### Nickel-bond Blades Part Number Description

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<th>Blade No.</th>
<th>Blade Description</th>
</tr>
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<tbody>
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<td>50.8 mm Diameter</td>
</tr>
<tr>
<td>601-800</td>
<td>63.5 mm Diameter</td>
</tr>
<tr>
<td>901-1000</td>
<td>76.2 mm Diameter</td>
</tr>
<tr>
<td>1101-1200</td>
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</tr>
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**Depends on desired grit size**

**Depends on blade thickness and diamond grit size**

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### Nickel-bond Blades Standard Sizes

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<tr>
<th>Blade O.D.</th>
<th>Blade I.D.</th>
<th>Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.500 (88.9)</td>
<td>2.204 (56.0)</td>
<td>±0.0003</td>
</tr>
<tr>
<td>4.400 (111.8)</td>
<td>2.953 (75.0)</td>
<td>±0.0010</td>
</tr>
<tr>
<td>4.500 (114.3)</td>
<td>2.260 (57.15)</td>
<td>±0.0010</td>
</tr>
<tr>
<td>4.600 (116.8)</td>
<td>2.204 (56.0)</td>
<td>±0.0010</td>
</tr>
<tr>
<td>5.000 (127.0)</td>
<td>2.362 (60.0)</td>
<td>±0.0010</td>
</tr>
</tbody>
</table>

**Additional information:**

1. Locate your desired blade diameter (O.D. and I.D.) in any one of the gray shaded bars of 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 0.0070” to 0.0130”.

2. Make sure that the desired blade diameter is available in the desired thickness.

3. All of the colored options bars below the red bar indicate the range of thickness, where that option is available. For example, options with a yellow bar are only available in thickness range from 0.0070” to 0.0130”

**Please note:** Other diameters, grit sizes and thickness options are available upon request.
Nickel-bond Blades

For soft material and machineable hard material applications

ADT’s Annular Nickel Blades are produced using a state-of-the-art, tightly controlled electroforming process which guarantees a uniform distribution of diamonds throughout the Nickel layer. This process not only allows for blades to be produced to very tight tolerances, but also permits optimization of grit size, hardness and geometry to meet the particular requirements of your application.

The Nickel binder provides longer life and lower wear rate and together with the abrasive makes Nickel-bond Blades a perfect choice for softer application such as:

- PCB (LED Packages)
- FR4 and BT Resin
- Multi-Layer Capacitors
- Green Ceramic
- FR4 and Epoxy Molding

The new “P” type blade for dicing PZT Ultrasound Sensors

To meet the demanding requirements of this specific application, ADT has developed the new “P” type of thin nickel blades specifically designed for ultrasound PZT sensor applications. This new type has a unique hardness and stiffness characteristics. The diamond concentration is optimized to minimize blade loading in order to provide superior cut perpendicularity. These blades are available with different diamond grit sizes ranging from 3-6mic up to 10mic depending on the application requirements. All blades can be ordered with different outer diameters to perform an optimized blade exposure in order to get tight kerf size requirements.

Offering:
- Kerf accuracy
- Kerf perpendicularity
- Superior quality
- High throughput

A WIDE SELECTION OF BLADES FOR A VARIETY OF Dicing APPLICATIONS

Nickel-bond Blades

A wide selection of annular blades

Our blade selection is comprised of three product families distinguished by the type of binder:
- Nickel-bond Blades
- Metal-bond (Sintered) Blades
- Resin-bond 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, Annular Blades and Periphery 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 ensures 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 ensure 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.

Offering:
- High throughput
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For soft material and machinable hard material applications

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The Nickel binder provides longer life and lower wear rate and together with the abrasive makes Nickel-bond Blades a perfect choice for softer application such as:

**Application** | **Recommended Grit Size**
--- | ---
PCB (LED Packages) | 10 μm, 13 μm, 17 μm
FR4 and BT Resin | 30 μm, 50 μm
BGA | 30 μm, 50 μm
Multi-Layer Epoxy Molding | 30 μm, 50 μm
Green Ceramic | 6-8 μm, 10μm
Ultrasound Sensors, Micro-positions | 3-6 μm, 10 μm, 13 μm
Tape Heads | 3-6 μm, 10 μm, 13 μm
Magnetic Heads | 3-6 μm, 10 μm, 13 μm

“FAST” and Easy Blade Selection

There is nothing trivial about choosing the right blade composition for your process. The task requires taking into consideration: geometry, diamond size & concentration, binder hardness and many more variables. With our Web Selection Tool, you can enjoy the benefit of our over 30 years of experience.

Our “FAST” & friendly assistance tool will walk you through the selection process taking your particular requirements into consideration and producing an educated ADT recommendation for a part number.

We invite you to 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. Contact information is available on ADT website.

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A WIDE SELECTION OF BLADES FOR A VARIETY OF DICING APPLICATIONS

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Nickel-bond Blades Part Number Description

Nickel-bond Blades Standard Sizes

Blade O.D.  Blade O.D.

1. Choose your desired blade diameters (O.D. and I.D.) in any one of the gray shaded bars below the chart. The horizontal length of the shaded bar in comparison to the red bar indicates the range in which blades are available. For example, if 1.000” O.D. blades are only available (as standard) in thickness range from .0015” to .0130”

2. Make sure that the desired blade diameter is available in the desired thickness.

3. All of the colored options below the red bar indicate the range of thickness in which blades in the gray shaded bars at the top of the chart. The horizontal length of the colored bars at the top of the chart indicates the range of thickness in which blades are available. For example, blades with .0070” and thickness are only available (as standard) in thickness range from .0015” to .0130”

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 Nickel-bond Blades Part Number Description table for ordering information.

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

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Nickel-bond Blades

A WIDE SELECTION OF BLADES FOR A VARIETY OF Dicing APPLICATIONS

Nickel-bond Blades

The best choice for soft material and machinable hard material applications

A Comprehensive Dicing Solution

- The hardest binder for superb wear resistance
- The purest blades available (Blown in. (2009))
- Excellent rigidity for higher exposure
- Exceptionally long blade life
- High precision dicing
- Attractive cost-benefit ratio
Nickel-bond Blades Part Number Description

**Blade O.D.**
- .0110" - .0130" - .0040"
- 4.5 mil
- 0.45 m
- XX product family

**Grit Size**
- 201-
- 4.8" O.D.
- .0090" 776
- .0400"
- 4B776
- O.D.
- XX
- **3-6**
- *
- Depends on diamond grit size

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

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Nickel-bond Blades Standard Sizes

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<tr>
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Nickel-bond Blades

The best choice for soft material and machinable hard material applications

A Comprehensive Dicing Solution

- The hardest binder for superior wear resistance
- *The* only blade available (shown in gray) (2013)
- Biscuit rigidity for higher exposure
- *Biscuit* long blade life
- High precision dicing
- Attractive cost-of-ownership

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Nickel-bond Blades Applications

A Wide Selection of Blades for a Variety of Dicing Applications

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