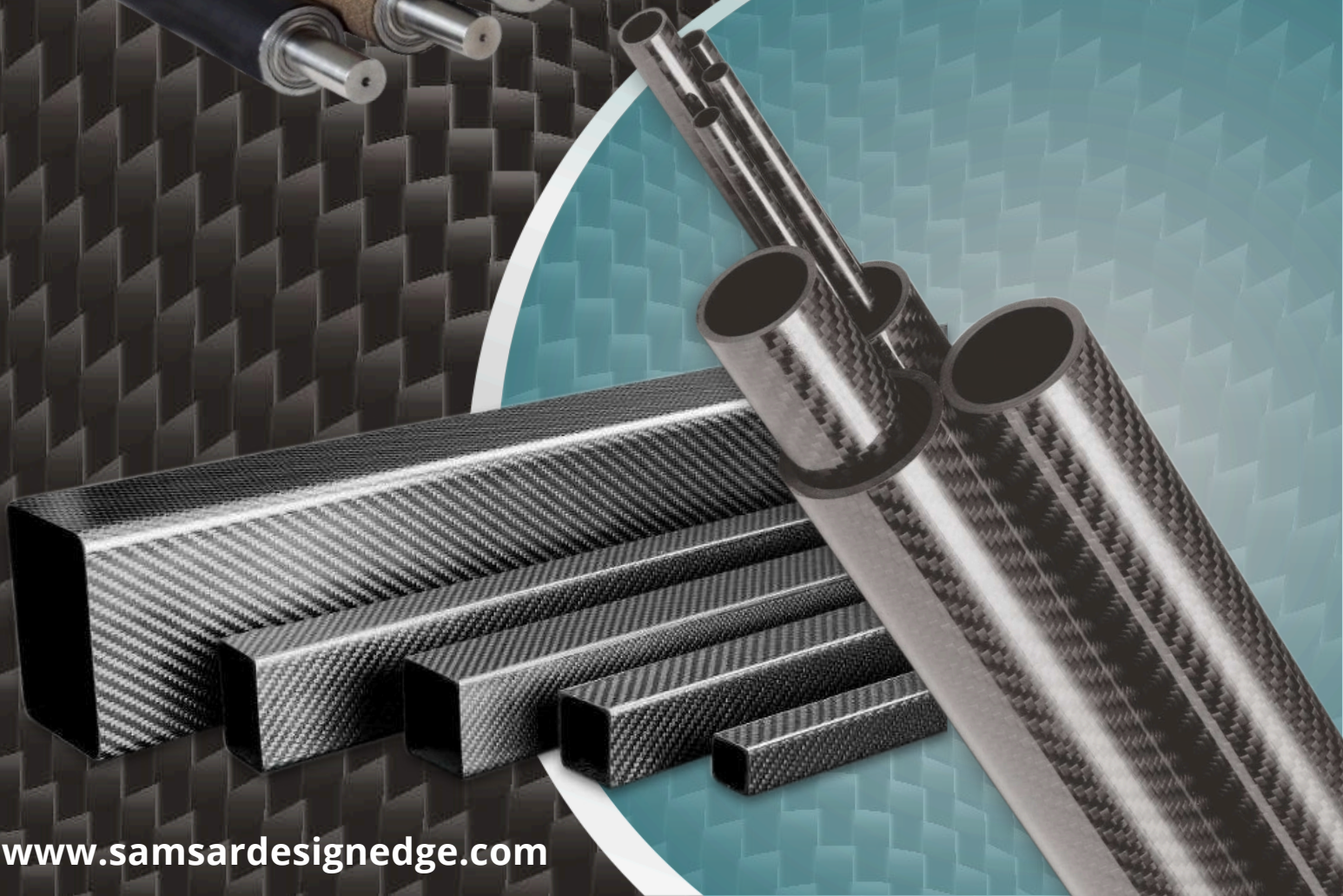
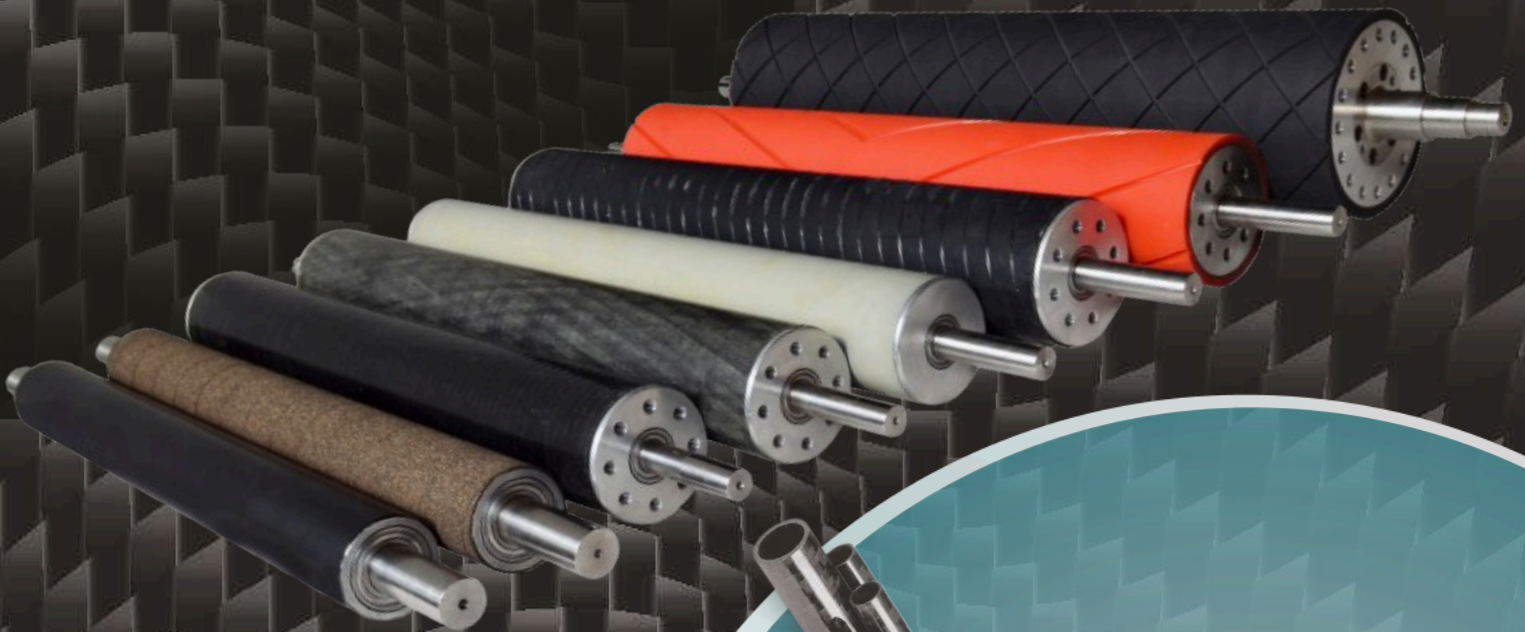
