

INDUSTRIAL TRADING CENTER

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ABOUT US:-

- **ITC (INDUSTRIAL TRADING CENTER)** is one of the leading providers and manufacturers of 4P DIAMOND CUTTING MACHINE in Surat.
- We have reached the pinnacle of success and earned a name as an eminent manufacturer and supplier of Diode Laser Sawing Machine, 4P Diamond Cutting Machine,. Our offered machine is precisely fabricated by our adroit professionals by making use best grade of components and cutting-edge technology.



4P DIAMOND CUTTING MACHINE

Quality is our arm

WHY ITC?

- **INDUSTRIAL TRADING CENTER** Surat, offers 4P DIAMOND CUTTING MACHINE. This offered machine is strictly tested by our skilled quality inspectors, against set industrial standards to deliver highly demanded sawing machine.
- Besides, our esteemed clients can avail this machine from us at market prices. We Provide fastest service to our client 4P DIAMOND CUTTING MACHINE. We provide entire optics of laser machine manufacturing.
- We are a unique entity in the industry, actively committed towards manufacturing and supplying an optimum quality range of 4P DIAMOND CUTTING MACHINE ensure the optimum performance, this machine is stringently tested by our quality experts on various quality parameters.



LAYOUT OF MACHINE

GENERAL FEATURES:-

- Excellent Precise and Accurate Mechanism
- It can work with Lamp Pump, Diode Pump and Fiber Laser
- From table as well as bottom side bruiting facility
- No need to carry out table smoothing operation
- Greater Yield: Recovery of extra pieces, which leads to higher yield
- Smart Laser cutting processing using Smart Set
- To reduce breaking using bending
- Smallest Machine
- Operator Friendly
- Saves up to 50% in electricity bill
- Accurate designed Structure for save more space and Hassle free service
- Robust and vibration free
- Perfect sealed laser rail to protect optics & Diode from dust for enhances life.

HIGHLIGHTS:-

- 4 Process Marquise & Pear Shape
- Hi-Tech or USA made Diode module (NG)
- Power control interface with software
- Various Shape Cutting
- Bending facility
- Use USB Motion Control Card
- Can work with any motion control card based Laser System using advance electronics kit
- More than 100 Installations
- Power control interface with software
- Top Blocking

SYSTEM SPECIFICATION:-

Description	Parameters
Laser	ND Yag Diode
Wavelength	1064mm
Transverse Mode	TEM00
Switched Power	20 Watt
Frequency Range	0 to 50 KHz

ELECTRIACAL SPECIFICATION :-

Description	Parameters
Power Requirement	220 VAC, 50 KHz
Power Consumption	3KVA 15 Amp

CNC SYSTEM SPECIFICATION:-

Description	Parameters
Axis Travel	70 mm x 70 mm x 70 mm
Resolution	2 Micron
Accuracy	2 Micron / 25 mm
Drive	Servo and Hybrid Servo

TECHNICAL SPECIFICATION:-

Description	Parameter
Laser Source	75W CW
Laser Type	DPSSL
Wave Length	1064 nm
Beam Mode	TEM00
Working Power	4-18 watt
Resolution	± 2 micron
Repeatability	± 2 micron
Accuracy	± 1 micron
Temperature/Humidity	20-30/<60% Celsius

Description	Parameter
Drive Type	AC Servo/DC Servo/Hybrid Servo
Power Supply	1 Phase, 15 AMP
Power Consumption	1.7 KW
Height of machine	57 inch
Length of machine	27 inch
Width of machine	22 inch
Coolant Requirement	4-6 lit/min
Computer System	Intel core 2d, 17" LCD

The background features a large, light blue, stylized 'S' shape that curves around the central text. In the center, there is a faint, light gray silhouette of a person with their arms raised. At the top of the page, there are several overlapping, curved bands in shades of green, yellow, and red. The overall design is clean and modern.

Polari scope (Tension Machine)

Quality is our arm

Details:-

The polariscope may be one of the most underestimated tools in gemology. Most gemologists use it to quickly determine if the stone at hand is isotropic or anisotropic or, at best, to determine the optic character of gemstones. With some small additions, one can determine both optic character and the optic sign of a gemstone. It is also the preferred tool -- next to the microscope -- for separating synthetic amethyst from its natural counterparts (although with recent synthetics that may prove difficult).

In addition, the polariscope may be very useful for distinguishing solid inclusions from negative inclusions as well as for spotting polysynthetic twinning.



A polariscope uses polarized light for gem identification. It consists of two polarized filters, one on the top and one on the bottom of the instrument as seen in the picture to the right. Both the polarizer and the analyzer have their own vibrational planes. When the vibrational plane of the polarizer is at right angles to the vibrational direction of the analyzer, the field between them remains dark. This position is known as the "crossed position". In this position, gems can be tested to determine if they are:

- isotropic
- anisotropic
- anomalously double refractive or an
- anisotropic aggregate

The polarizing filters of this instrument are made of polarizing plastic sheets (polyvinyl alcohol containing diachronic molecules - stretched polymers). Older models were created with microscopically oriented crystals of iodoquinine sulfate (herapathite) or tourmaline plates.

Operation of the polariscope and possible observations:-

With the polarizer and analyzer in crossed position, turn on the light source and place the gemstone on the rotating platform just above the polarizer (this platform might not always be present, in which case you use your tweezers).

Observing the gemstone through the analyzer while slowly turning the stone will give you 4 possibilities.

1. The stone appears dark throughout a 360° rotation.

The stone is isotropic (single refractive).

2. Throughout a 360° rotation the stone blinks 4 times, light and dark.

The stone is anisotropic (double refractive).

3. The stone will appear light all the time.

The stone is a microcrystalline or cryptocrystalline aggregate (like, for instance, chalcedony).

4. The stone will show anomalous double refraction (ADR).

It is isotropic (single refractive).



**THANK
YOU**

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