

# DIAMOND TOOL FRONT CLEARANCE OPTIONS



**As part of the DTG group, Contour is one of the largest industrial diamond purchasers for single crystal diamond in the world.**

Quite simply... **We get the best stones!**

**Priorities for diamond selection: Orientation ... Colour ... Shape**

**Contour understands that:**

- Poor quality diamonds cause poor tool-life.
- Light brown - dark brown diamonds have stress, causing cracks and quick edge break down.
- Pique (carbon spots) cause holes within the crystal.
- Naat (growth irregularities) within the crystal can only be overcome by force grinding.

Diamonds with these defects are much less expensive and **will not** be used here at Contour.



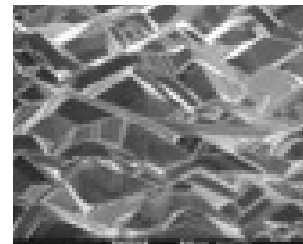
*Single Crystal Natural*



*Single Crystal CVD*



*Single Crystal Synthetic*



*Poly Crystal CVD*

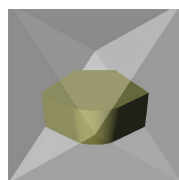
**Natural and Synthetic Diamond in Dodec Orientation:**

- Most resistant to abrasive wear
- For tools with high clearance ( $>10^\circ$ )
- Maximum arc  $120^\circ$
- Positive or negative rake angle possible

**Synthetic Diamond in Cubic Orientation:**

- Most resistant to chemical wear (RGP lenses)
- For tools with small clearance angle ( $<10^\circ$ )
- Arc above  $120^\circ$  possible
- Only  $0^\circ$  rake angle possible (negative Rake must be pitched on shank)

**Dodec 2-point 110/100**



**Cubic 4-point 100/100**