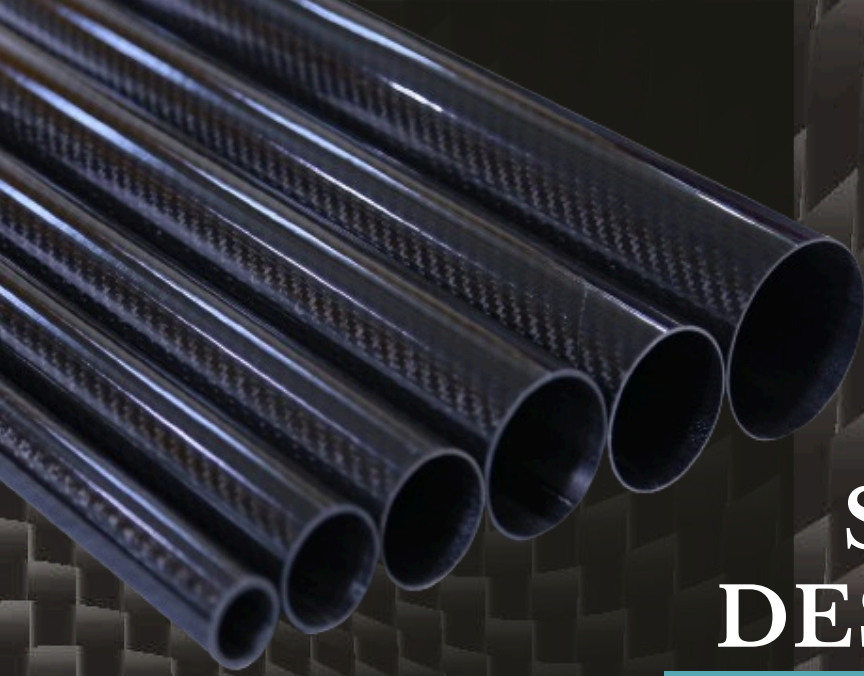




