metal-bond (Sintered) Blades are characterized by long blade life and endurance, while Resin-bond Blades wear off faster and create less heat & friction. Resin-bond Blades are therefore best suited for hard and brittle materials such as alumina, glass and quartz, whereas Nickel-bond and Metal-bond (Sintered) Blades are an excellent choice for softer materials/substrates such as: PCB, Silicon and BGA.

30 years of experience in tailoring solutions to specific applications

ADT's Dicing Saws, Laser Scriber System, Annular Blades and Peripheral Equipment manifest a wealth of dicing know-how and experience accumulated over three decades. We offer our customers a comprehensive solution- a unique blend of research, development, process mastery and skill.

State-of-the-Art Manufacturing Technology

Our blades are composed of abrasive materials embedded in a resin or metal matrix. Resin-bond Blades are cured under pressure and high temperature, Metal-bond Blades are sintered and Nickel-bond Blades are manufactured using a tightly controlled electroforming process.

The highest standards of quality assurance & process control

Strict monitoring at each critical stage of the production process insures that each ADT blade meets the desired specifications and dimensional tolerances. Our blades are tested extensively on the latest platforms, simulating the customer's operating conditions and process parameters. **A 100% final inspection is conducted on all products leaving the factory.**

A highly efficient customer support structure

By utilizing a tiered, global customer support structure we insure efficient support and fast response time to our customers' needs.

Tier 1: Headquarters and Factory-based support
Including customer support, application development centers and training

Tier 2: Regional support
Including technical support, application support, sales representation and training

Tier 3: Field support
Including service, process support and local sales

Attractive cost-of-ownership

By continuously lowering the cost of manufacturing, improving the quality and longevity of our products and maintaining a competitive, premium pricing policy, we lower the total cost-of-ownership and add value to your dicing operation.

Resin-bond Blades

For Hard and Brittle Materials

ADT's **Resin-bond Blades** are manufactured through a unique proprietary molding process. When cutting hard and brittle materials such as alumina, glass, quartz and ferrite, the edge of the blade wears out at a controlled rate exposing new diamonds to constantly sharpen the blade and thus achieve highly accurate kerf, outstanding yield and exceptional blade life.

Phenolic resin as binder allows for blade wear management rendering Resin-bond Blades an excellent choice for hard and brittle materials such as:

Application	Recommended Grit Size	
QFN Copper+Epoxy Molding	45 µm, 53 µm, 63 µm, 75 µm, 88 µm, 105 µm	
Hybrid Substrates and Ceramic Packages Alumina	30 µm, 45 µm, 53 µm, 63 µm, 88 µm	
SAW Devices LiTaO3 & LiNbO3	15 µm, 20 µm, 30 µm	
SAW Devices Quartz	30 µm, 45 µm	
Tape Heads Ferrite	6 µm, 9 µm	
Communication Glass+Silicon	20 µm, 25 µm, 30 µm	
Optical Devices Glass	3 µm,6 µm, 9 µm	
Fiber Optics Glass	30 µm, 45 µm	

New

FAST
first sample selection tool

"FAST" and Easy Blade Selection

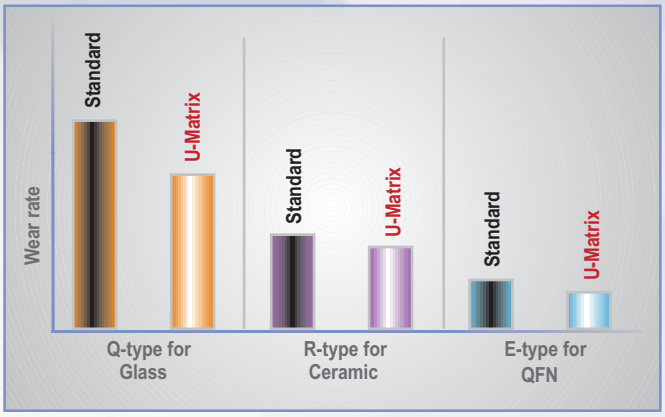
There is nothing trivial about choosing the right blade composition for your process. The task requires taking into consideration, thickness, geometry, diamond concentration, binder hardness and many more variables. With "FAST", our Sample Selection Assistant, you can enjoy the benefit of our 30 years of process experience. Our "FAST" & friendly assistant will walk you through the selection process taking your particular requirements into consideration and producing an educated ADT recommendation for a **first trial, sample blade, part number**. Based on the submitted information, a sample blade will be shipped to your address. The "FAST" assistant is now available through the ADT Website. Please visit: www.adt-dicing.com. In addition, as always, our engineers are available to assess your needs and assist you in the blade selection process. For further assistance please contact your local sales representative. Contact information is available on the ADT website.

