



The pioneer in  
**Carbon Technology**  
in India



**TIRUCARBON**

[www.tirucarbon.com](http://www.tirucarbon.com)



# TIRUPATI CARBON PRODUCTS PVT LTD

## *About Tirupati Carbon*

Tirupati Carbon Products Pvt Ltd (TCP) is one of the premier manufacturers and exporters of Electrical carbon and Mechanical carbon products in India.

### **Electrical Carbon**

Our Electrical carbon grades include carbon brushes, carbon blocks, tablets, brushes, current collectors and sliding contacts. Our carbon brushes are designed for maximum performance on all types of Automobile Motors, Power Tools, Micro Motors as well as large Industrial Motors. We have developed wide range of grades in **Metal Graphite, Silver Graphite, Electrographite, Natural Graphite, Carbon graphite and Resin Bonded**, which are best suited to meet even the most demanding requirements. Our products meet strict international quality standards at competitive pricing.

### **Mechanical Carbon**

Our **Mechanical Carbon grades** include **Seal rings** for Axial Face Seals, **Bearings** for Pumps and Industrial equipment, **Valve Seats** for Metering in gasoline pumps, **Thrust pads, Vanes and Rotors** for pumps and compressors.

The machining unit in Jaipur is equipped with the latest state-of-the-art machines to offer finished sizes.

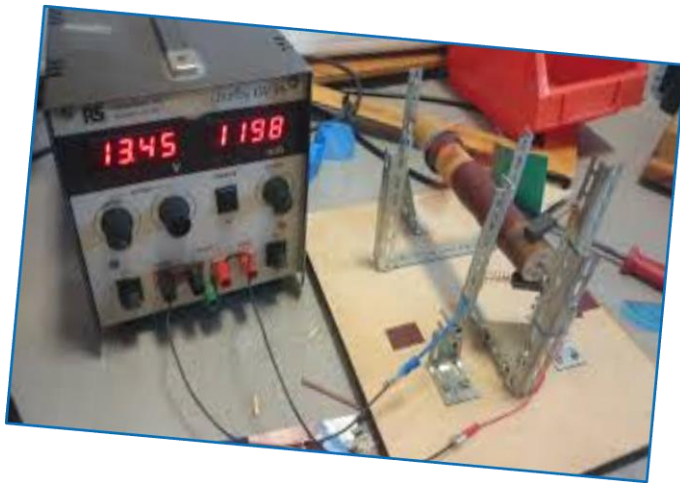
The company has state of the art **R&D** center in Jaipur. Today, the company's products are relied upon for various applications in several major industries.

TCP have always stood for brilliant vision leading to timely diversification, expansion, intense research and innovation. TCP has always considered commitment to customer needs and responsible business conduct as its mission.

## Manufacturing facilities and R & D Centre, Jaipur







# electrical carbon



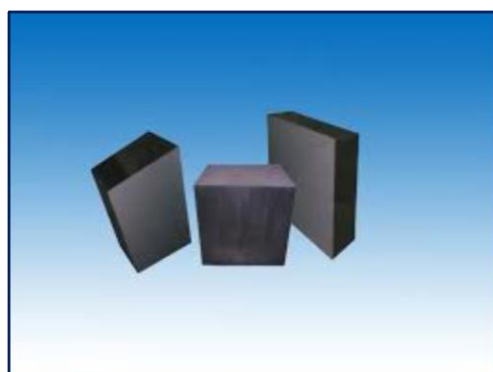
## Brush, Blocks, Tablets and Current Collectors



# electrical carbon



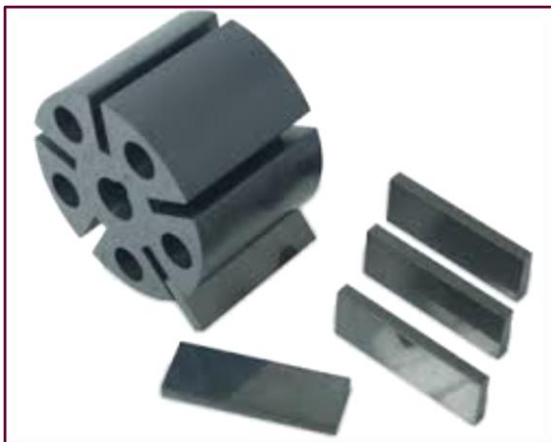
## Brush, Blocks, Tablets and Current Collectors