Gear Up For Industrial Excellence

# SAMSAR DESIGN EDGE



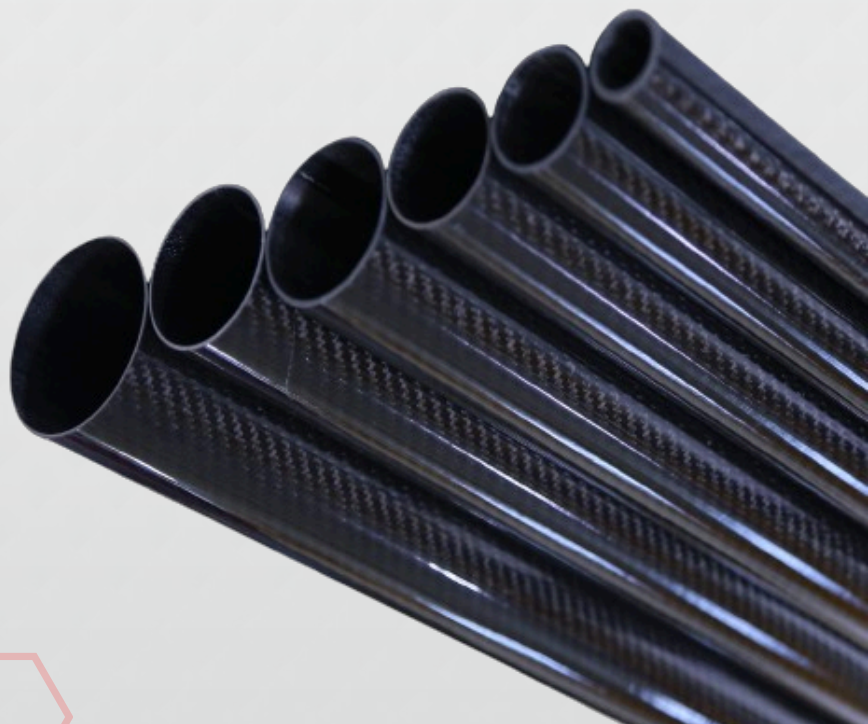
# CARBON FIBER TUBE

These carbon fiber tubes are crafted through the process of multiple wrapping using twill and/or unidirectional fabrics.

These tubes are well-suited for various applications demanding exceptional bending stiffness and minimal weight, including automation robotics, idler rollers, and UAV components.

## Key Features

- Made of Carbon Fiber material
- High Strength and Lightweight
- Corrosion Resistance
- Non Thermal Conductivity in forms

