AccuPlus™ – New Hub Blades offer a customizable solution for discrete wafer dicing with improved efficiency and a lower cost of ownership.

As a general trend in the discrete wafer market, wafers have continued to get thinner, while the overall die size remains small. Dicing technologies face the additional challenge of die movement and/or blade loading, which can eventually cause costly die chipping and cracks, impacting assembly and test site productivity when handling and processing wafers.

By optimizing key blade elements such as diamond grit size, diamond concentration, and nickel bond hardness, in conjunction with the newly introduced features, K&S AccuPlus™ blades deliver superior cut quality, bond life and cost of ownership improvement to the discrete wafer dicing.

**Highlighted Features:**

- Customizable solution for thin, small die & backside coated discrete wafers
- Quality, precision and cost of ownership improvement
- Shortened pre-cut process for lower cost of ownership
- Two series of special nickel bond hardness
- Multi-levels of diamond concentration

**Special Nickel Bond Hardness**

There are two series of special nickel bond hardness under the AccuPlus™ Blades Line. The Discrete Series’ bond hardness is designed for enabling high cutting power to increase production throughout and blade life, while the Ultra Series’ bond hardness is optimized for high loading processes like metalized saw street and backside coated wafers.

**Multi-Level of Diamond Concentration**

Diamond concentration is a critical factor for blade cutting power. Lower concentrations provide greater resistance to blade loading, and higher concentrations enable higher feed rates and longer blade life. K&S AccuPlus™ hub blades are available in different diamond concentrations to achieve the desired equilibrium among loading, blade life and throughput.

**Discrete Device Type**

- Small-Die
- Glassivation
- Normal Street
**Special Hub Materials and Design for High / Low Spindle Frequency**

Metalized saw street and thin wafer dicing requires higher spindle RPM to maintain blade cutting power and obtaining desired cutting quality. However, higher spindle RPM may induce unnecessary blade vibration and harmonic noise. K&S AccuPlus™ hub blades are equipped with stronger materials and a special hub design to minimize blade vibration and noise caused by high spindle speed.

**Improved efficiency and lower cost of ownership**

![Graph: Initial Cutting Quality](image)

- **AccuPlus Vs. Standard blade cutting quality in 5m cutting length**
  - Top side: AccuPlus
  - Back side: AccuPlus

**AccuPlus™ Blade Part Number Configuration**

![Diagram: AccuPlus Blade Part Number Configuration](image)

- **Main P/N Structure**
- **1st Code**
- **2nd + 3rd Code**
  - max. kerf (µm)
- **4th Code**
  - Exposure (µm)
  - Grit Size
    - 2 to 4µm: F
    - 2 to 6µm: G
    - 4 to 6µm: K
- **5th Code**
  - Exposure Shift (+)
- **6th Code**
  - Diamond Conc.
  - Coding
- **7th Coding**
  - 8th & 9th Coding
  - Al. Hub Type
- **10th to 12th Code**
  - Special Configuration

![Image: Kulicke & Soffa](image)