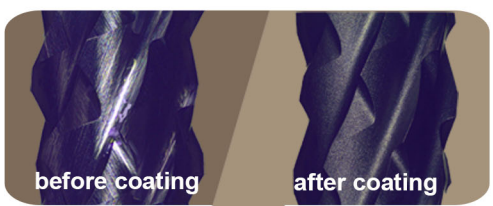
GCT
we are diamond

DiA · DRiLL

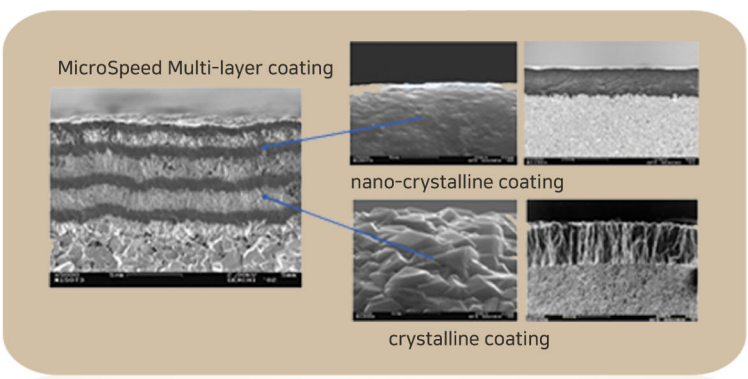
1625

The Best Solution for the Problems of
Tolerance and Concentricity of Electro-deposited Drills,
And high Prices of PCD Drills

# CORE TECHNOLOGY OF GCT DIAMOND COATING

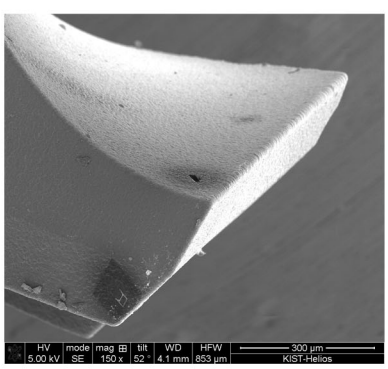


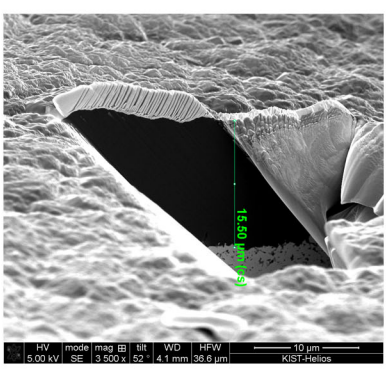

GCT diamond coating is a multi-layer diamond-coating system consisting of several crystalline and nano-crystalline layers.
It has the hardness of natural diamond level and absorbs the outer shocks perfectly.

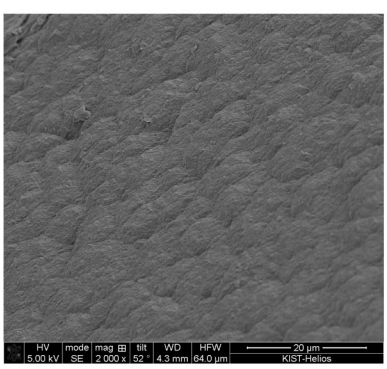



## FIB(Helios) pictures by KIST

Korea Institute of Science and Technology






GCT multi-layer diamond coating withstanding 50 hours in 1000℃ chambers to obtain the hardness of natural diamond level

# Type 1625

For $Al_2O_3$, AlN, $Y_2O_3$, $ZrO_2$, $Si_3N_4$, SiC, Quartz

| Ø (mm) | Flute length (mm) | |
|---|---|---|
| 0.10 | 1.8 | - |
| 0.15 | 2.0 | - |
| 0.18 | 2.5 | - |
| 0.20 | 1.5 | 3.0 |
| 0.25 | 3.0 | - |
| 0.30 | 5.5 | - |
| 0.35 | 5.5 | - |
| 0.40 | 5.5 | - |
| 0.45 | 7.0 | 11.5 |
| 0.48 | 5.5 | - |
| 0.50 | 7.0 | 12.5 |
| 0.52 | 7.0 | - |
| 0.55 | 7.0 | - |
| 0.60 | 7.0 | - |
| 0.65 | 7.0 | - |
| 0.70 | 7.0 | - |
| 0.80 | 7.0 | 12.0 |
| 0.90 | 7.0 | 12.0 |
| 1.00 | 7.0 | 12.0 |
| 1.10 | 7.0 | 12.0 |
| 1.20 | 7.0 | 12.0 |
| 1.30 | 7.0 | 12.0 |
| 1.40 | 7.0 | 12.0 |
| 1.50 | 7.0 | 12.0 |