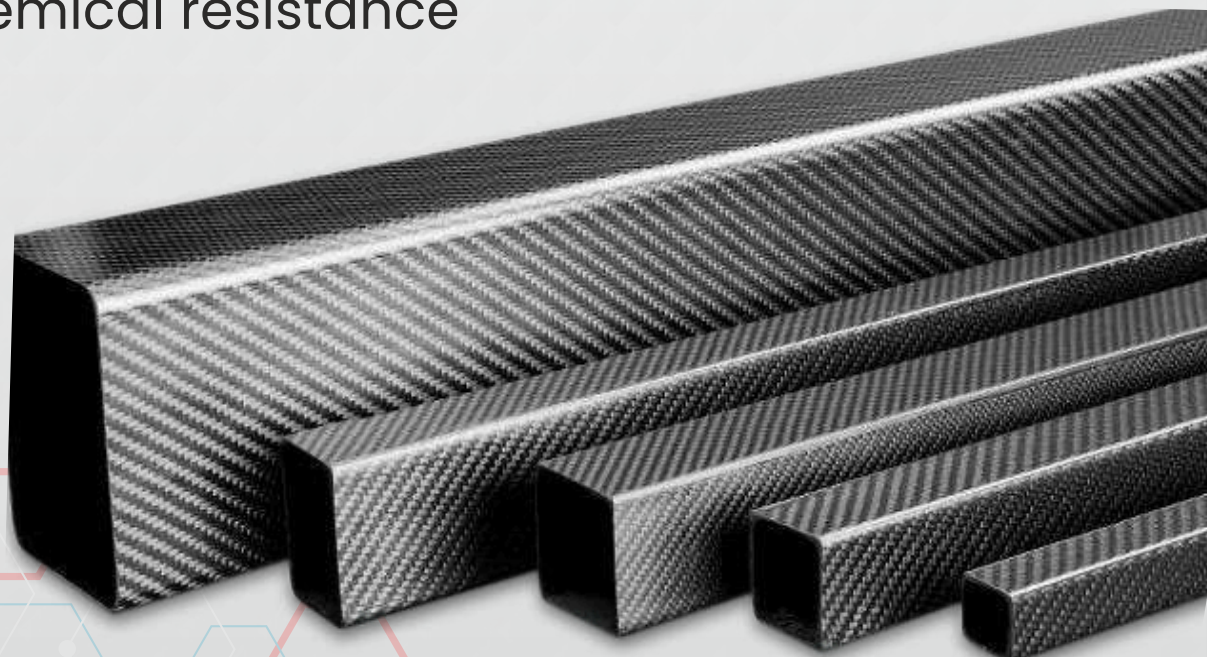


# CARBON FIBER SQUARE TUBE

The pultrusion process creates continuous lengths of tubes with unidirectional properties. Roll wrapping, on the other hand involves multiple wraps of carbon fiber prepregs in various weave types. The prepreg square tubes have a better areal moment of inertia which gives higher bending strength.

## Key Features

- High strength to weight ratio
- Dimensional stability - Low coefficient of thermal expansion
- Highly corrosion resistant
- Thermally stable up to 125°C
- Higher moment of area provides high stiffness
- High chemical resistance



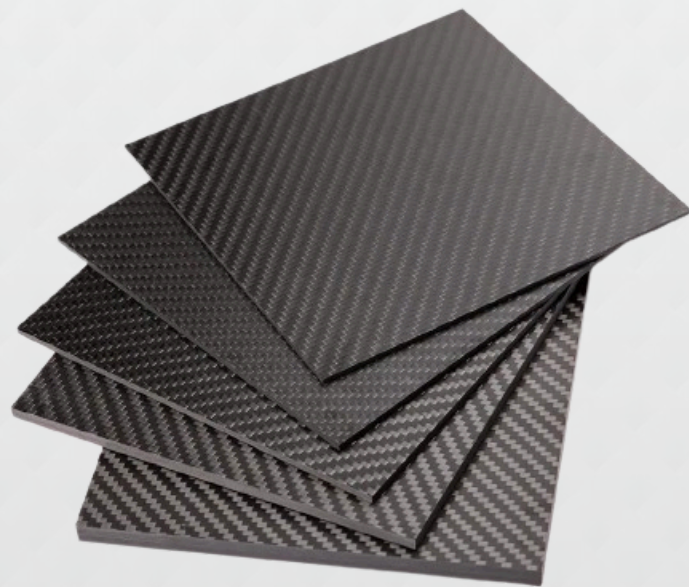
# CARBON FIBER SHEET

Carbon fiber composite sheets are manufactured through compression molding or vacuum infusion techniques, employing carbon fiber fabric infused with epoxy resin or carbon fiber prepreg.

In compression molding, carbon fiber prepreg is placed into a mold, where it is heated under pressure using large hydraulic presses.

The sheet is then cured according to specific curing cycles, resulting in sheets of varying dimensions.

Our carbon fiber sheets are available in different sizes and thickness with consistent quality and glossy surface finish.



