LASER TECH

SYSTEMS AND SOLUTIONS

SERVICE BEFORE SALES

QuickMark Series

CO2 Laser Marking Machine

COMPANY PROFILE:

Laser Tech Systems and Solutions was founded by Mr. Rajiv Kumar with a group of Technocrats in 2021, with the idea of creating a large umbrella organization to assist and serve the growing Indian Laser Industry and to help the market with its years of experience in the field of Lasers and its applications.

We represent many global manufactures, covering a wide range of solutions Laser Marking, Laser Welding, 2D Laser Cutting, 3D Laser Cutting, Laser Cladding, Laser Hardening. Our Laser Solutions can process a wide range of materials like Metal, Paper, Acrylic, Wood, Textile, Leather, Plastic and many more.

Our main aim is to serve our customers with cost effective and innovative solutions with our utmost know how of Applications and help them to fulfill their objectives.

Our aim is to provide the best solutions to all our customers with best systems and economical prices. We believe in **SERVICE BEFORE SALES**...We provide industrial solutions for Laser for Metals, non-metal laser cutting/engraving machines, Galvo based solutions, Laser Marking, Laser welding, 2D laser cutting, 3D laser cutting, Laser cladding etc.

LTSS Service and Support:

Laser Tech Systems and Solutions supports installation, commissioning, and training for its customers. Dedicated Laser Systems available for in-house demonstration, applications and software training. Specialized engineers are available to provide online and telephonic support.

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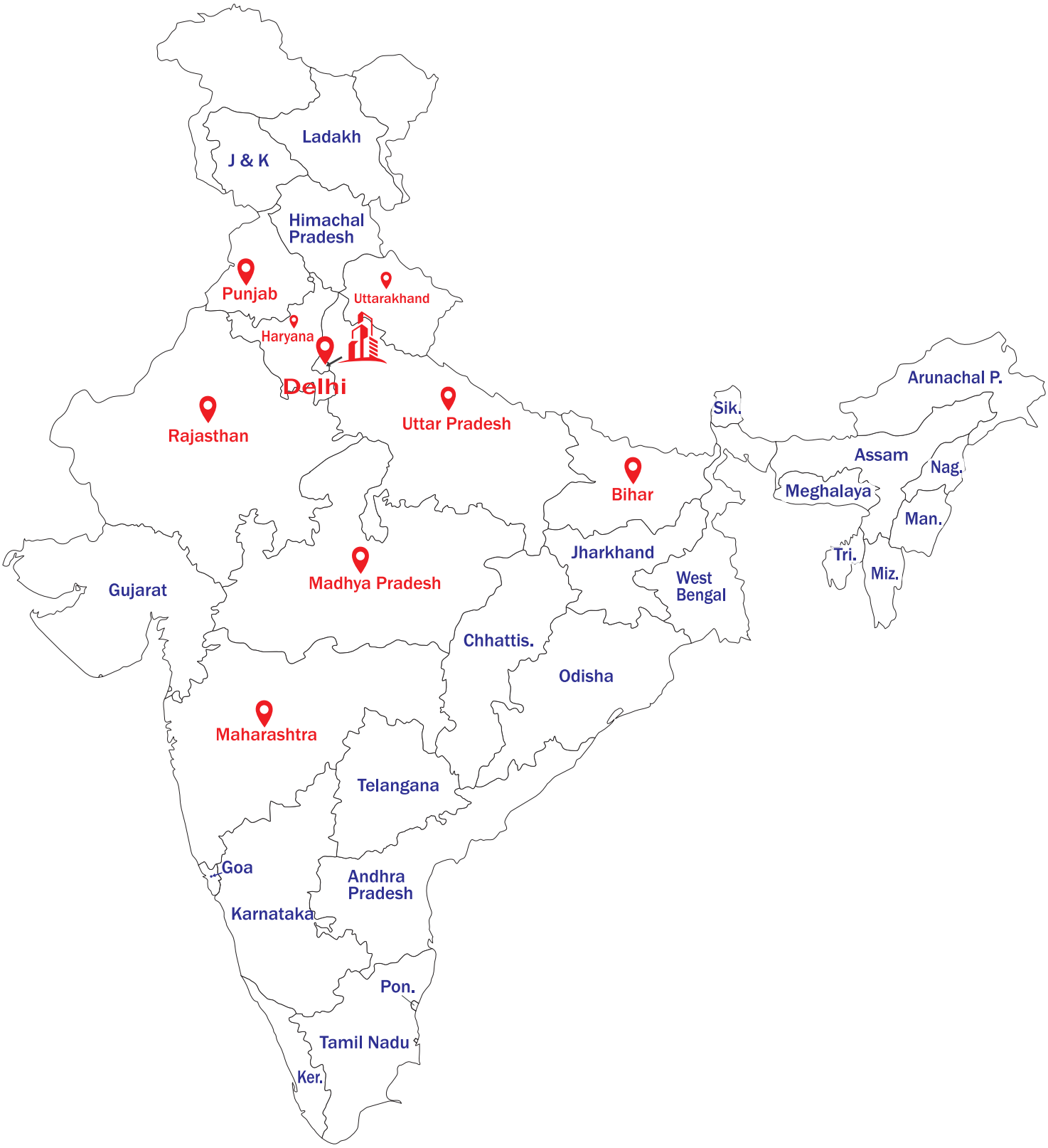
We proudly say that because of our team's dedicated efforts and our motto " SERVICE BEFORE SALES" we have a chain of happy customers related to various industries using our Laser machines in India.



