

## Diamond Applications: Hole drilling for Jewellery Synova, Switzerland

Diamcase-05 Date: 21.10.2020



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### PRODUCT

#### Diamonds for Jewellery applications

Rough or polished diamonds in different shapes are often used as pendants for necklaces, earrings etc.

To link the diamond with the other jewellery part, a hole-drilling process might be required

LMJ used for:

- Hole drilling



### CHALLENGE

#### Perfect straight holes in hard and valuable diamond material

Main processing criteria:

- Through-holes in extremely hard diamond material
- Minimal diamond damages
- Avoiding of chipping at hole entry and exit
- Perfect roundness

Machining technologies able to reach these criteria:

- Dry laser
- Laser MicroJet (LMJ) - water jet guided laser technology



### SOLUTION

#### Perfectly drilled holes, straight drilling process

LMJ advantages versus Dry Laser:

- Drilled holes are fully straight, no V-shape
- No diamond damages
- No chipping at entry and exit of holes
- Perfect and highly accurate hole geometry

Installed machine type:

- 1 x DCS 300
- 100 W green laser



DCS 50-3