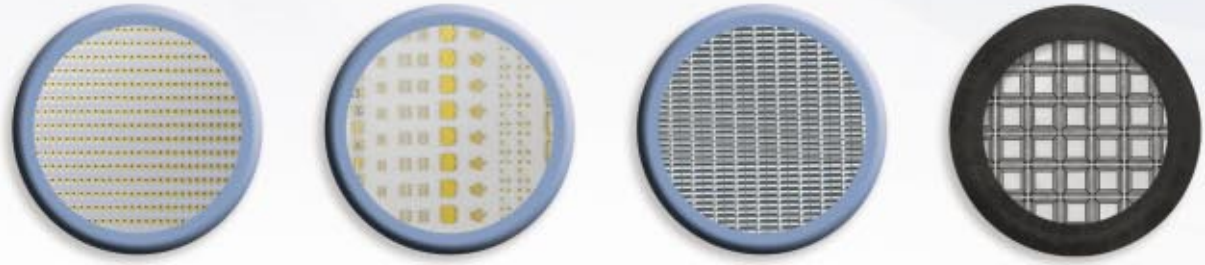
Special Offerings

Extended-life Resin-bond Blades for hard material applications

As part of our on-going effort to improve blade life properties and cut quality, ADT has recently introduced a new family of Resin Blades with extended blade life. This family, based upon a new resin type designated by the letter "U" in the part number, is characterized by lower blade wear leading to a significant increase in blade life. This increase is typically on the order of 20%-30% compared to conventional phenolic Resin Blades, depending on the specific application being diced and the process parameters. The extended life is seen througout the complete range of applications diced by Resin Blades including QFN, glass, alumina, etc. Moreover, this extended life does not come at the expense of cut quality.

- Increased blade life
- Improved cost-of-ownership





Resin-bond Blades Part Number Description

EDGE TYPE**	O.D. & I.D.		GRIT SIZE (μm)	THICKNESS (mil) *
1=Serrated, 16 slots	**1**=2.188" x 40 mm	**F**=60mm x 40 mm	**(003)**=3	**(003)**=3
2=Shaped edge	**2**=4.256" x 88.82mm	**G**=4.4" x 88.82 mm	**(006)**=6	↓
3=Fine/Coarse	**3**=3.0" x 40 mm	**H**=58 mm x 40 mm	**(009)**=9	↓
4=Blade I.D.3.5" (88.9 mm)	**4**=4.5" x 88.82mm	**K**=4.45" x 88.82 mm	**(015)**=15	↓
	5=5.0" x 88.82mm	**J**=57 mm x 40 mm	**(020)**=20	↓
5=Serrated, 8 slots	**6**=4.6" x 88.82mm	**M**=50 mm x 40 mm	**(025)**=25	↓
6=Serrated, 4 slots	**7**=4.7" x 88.82mm	**N**=52.5 mm x 40 mm	**(030)**=30	↓
7=Fiber reinforced	**8**=2.25" x 40 mm	**P**=78 mm x 40 mm	**(035)**=35	↓
8=CBN	**9**=2.25" x 40 mm	**R**=64 mm x 40 mm	**(045)**=45	↓
	A=53 mm x 40 mm	**S**=66 mm x 40 mm	**(053)**=53	↓
	B=56 mm x 40 mm	**T**=74 mm x 40 mm	**(063)**=63	↓
	C=56 mm x 40 mm	**U**=76.4 mm x 40 mm	**(075)**=75	↓
	D=52 mm x 40 mm	**Q**=4.8" x 88.82 mm	**(088)**=88	↓
	E=54 mm x 40 mm	**W**=72 mm x 40 mm	**(105)**=105	↓
			(125)=125	↓
			(150)=150	**(100)**=100
			(200)=200	