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From the Galaxies of opportunity **QuickMark series** bring the best configured/Engineered machine for the apt applications of Laser Marking.

QuickMark Series - CO2 Laser Marking Machine

The CO2 laser marking machine's uses a sealed tube containing a mixture of CO2 to generate Laser. This machine is used for non-metallic surfaces like glass, wood, acrylic, and plastic. Its industrial uses include marking the surface for identification, date stamping, batch coding, gift items etc.

Why Choose A CO2 Laser Marking Machine?

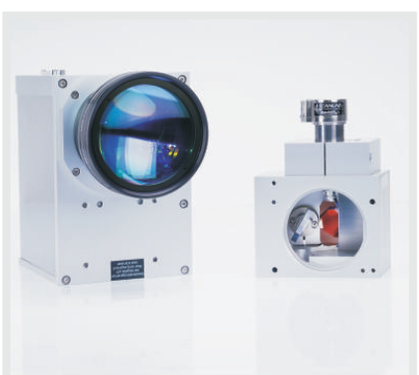
For high-quality and high-precision marking and engraving needs on non-metallic surfaces. It is quite an affordable and time-efficient machine. So, you can expect from the CO2 lasers fast piercing times and cutting-edge technology for materials above 5mm. It is best suited for non-metallic materials like fruits, wood, leather, plastics, garments, and similar others.

Note: *Machine photos are for reference Purpose only. The machine model & colour may vary as per the availability.*

INGENIOUS DESIGN - FULL SHEET METAL BODY

The machine is completely made from the metal sheet, with optional full cover. This gives aesthetic look along with the stability over the years.

FEATURES & ADVANTAGES



COMPACT HEAD	DURABLE	HIGH SPEED
LOW CONSUMPTION	ZERO MAINTENANCE	EZCAD ORIGINAL SOFTWARE

QuickMark Series

CO2 Laser Marking Machine

A CO2 laser marking machine utilizes a carbon dioxide laser to create permanent markings on a variety of materials. This type of laser operates in the infrared range, typically at a wavelength of around 10.6 micrometers. CO2 lasers are well-suited for marking non-metallic materials, including wood, glass, plastics, leather, and certain types of ceramics. The machine works by emitting a high-intensity laser beam through a series of mirrors and lenses, focusing it onto the surface of the material. The focused laser beam interacts with the material, causing it to undergo a process known as thermal disruption or material removal, resulting in a visible and durable mark. CO2 laser marking is widely used for applications such as product labeling, coding, engraving, and creating intricate designs on various items. The versatility of CO2 laser marking machines makes them popular in industries such as packaging, textiles, woodworking, and electronics.

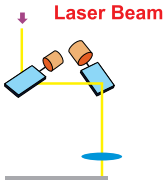
FEATURES OF LASER MARKING

* The CO2 laser marking machine provides high efficiency and beam quality to mark and engrave non-metallic surfaces.
* Machine's long life is about 25,000 Hours.
* A wide variety of non-metallic materials are available, including textiles, plastics, foils, stone, wood, acrylic, glass, etc.
* The CO2 laser marking industrial uses are largely focuses on electronic components, food, drug, or alcohol packaging.
* Additionally, it does high-quality marking and engraving work on electrical appliances, mobile communications, building materials needs, and many others.
* You can engrave and design logos, dates, and many others.
* The CO2 laser marking machine has high stability and a fast marking speed and it meets the demands of non-metallic highly precise marking and engraving works.

