

"Prospective User Handbook"

Frequently Asked Questions about the **Ratnkanti Machine**"

1. Will the Ratnkanti machine only do faceting, or will it also remove extra pieces?

Yes, you can cut extra pieces from the bottom side first, and then you can further process for faceting with the same setup.

2. At which stage will the Ratnkanti machine be used?

This machine will be used for both Natural and Lab-Grown Diamonds (CVD). The makeable status, where extra portions from the crown side of the diamond are removed by normal laser sawing. This diamond has a marking done by the Planner machine, and this marking data is imported to Ratnkanti for the faceting process.

3. Can Ratnkanti perform 56 facets?

Yes, practically all 56 facets can be done by the Ratnkanti machine. After all, Ratnkanti imports diamond data in .OBJ file format from Planner machine. Ratnkanti follows the data and cuts the diamond accordingly.

4. After the 56-facet cut, can we take it for further final polishing? Is 8 or 16 or 56 facets more viable?

The Ratnkanti machine, in practical terms, functions as a Semi- Faceting or Semi-Laser Auto Blocking machine. It is recommended to allocate up to 90% of the faceting or modeling process to this machine, the remaining 10% to 15% for the final polishing stage. Even when cutting 56 facets with the Ratnkanti, a portion of the work must still be completed in the final stage, and the laser cutting process may require additional time. In contrast, when working with 8 or 16 facets, the laser cutting process is more efficient and the final stage remains equally time-consuming. After extensive consultations and discussions with manufacturers, the consensus is that opting for 8 or 16 facets is a more viable choice in Ratnkanti machine.

5. After the installation of the Ratnkanti laser faceting machine, what should we do with the Auto polishing machine? Can we still use it?

Yes, you can use the Auto diamond polishing machine. Since Ratnkanti is a Semi-Laser Auto Blocking machine, it will polish 85% to 90% of the diamond, with the

remaining 10% to 15% completed by the auto polishing machine. This will increase your production by 1.5 times.

6. After diamond faceting is done by the Ratnkanti machine, should further processing be done by the polishing workers too?

The choice between using an automated polishing machine or relying on manual worker depends on the specifics of your manufacturing system. You can choose for either approach, with the automated polishing machine offering cut, clarity & luster; while manual polishing is carried out by skilled workers. This will increase the worker's productivity by a factor of 1.5 to 2 times.

7. Is the maintenance for the Ratnkanti laser system the same as for a normal laser system, or is it different?

Ratnkanti laser system requires less maintenance compared to a normal sawing laser because Ratnkanti laser is Galvo-based, available in Green and IR laser. This design results in reduced friction in Axis movement. Ratnkanti's aesthetic and enclosure design is done in such a way that it does not require periodic alignment, resulting in lower maintenance compared to normal sawing laser.

8. What about laser reflection and Damage Ratio in Ratnkanti?

Although all the cutting fundamentals of Ratnkanti are different from ordinary laser machines, we provide preventive steps for laser reflection and damage. Therefore, Ratnkanti has a lower reflection and damage ratio compared to normal laser sawing machines.