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**Remark 1**

shank diameter : Ø3.175

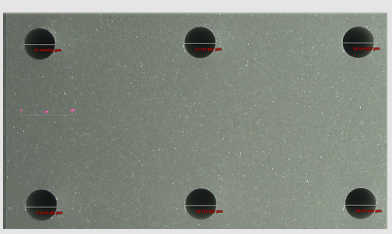
**Remark 2**

The mentioned diameters of drills are based on the sizes of uncoated ones. Actual diameters of coated drills are 15-25 ㎛ larger than the mentioned diameters. For the accurate tolerance of coated drills, prior discussion is necessary.

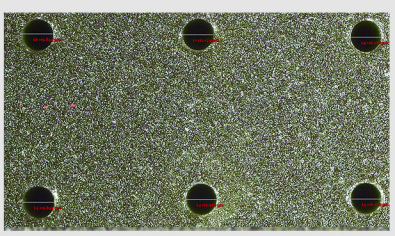
Further diameters and flute lengths on request.

**Type 1625:**
- thicker diamond coating and application-specific design
- for extremely high wear requirements
- right hand cutting, right twisted
- shank Ø 3.175mm
- overall length 38.10mm
- tolerances according to GCT drill specification
- made of solid carbide

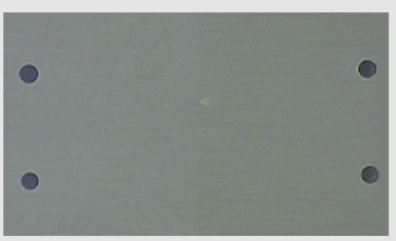
## High Purity $Al_2O_3$ / AlN / $ZrO_2$ : Ø0.1, Ø0.15 hole drilling



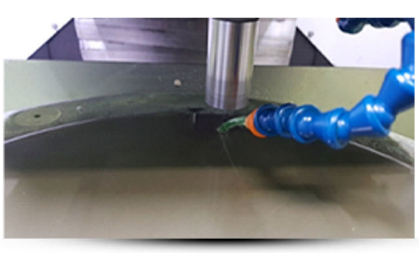
Ø0.1 Drill machining (x300)
high purity $Al_2O_3$



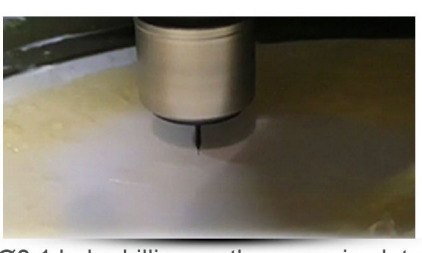
Ø0.1 Drill machining (x300)
AlN



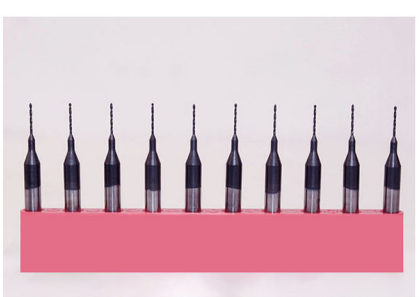
Ø0.15 Drill machining (x60)
Zirconia ($ZrO_2$)



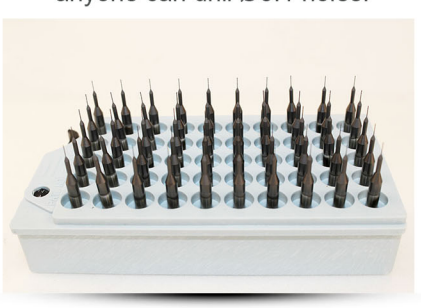
Ø0.1 hole drilling on the ceramic plate with an ultrasonic spindle



Ø0.1 hole drilling on the ceramic plate with old-type MCT.
Only if Collet can be used correctly, anyone can drill Ø0.1 holes.



Ø0.48(F/L 5.5mm)



50 pcs clamping box : Ø0.18