ZENESIS®

"From chaos to order"

Development History of ZENESIS® Technology

2000: Conceptual product design, Exploration of manufacturing technology.

2001.7: Creation of a dedicated research team.

2001.9: 1st patent on patterning technology. (Patent no. 10-0428947 / US 6626167)

2002.1: Design for manufacturing process completed.

2003.4: Start of test marketing.

Current: Design and production ready for each product category. Over a dozen patents registered and pending on patterned diamond design and production technology.

ZENESIS® Products

Cured Concrete Blades

Cutting material: Cured and reinforced concrete (Flint concrete).
Diameter: 12" to 60".
Equipment: 10 HP to 80 HP.

Wall Saw Blades

Cutting material: Heavy reinforced concrete.
Diameter: 12" to 60".
Equipment: 5HP to 50HP (Electric / Hydraulic).

Trimming Blades

Cutting material: Granite.
Diameter: 12", 14", 16", 18", 20".
Equipment: 5HP to 30HP (Manual / C.N.C.).

Core Bits

Cutting material: Heavy reinforced concrete (dry/wet).
Diameter: 2" up to 14".
Equipment: 1HP to 15HP.

ZENESIS®

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Use approved safety guards and protective goggles.
Do not use in curved or obliqued cuts.

ZENESIS® TECHNOLOGY

ZENESIS® is a platform technology that brings to life dramatic improvement in diamond tool performance by its ability to custom design and mass produce optimal patterns of diamonds based on application needs.

• Conventional Diamond Tools

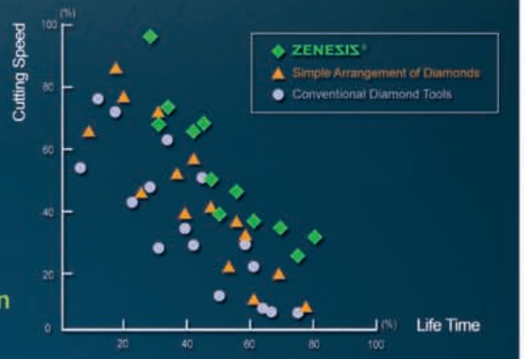
- Diamonds are randomly distributed.
- Random variation results in inconsistent product performance.
- Trade-off is made between cutting speed and life.

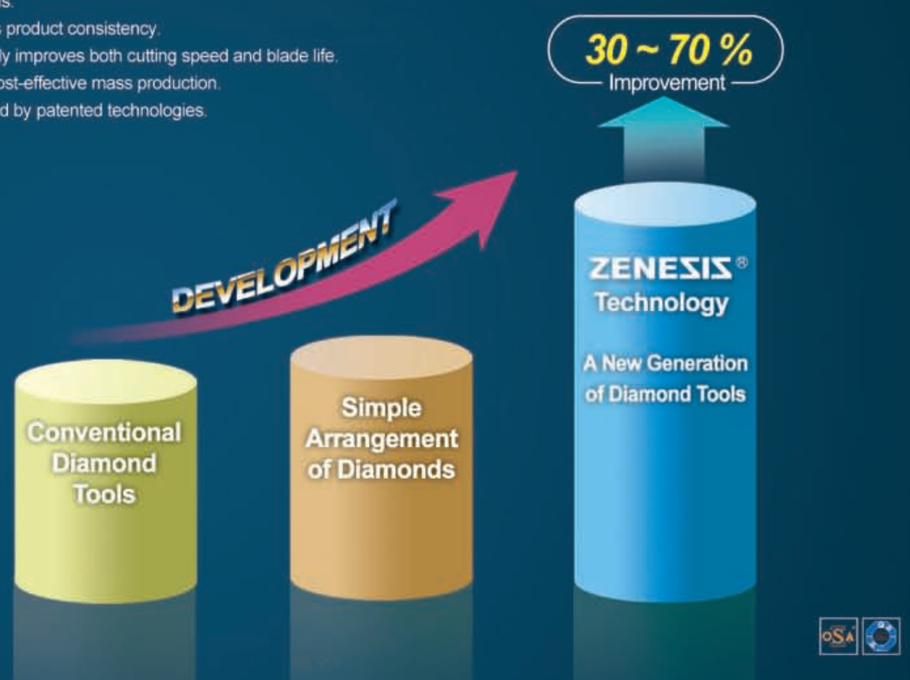
• Simple Arrangement of Diamonds

- Elimination of randomness provides only marginal improvement in performance...
- ... and does not justify the increase in cost.