CO2 LASER VERSES FIBER LASER

	Co2 Laser Marking Machine	Fiber Laser Marking Machine
Emission Type	Co2 gases tubal emersion	fiber beam emission
Material Type	non-metallic materials: Leathers, glass, plastics, textiles, acrylic, wood, and stone.	Painted Acrylic, Stainless Steel, Carbon Steel, brass, Aluminum, Copper, Aerosol Glass, PVC, etc.
Best Industrial Uses	Marking and engraving of pharmaceutical, PVC pipes, building materials, mobile electrical appliances, etc.	Fiber lasers also have a growing demand for industrial cleaning applications such as removing rust, paint, oxides, and other contaminants.

A CO2 laser marking machine is greatly designed to focus on and meet high-precision marking and engraving needs. And, for industrial growth and precise engraving and marking configurations, both the CO2 and fiber laser marking machines are quite durable, cost-effective, and time-efficient.



LASER MARKING VS CONVENTIONAL METHODS

Methods/Parameter	Laser Marking	Dot Pin	Chemical Etching	Ink Jet	Mechanical Stamp
Productivity	High	Poor	High	High	High
Quality / Durability	High	Low	High	Poor	High
Flexibility	High	Avg	Low	High	Low
Cost per part Variable	Low	High	High	Low	High

Advantages of CO2 Laser Marking Machine

High Precision and Accuracy

CO2 laser marking provides high levels of precision and accuracy in creating markings and engravings. The focused laser beam allows for fine details and intricate designs, making it ideal for applications that require precise and detailed marking.

Versatility in Material Compatibility

CO2 lasers are well-suited for marking a wide range of non-metallic materials, including wood, glass, plastics, leather, paper, and certain ceramics. This versatility makes CO2 laser marking machines suitable for diverse industries and applications.

Non-Contact and Non-Destructive

Co2 laser marking is a non-contact and non-destructive marking process. The laser beam does not physically touch the material, minimizing the risk of damage to delicate or sensitive surfaces. This is particularly advantageous for marking electronics, glass, and other fragile materials.

Permanent and Durable Markings

The markings created by Co2 laser machines are permanent and durable. The laser beam interacts with the material, causing it to undergo a color change or material removal, resulting in long-lasting and resistant markings that withstand environmental factors.

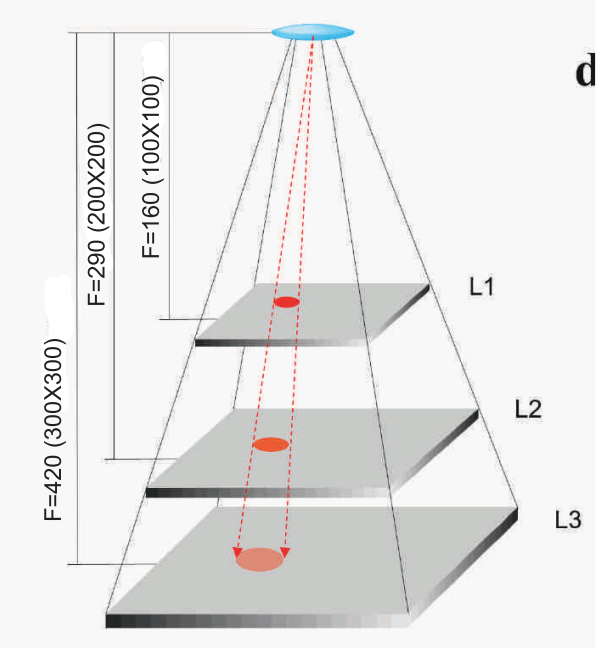
High-Speed Marking

CO2 laser marking machines can achieve high marking speeds, making them efficient for industrial production environments. The rapid processing capability allows for quick and precise marking of large batches of products.

Low Maintenance Requirements

CO2 lasers have relatively low maintenance requirements compared to other marking technologies. The sealed design of CO2 lasers reduces the need for frequent maintenance, contributing to the overall cost-effectiveness of these machines.