## Key Features

- Exceptionally rigid
- These sheets are well suited for various application in UAVs and medical industriestivity in some forms
- High Corrosion Resistance
- Low coefficient of thermal expansion
- Available in different diameter

# CARBON FIBER SOLID ROD

Carbon Fiber Pultruded Rods are high-performance rods made from continuous carbon fibers and a resin matrix. They are created through a pultrusion process, resulting in a solid round rod with exceptional strength and stiffness.

## Key Features

- Exceptionally rigid
- High dimensional stability and UV resistant
- High corrosion resistance
- High thermal conductivity in some forms
- Available in different diameter

# CARBON FIBER ROLLER

Carbon fiber rollers offer several advantages over traditional rollers made from materials like metal or rubber. They are known for their lightweight nature, high strength-to-weight ratio, corrosion resistance, and low thermal expansion properties. These characteristics make carbon fiber rollers suitable for various industrial applications where precision, durability, and performance are crucial.

Some common uses of carbon fiber rollers include web handling in printing, converting, and packaging machinery, as well as in textile processing, papermaking, and other industrial processes where rollers are used for guiding, tensioning, or conveying materials.



# MILD-STEEL ROLLER

Mild steel rollers are a type of roller commonly used in various industrial applications where strength, durability, and affordability are key considerations.

Mild steel, also known as low carbon steel, is a type of carbon steel that contains a relatively low amount of carbon (typically less than 0.3% by weight), along with other alloying elements such as manganese, silicon, and phosphorus. Mild steel rollers are typically manufactured by machining or fabrication processes from mild steel stock, which is readily available and cost-effective.

These rollers can be used in a wide range of applications, including conveyor systems, material handling equipment, machinery components, and industrial processes where moderate strength and wear resistance are sufficient.

## Some key characteristics of mild steel rollers include:

- **Strength:** Mild steel rollers offer sufficient strength and rigidity for many industrial applications, making them suitable for supporting and conveying various types of materials.
- **Weldability:** Mild steel is easily weldable using common welding processes such as arc welding, MIG welding, or TIG welding, allowing for easy fabrication and customization of roller assemblies.
- **Machinability:** Mild steel is relatively easy to machine, allowing for precise machining of roller components to achieve specific dimensions and surface finishes.
- **Corrosion Resistance:** While mild steel is prone to rust and corrosion in certain environments, it can be protected from corrosion through various methods such as painting, coating, or galvanizing.
- **Cost-Effectiveness:** Mild steel is an economical choice for rollers compared to other materials such as stainless steel or aluminum, making it a popular option for applications where cost is a significant factor.

# STAINLESS-STEEL ROLLER

Stainless steel rollers, often abbreviated as SS rollers, are cylindrical components made entirely or predominantly from stainless steel. Stainless steel is an alloy known for its corrosion resistance, durability, and strength, making it an excellent choice for various industrial applications.

Stainless steel rollers find extensive use in industries where hygiene, corrosion resistance, and durability are crucial considerations.

Different type of coatings also available.





# MACHINE JOB-WORK

## CNC LASER DESIGN

Our laser cutting solutions are adeptly employed to precision-cut and fabricate a diverse range of industrial components, utilizing sheet metal of varying thicknesses and dimensions.

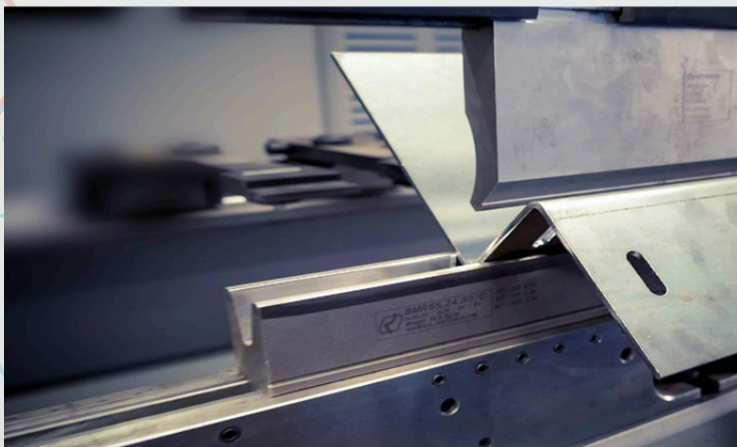
We pride ourselves on delivering superior laser cutting services to our clients, offering top-notch quality at highly competitive rates.



