

# वज्रमणि<sup>™</sup>

Modern Way of Diamond Polishing



**“VAJRAMANI”** Machine is the most Feasible and Convenient ever which accomplished Rough Diamond polishing needs. It has been never easy to polish such a way which is now made easy with **“VAJRAMANI”** this New Innovative technology is more capable of doing simultaneous processes which makes ease of running Diamond Factory relatively with minimum operating cost and additional benefits are certain user to switch process from existing one. This is Modern Generation Technology that has been used in most of the modern Mechatronics & Software Embedded ideas that will give sustainability of the whole machine. Present Gem Diamond Manufacturing era is certainly entering into a new way of polishing phenomena by **“VAJRAMANI”**

**“TEAM DHARMAJ”** is taking Pride to address the Fundamental needs of Industry.

**Manufacturing Laser & Automation Solutions**

## Machine Specification

- Metal Grinding Wheel 9" + Vitrified Wheel 4"
- 6 Axis Robotic Arm with Precise Amplifier & Motors
- Induction Motor 0.5Hp 3 Phase AC Volt



## Computer Specification

Fan Less Embedded Computer, Processor Core i7 9<sup>th</sup> Generation, 8GB RAM, SSD 1TB HDD, Working Operating Temp. : 0 to 60 Deg.

## Electrical

AC 3 Phase 1Hp Machine Supply

## Chiller

Cooling Capacity 1200 Watt

Power Consumption 1Ø, 230 Volts, 8 Amps

## Dimension

Len. \* Wid. \*Heig. 1240mm x 1120mm x 1500mm  
Weight ~400kg

Single chiller compatible with 5 Machines.

### Modern Way Vs Conventional way of Diamond Polishing

Modern way	Conventional way
Always Cool Cutting	Diamond gets heated during Cutting
Non Grain seeking Machine	Requires Grain seeking for Polishing Diamond
Uniform few grams Pressure	Variable few 100s grams Pressure
Controlled by AI	Controlled by HI
One machine for Round & Fancy	Different Polisher for Round & Fancy
Scaife doesn't requires Grinding & Lapping	Requires periodically Grinding & Lapping
Same Arm for All size of Diamond	Different Tangs-Dops-Tools for All sizes of Diamond
Defined & set formula for Stressed/Tension Diamond cutting	Undefined formula for Stressed/Tension Diamond cutting
Top-Bottom matching Facet	Mismatching facet

# Salient Features

- Multi Cycle Faceting Available
- Remarkably Controlling Damage
- Amazingly Smooth Surface with Fast Cutting
- Capable for Simultaneous Process
- Auto Compatible with Sarine 8.0 Advisor & Helium Carbon
- Table on Angle Cutting instead of Zero Degree
- Robust & Long Life Machine
- Smartly Automated System
- Offers Round & Fancy Shapes
- Consistency in Accuracy
- Aesthetic Look & SS Enclosure



Cutting on Precision Calculation

## **P**roduction output for 8 Facet\*

- 1-3 Carat of Powder loss/24 hrs - High stress type stone.
- 3-4 Carat of Powder loss/24 hrs - Semi stress type stone.
- 4-7 Carat of Powder loss/24 hrs - Non stress type stone.

## **P**roduction output for 16 Facet\*

- 1.00ct to 2.15ct of Powder loss/24 hrs - High stress type stone.
- 2.75ct to 3.75ct of Powder loss/24 hrs - Semi stress type stone.
- 3.75ct to 6.75ct of Powder loss/24 hrs - Non stress type stone.

Production may differ on size of table cutting as well as size of overall makeable diamond.\*

## **F**ancy Diamond blocking Facet as per AZIMUTH. Leo/GIA

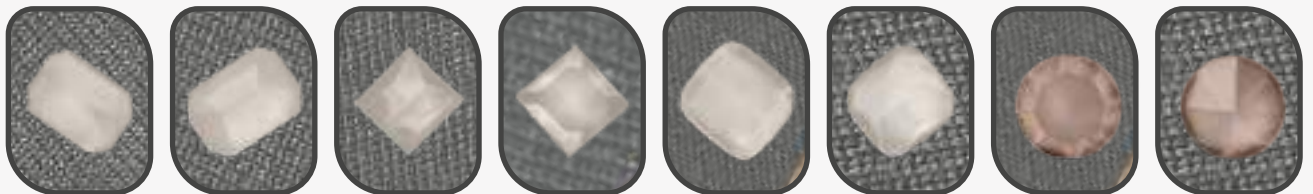


**Marquise**

**Oval**

**Pear**

**16 Facet Round**



**Emerald**

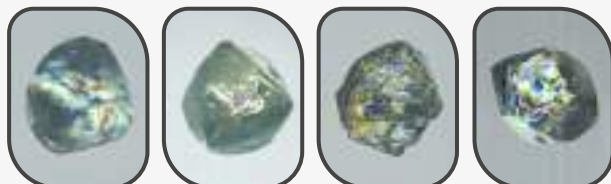
**Radiant**

**Cushion**

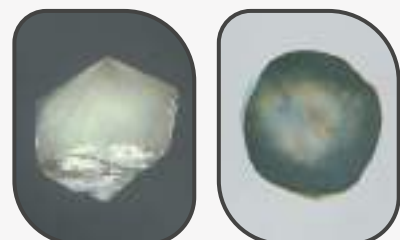
**Round**

## **S**tressed Diamond

Ideal machine for stressed Diamond.