WORKING AREA SELECTION



Increasing :

1. Spot Diameter
2. Marking Speed
3. Marking area

Decreasing :

1. Power density

Working Area Range - 100X100 | 200X200 | 300X300 | 400X400 | 600X600

Material

Non-metal materials, such as, wood, paper, leather, cloth, organic glass, resin, acrylic, woolens, plastic, rubber, ceramic, crystal, jade, bamboo.

SPECIFICATION

Model	Co2 QuickMark	**Min. Line Width**	0.12mm
Max. Average Power	80W / 100W	**Repetition Accuracy**	±0.01mm
Wave Length	10.64um	**Operating System**	WindowsXP/2000/98
Output Stability(8h)	±5%/ ±10%	**Cooling System**	WindowsXP/2000/98
Marking Area	175mmX175mm 300mmX300mm	**Cooling System**	Air cooling(10W/30W/60W)
Output Power	10% ~100% continuous adjustable	**Environment Temperature**	15ºC~30ºC
Output Frequency	0KHZ~200Khz continuous adjustable	**Humidity**	45%-75%
Marking Speed	≤ 3m/s	**Power Voltage**	220V/50Hz/60Hz/10A
Marking Depth	≤1mm /≤4mm	**Overall Power Consumption**	4.0KW (100W)
Character Size	0.6mm	**Supported Format**	BMP,JPG,PNG,TIF,PCX,TAG, IOO,GIF,PLT

CO2 Laser Metal Tube

Metal laser tubes use a metal core/tube to contain the gas mixture as opposed to a glass tube. Ceramic laser tubes use a ceramic core to hold the gas. Instead of using high voltage DC, the metal and ceramic laser tubes use a technique called "radio frequency" to stimulate the gasses to produce the beam. Using radio frequency has advantages over DC voltage, including less energy consumption, better control of the engraving process and a longer lifetime resulting in a higher quality laser beam output over a longer period of time. Metal and ceramic laser sources can be air cooled or water cooled depending on the wattage of the laser. Most wattages ranging from 30-120 watts are air cooled.

Because metal and ceramic sources use radio frequency to generate the beam, the radio waves can be cycled on and off very quickly resulting in excellent pulsing, thus rendering excellent raster engraving quality, a characteristic which is very important for photo engraving and fine detail work. The metal laser source has electrodes that generate the radio frequency mounted on the inside of the metal core. Ceramic sources have electrodes mounted on the outside of the source due to the fact that RF can pass through the ceramic. Having electrodes outside of the gas mixture can yield a better quality laser beam and less contamination of the gasses.

CO2 Laser Glass Tube

- Long operational life of the laser tube: near 45 000 hours or 5-7 years of the constant running.
- The sealed metal housing enables the laser tube resistance to mechanical, thermal and heavy influencing factors of the production environment.
- Air cooling of the laser tube
- High quality of the laser beam (parameter M2 < 1.2)
- Stable parameters of the laser's output power +- 2-5%
- High pulse frequency of laser up to 20kHz increases laser engraving speed up to 200 cm per second.
- The laser tube supports the photo engraving mode with color intensity of 256 shades of gray and automatic change of output power in accordance with the gray level.
- The laser tune supports the seals and stamps production mode.
- High quality of laser engraving and cutting

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OUR SYSTEMS : Capabilities for laser engraving on metal have been utilized for diverse industries in the production of a wide variety of products such as:

- AEROSPACE
- AUTOMOTIVE
- DENTAL
- GIFT & CUSTOMIZATION
- JEWELLERY
- ELECTRONICS
- SOLAR INDUSTRY
- LIGHT & ELECTRICAL INDUSTRY

Laser Tech Systems and Solutions indulge into long time in laser industry and with our " KNOW HOW" experience the laser marking selection has become easier, the major challenge is always been right selection of machines.

OUR CO2 LASER ENGRAVING MACHINE FOR NON-METAL CAN MARK ON SUCH SURFACES AS BELOW

Rubber	Wood	Acrylic	Leather	Paper
Plastic	Cloth	MDF	Rexine	Sticker

PAINTED OR COATED MATERIALS

Surgical instruments	Firearms and accessories	Electronics	Cooking equipment
Construction tools	Cutting tools	Cutlery	Pipes, tubes, and valves
Drills	Automotive equipment	Kitchen appliances	HVAC systems