## CNC BENDING

CNC bending refers to the process of utilizing CNC machines to bend metal components according to specified designs and dimensions.

In this process, a CNC bending machine, also known as a press brake, is programmed to precisely bend metal sheets or profiles into various shapes and angles.



# MACHINE JOB-WORK

## VMC JOB-WORK

VMC job work refers to the process of using Vertical Machining Centers (VMCs) to manufacture precision components or parts according to specified designs and requirements.

VMCs are computer-controlled machine tools equipped with rotating cutting tools that can perform various machining operations such as milling, drilling, tapping, and boring on metal, plastic or other materials.



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## MILLING JOB-WORK

Milling job work refers to the process of using milling machines to manufacture precision components or parts according to specified designs and requirements.

Milling machines are machine tools equipped with rotating cutting tools that can perform various machining operations such as milling, drilling, tapping, and boring on metal, plastic or other materials



# MACHINE JOB-WORK

## LATHE JOB-WORK

Lathe machine job work involves using a lathe machine to manufacture precision components or parts by rotating a workpiece against a cutting tool.

The lathe machine is a versatile machine tool used in various industries for turning, facing, drilling, threading, and other machining operations.



# SURFACE TREATMENT

## ELECTROPLATING

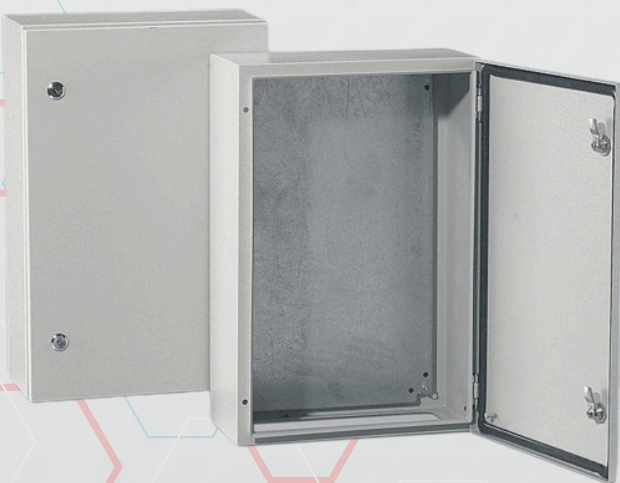
Electroplating is a process used to coat the surface of a metal object with a thin layer of another metal, typically for decorative, protective, or functional purposes. It involves the use of an electrolytic cell where electrical current is passed through a solution, known as an electrolyte, containing dissolved ions of the coating metal.

The metal object to be plated is immersed in the electrolyte and serves as the cathode (negative electrode), while an electrode made of the plating metal serves as the anode (positive electrode).



## POWDER COATING

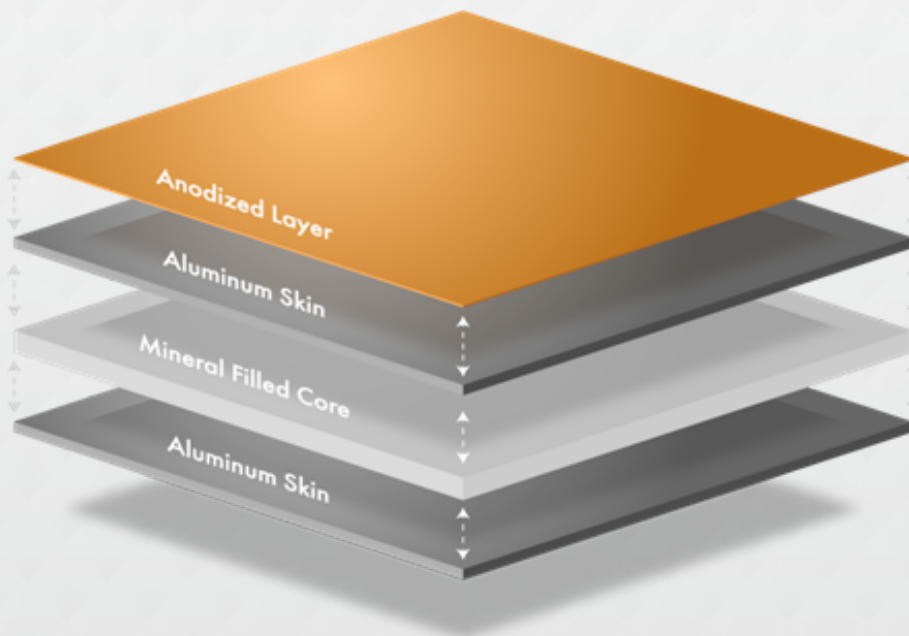
Powder coating is a surface finishing technique used to apply a decorative and protective coating to metal, plastic, or other materials. It involves applying a dry powder consisting of finely ground particles of pigment and resin onto a surface, and then curing it to form a hard and durable coating.