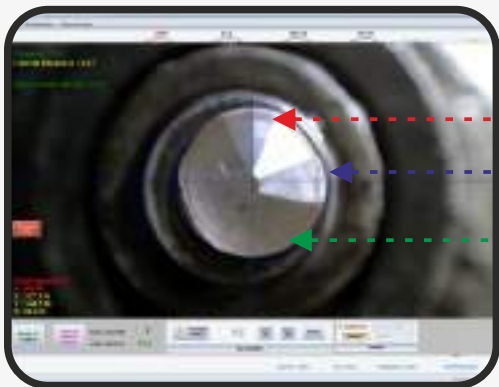
## 16 Facet on Stressed Diamond





Normal Stone - 20 to 30 grams weight applied on Diamond

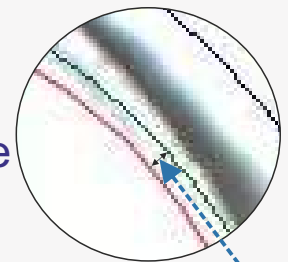
Stress Stone - 10 to 20 grams weight applied on Diamond



Polish Diameter

Outer Surface of Girdle

Actual Diameter



100 Micron

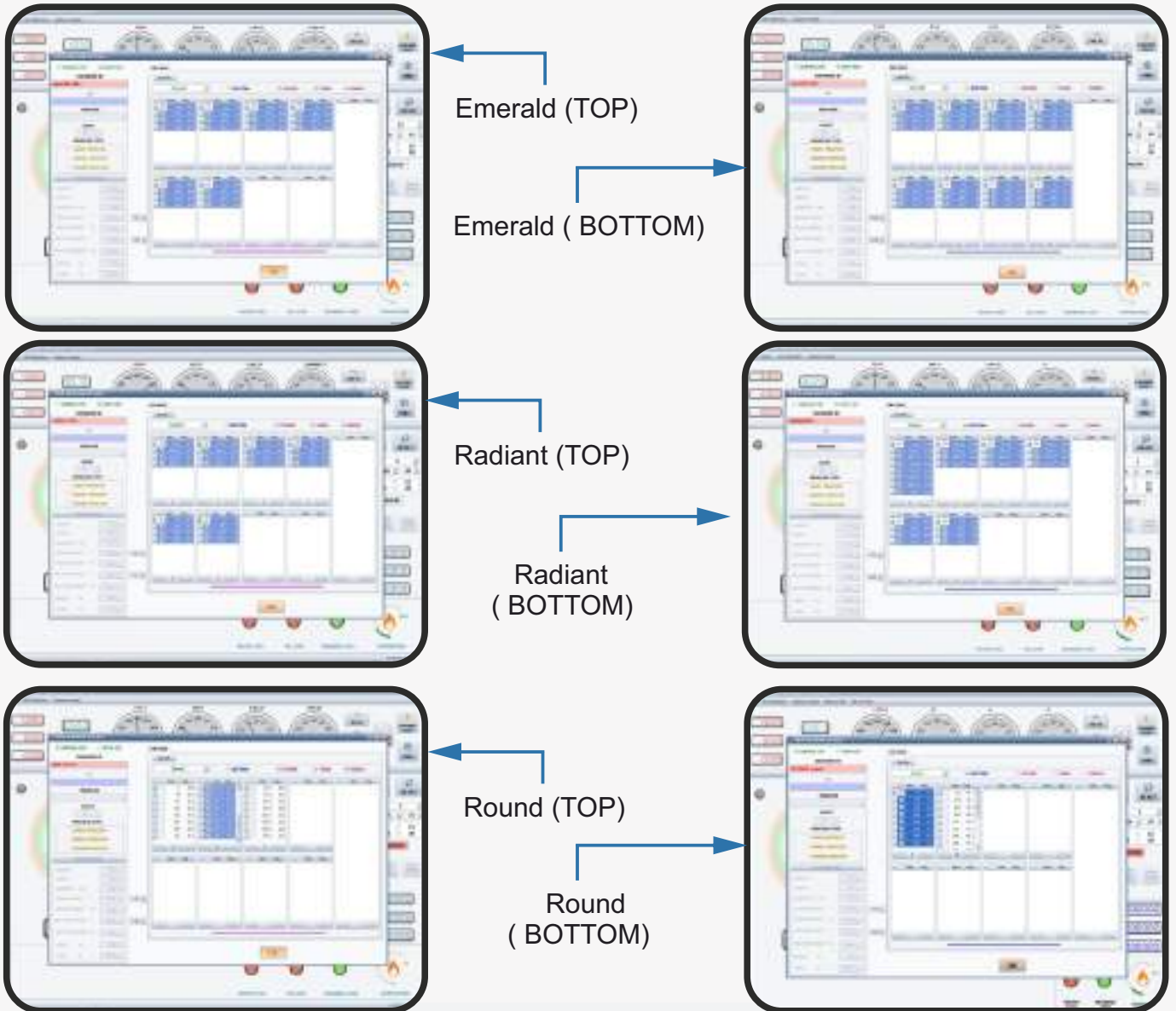
Chamber Temperature



Angle Variation -  $0.5^{\circ}$  -  $1^{\circ}$

In Ideal operating & Sticking method

# .OBJ File Synchronization from Sarine 8.0 Advisor & Carbon Helium



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