# mechanical carbon



## Bearings, Rings, Thrust Pads and Vanes

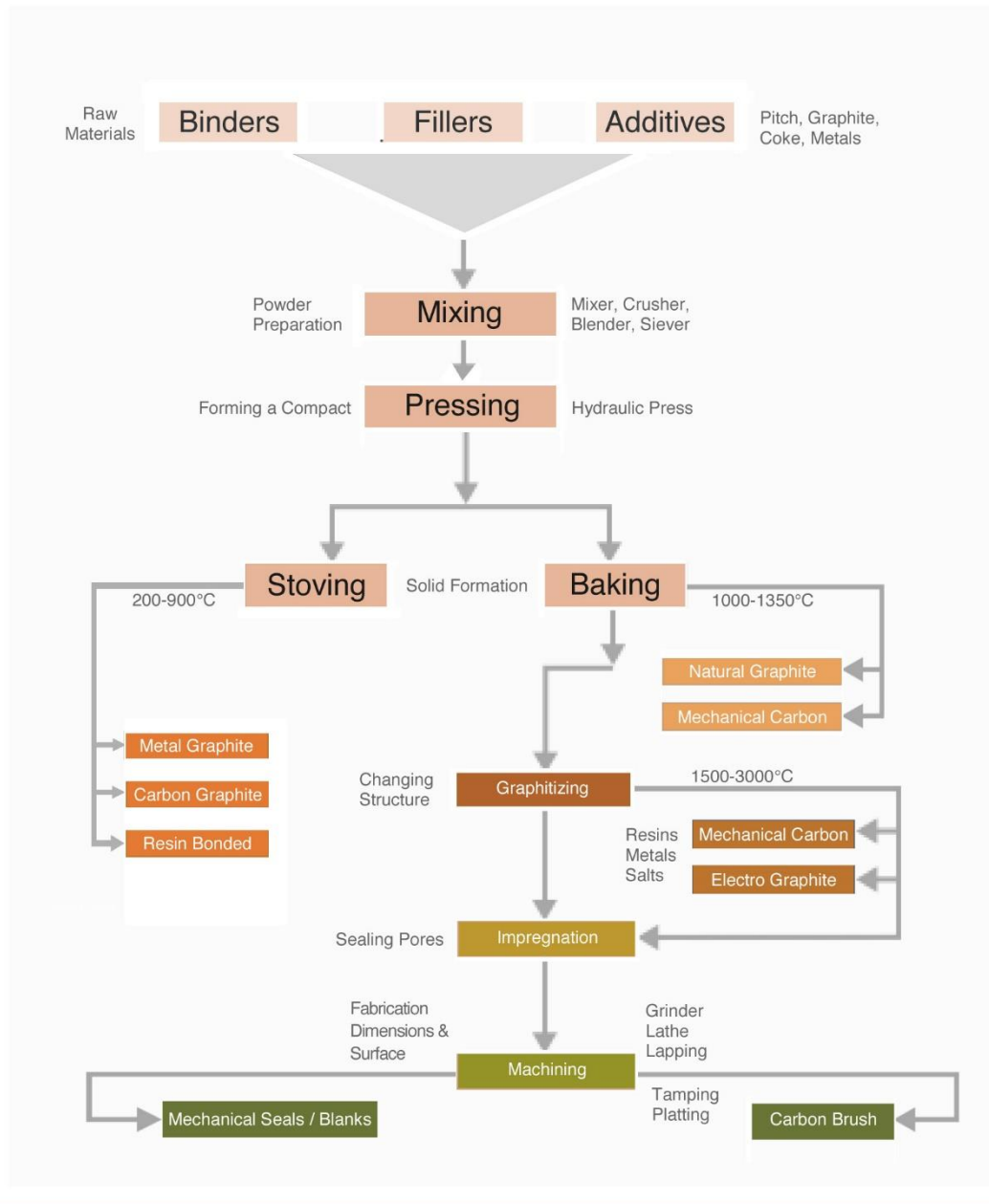






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## MANUFACTURING FLOW CHART ELECTRICAL & MECHANICAL CARBON





### **Raw material processing (Powder preparation)**

Raw materials are procured from approved sources. The raw materials are periodically checked at laboratories to ensure consistency in end products manufactured. The checking involves thorough tests for physical and chemical properties.

### **Mixing**

Different mixing technologies are used depending upon the grade to be produced.

### **Pressing**

Hydraulic Presses are capable of producing high-quality pressed Carbon components. These presses exert uniform pressure and good compacting. In addition to these heavy-duty presses, several smaller presses are also used in the press shop to produce smaller components.

### **Baking**

A state-of-the-art furnace using the latest hot air flow technology is used for baking of pressed Carbon components.

### **Graphitizing**

After being baked, Carbon components undergo the graphitizing process in special chambers where they are heated to 1500-3000°C. During this process, the Carbon undergoes structural changes.

### **Impregnation**

During this process, the Carbon block / blank is subjected to filling of cavities and pores with suitable material injected under high pressure.

### **Machining**

The finished Carbon block / blank is cut to the appropriate size and machined to obtain good surface finish.



### **Test laboratory**

During their manufacture, Carbon components undergo various tests.

- Raw material of various grades is tested for its purity and composition.
- Carbon blocks, after the impregnation process, are tested for strength, binding structure and other mechanical properties.
- After manufacturing, Carbon brushes are tested for various electrical properties.

### **Stringent quality assurance**

All the mechanical & electrical products strictly undergo stringent quality control at various stages viz. contact resistance test, mV drop test and pull-out strength test for brushes, pressure test, light band and surface roughness test for mechanical carbon products.

### **End products**

Using state-of-the-art machinery, carbon brushes, current collectors, seals, bushes, vanes, thrust pads, gland rings, steam joints are manufactured from various grades of Carbon to suit a variety of applications.

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