

QUARTZ - Vortex Cut

96 index gear • 25 mm • 52.8 carats

Please read entire diagram before starting

PAVILION

P1 43.00° 96-6-12-18-24-30-36-42-48-54-60-66-72-78-84-90 Cut to a center point

PAVILION CONCAVE

CC1 44.00° 96-12-24-36-48-60-72-84

Motor plate turned to 40.00° using an 8 mm mandrel (mandrel is facing you). Cut until reaching girdle area; stop before girdle. The center point of the stone should be touching the right edge of the mandrel. Expect to be cutting into the center point. When all of the concaves are cut, it will create a new centerpoint.

CROWN

C1 and C2 should be equal in size.

C1 45.00° 96-6-12-18-24-30-36-42-48-54-60-66-72-78-84-90 Cut to a level girdle line

C2 41.50° Same as C1

CROWN CONCAVE

CC1 40.50° 96-12-24-36-48-60-72-84

Motor plate at 40.00° (same as the pavilion). Rough in table about half the width of stone. The left side of the stone's roughed in table should be touching 8 mm mandrel. Cut until reaching the girdle.

TABLE 00.00° Half the width of the stone

Due to the size of this stone, the rough cutting was done with 325 diamond paste (expect to use more than one syringe). 600 to 1,200 was used to remove the scratches. Polishing was done with cerium.

Because the concaves are deep, you cannot swing the quill towards you or you will start cutting on the edges of the concave. You have to raise the height of the mast above the concave, then swing the quill towards you.

This is a time consuming stone to cut, as the concaves are very deep and using Diamond Paste, as opposed to a diamond mandrel, takes a long time. However, a diamond mandrel may leave more scratches which may result in even more time. Run the machine clockwise -- it will help keep the paste where you are cutting. (When cutting a stone smaller than 15 mm, the size of the mandrel needs to be 4-6 mm. Ultra Tec now offers 4 mm copper and maple mandrels.)