PLASTICS

ABS	Polyethylene	Glass Filled	Various Other Plastics

PAINTED / COATED / ANODIZED

Anodized Aluminium	Painted Materials	Black Oxide	Various Other Coatings

CARBIDE & SYNTHETICS

Carbide	PCD	Other Synthetic Materials

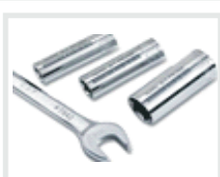
PAINTED OR COATED MATERIALS

PAINTED / COATED / ANODIZED

Rexine

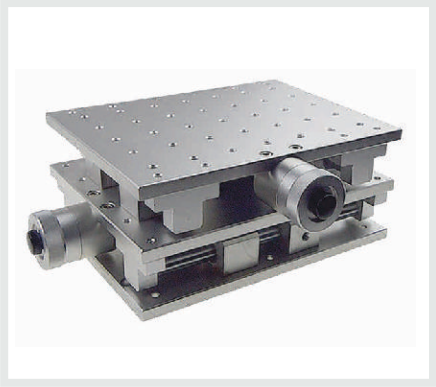
PLASTICS

CARBIDE & SYNTHETICS



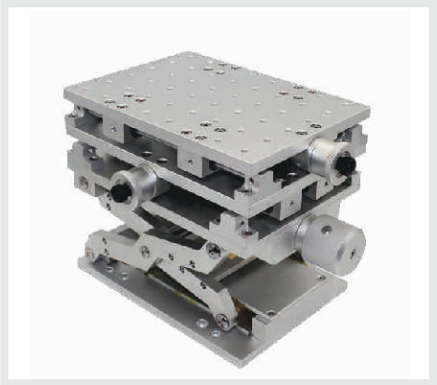
OPTIONAL ACCESSORIES

Induction Table

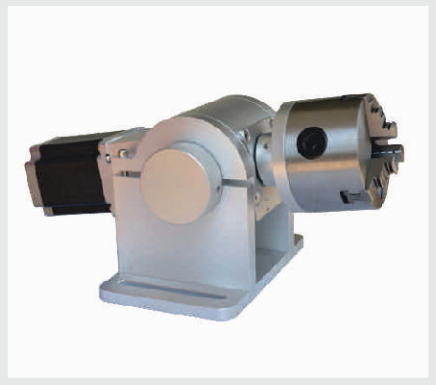


2D Marking Moving Table

Metal Cutting Fixure



3D Marking Moving Table

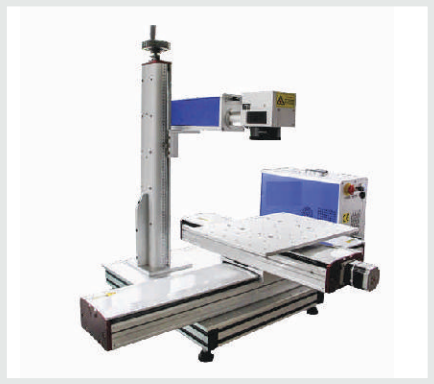


Rotary-Attachment

Conveyor Table

Enclosure Systems

Industrial Fume Extractor



2D Electric Moving Table

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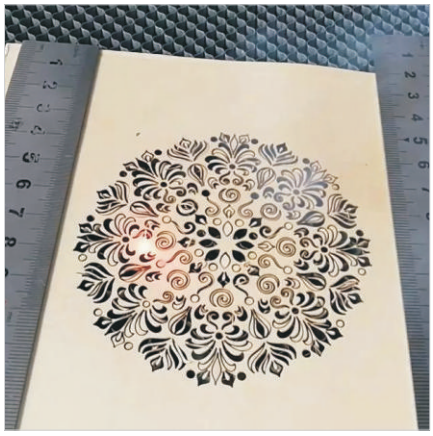
CO2 Laser Marking Samples

MDF

Rubber

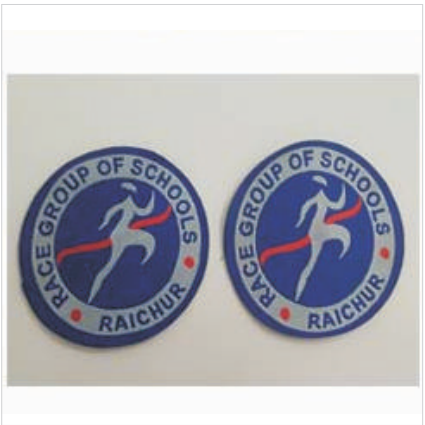
Wood



Paper

PVC

Cloth



Foam

Leather

Acrylic

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