• ZENESIS® Technology: A New Generation of Diamond Tools

- Delivers optimally customized patterns of diamonds for specific applications.
- Maximizes product consistency.
- Significantly improves both cutting speed and blade life.
- Enables cost-effective mass production.
- Is protected by patented technologies.





Examples of ZENESIS® Patterns

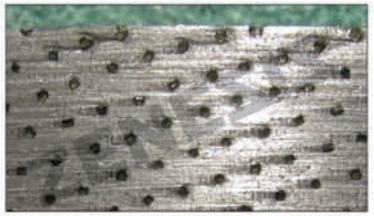
Inclined Triangular Structure

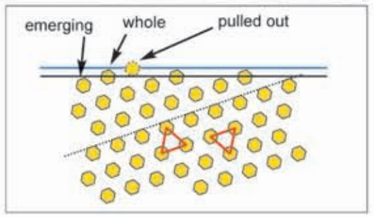
- **Design:** Inclined Triangular Structure
- **Concept:**

  Diamond pattern is designed to expose a pre-determined number of diamonds at an uninterrupted and regular sequence (consistency in wear progression).

- **Effect:**

  Consistent, smooth cutting performance throughout blade life.





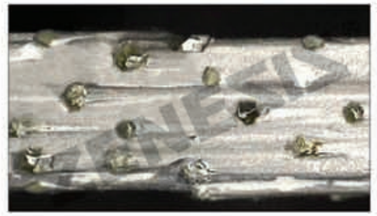
Alternating Diamond Layers

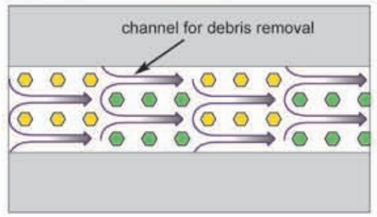
- **Design:** Alternating Diamond Layers
- **Concept:**

  Diamond layers are patterned to control the height of diamond exposure and the length of diamond "tail" and to create channels optimized for debris removal.

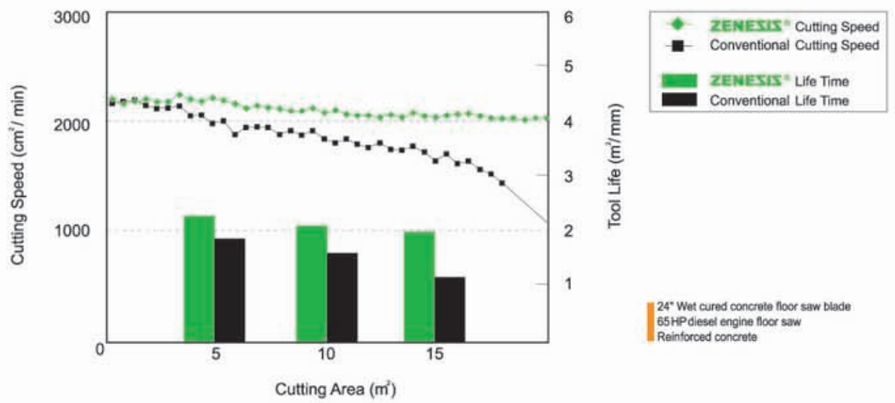
- **Effect:**

  Significant improvement in both cutting speed and life.





Performance : ZENESIS® vs. Conventional

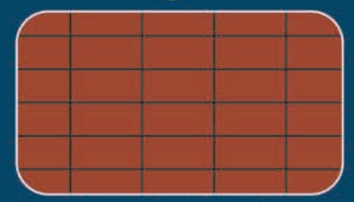


ZENESIS®

PATTERNING TECHNOLOGY

Industrial efforts continually evolve to reduce randomness in processes.

Random arrangement of various-sized stones.



Simple arrangement of bricks provide marginal improvement, but...

Ultimately, an engineered design provides the maximum effect.