EXAMPLE PART NUMBER **X 5 7 7 - 4 0 0 6 - 0 1 0 - X X X** product family

Serrated 8 slots	**4.5" O.D. 88.82 I.D.**	**6 μm GRIT**	**10 mil**

EDGE TYPE**	O.D. & I.D.	GRIT SIZE (μm)	THICKNESS (mil) *
1=Serrated, 16 slots	**0**=2" x 1"	**(003)**=3	**(003)**=3
2=Shaped edge	**2**=4.3" x 3"	**(006)**=6	↓
3=Fine/Coarse	**3**=3" x 55 mm	**(009)**=9	↓
4=Blade I.D.3.5" (88.9 mm)	**4**=4.5" x 2.75"	**(015)**=15	↓
	5=5" x 3"	**(020)**=20	↓
5=Serrated, 8 slots	**6**=4.6" x 3"	**(025)**=25	↓
6=Serrated, 4 slots	**8**=2.25" x 1.5"	**(030)**=30	↓
7=Fiber reinforced	**9**=4.25" x 2.75"	**(035)**=35	↓
8=CBN	**A**=2.188" x 39.92 mm	**(045)**=45	↓
	B=52 mm x 1"	**(053)**=53	↓
	E=78 mm x 52 mm	**(063)**=63	↓
	F=78.2 mm x 52 mm	**(075)**=75	↓
	G=4" x 2.75"	**(088)**=88	↓
		(105)=105	↓
		(125)=125	↓
		(150)=150	**(100)**=100
		(200)=200	

EXAMPLE PART NUMBER **X 1 7 6 7 - 5 0 2 0 - 0 2 0 - X X X** product family

Serrate 16 slots	**5" O.D. 3" I.D.**	**20 μm GRIT**	**20 mil**

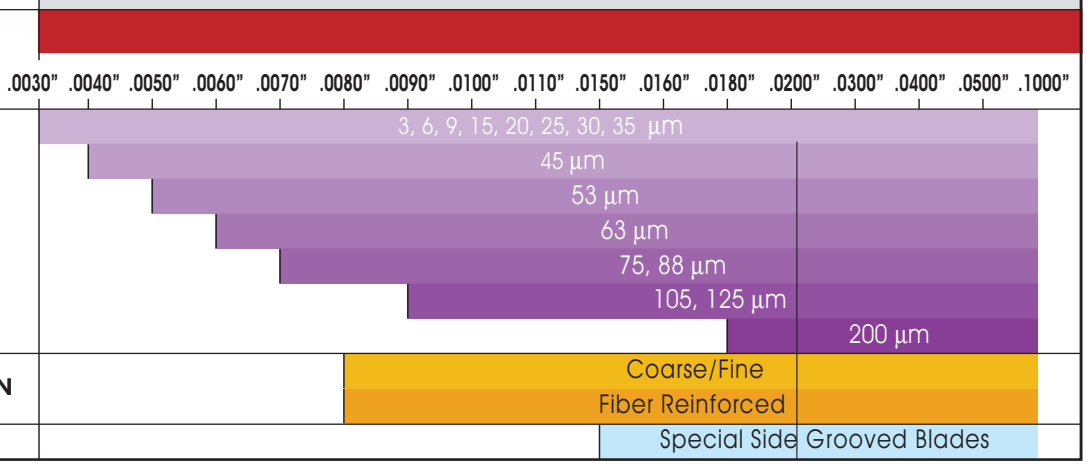
* Depends on diamond grit size

** Depends on blade thickness and diamond grit size

Other thickness options, diameters, edge geometries and diamond grit sizes are available upon request.

Resin-bond Blades Standard Sizes

BLADE I.D.		BLADE O.D.
inches	mm	inches (mm)
1.000	25.4	2.000 (50.8)
1.500	38.1	2.250 (57.1)
1.575	40.0	2.188 (55.6) 2.205 (56.0) 2.250 (57.1) 2.362 (60.0) 3.000 (76.2)
2.750	69.8	4.400 (101.6) 4.500 (114.3)
3.000	76.2	4.300 (109.2) 4.600 (116.8) 5.000 (127.0)
3.497	88.82	4.256 (108.1) 4.600 (116.8) 4.700 (119.4) 5.000 (127.0)
3.500	88.9	4.256 (108.1) 4.600 (116.8)



1. Locate your desired blade diameter (O.D. and I.D.) in any one of the gray shaded bars at the top of the chart. The horizontal length of the shaded bar, in comparison to the red bar indicates the range of thickness in which blades in the gray bar are available. For example, 5" O.D. blades are only available (as standard) in thickness range from .0150" to .1000".
2. Make sure that the desired blade diameter is available in the desired thickness.
3. All of the colored option bars below the red bar indicate the range of thickness, where that option is available. For example, blades with 63 µm grit size are only available (as standard) in thickness range from .0060" to .1000".

After you have determined (using the chart above) that your blades' O.D., I.D., thickness and grit size are available, please refer to the Resin-bond Blades Part Number Description table for ordering information.

Please note: Other diameters, grit sizes and thickness options are available upon request.

Design: Studio Rosinger

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