# SURFACE TREATMENT

## ANODIZING

Anodizing is an electrochemical surface finishing process used to create a protective oxide layer on the surface of metal parts, typically aluminum. This oxide layer improves the metal's corrosion resistance, durability, and appearance. Anodizing can also provide electrical insulation, enhance adhesion for paint or adhesives, and offer decorative finishes.



The anodizing process involves immersing the metal part in an electrolytic solution, usually sulfuric acid, while applying a current. This causes an oxide layer to form on the metal's surface through the oxidation of the metal itself. The thickness and properties of the oxide layer can be controlled by adjusting factors such as the voltage, current density, temperature, and duration of the anodizing process.

## ENGINEERING DESIGN WORK

With over a decade of dedicated experience in technical design work for a diverse range of industries, we bring unparalleled expertise and insight to every project we undertake. Our seasoned team of engineers and designers is committed to delivering innovative, efficient, and cost-effective solutions that exceed our customers' expectations.



## MACHINE SPARE PARTS

We specialize in providing high-quality machine spare parts to meet the diverse needs of industries across the globe. With years of experience and a commitment to excellence, we have earned a reputation as a trusted supplier of reliable spare parts for various types of machinery.



# SPECIAL PURPOSE MACHINE (SPM)

## SPECIAL PURPOSE MACHINE (SPM)

With over a decade of experience in the industry, we have expertise in manufacturing of special purpose machines.

We specialize in designing and building customized machines to meet the unique needs of our clients across various sectors.

**Our Expertise :** We bring together a team of skilled engineers, technicians, and designers with extensive experience in the field of special purpose machine manufacturing.

Our expertise allows us to conceptualize, design, and fabricate innovative solutions tailored to your specific requirements.

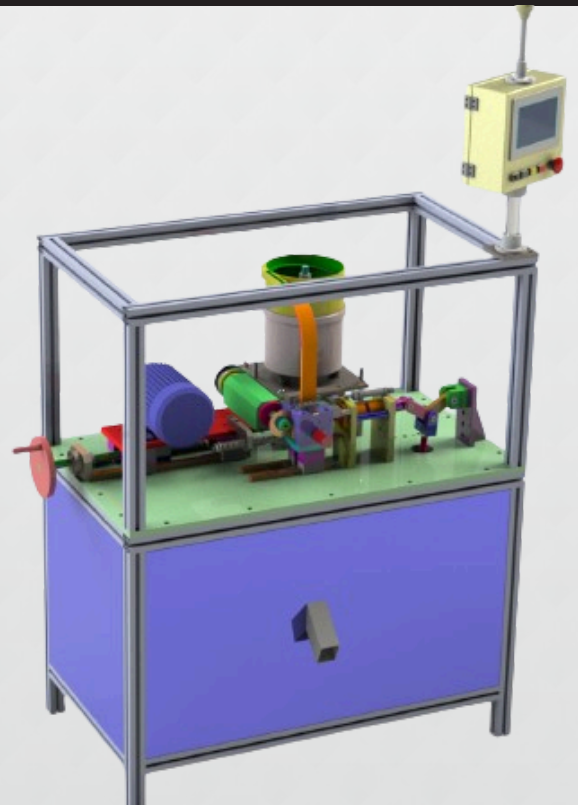
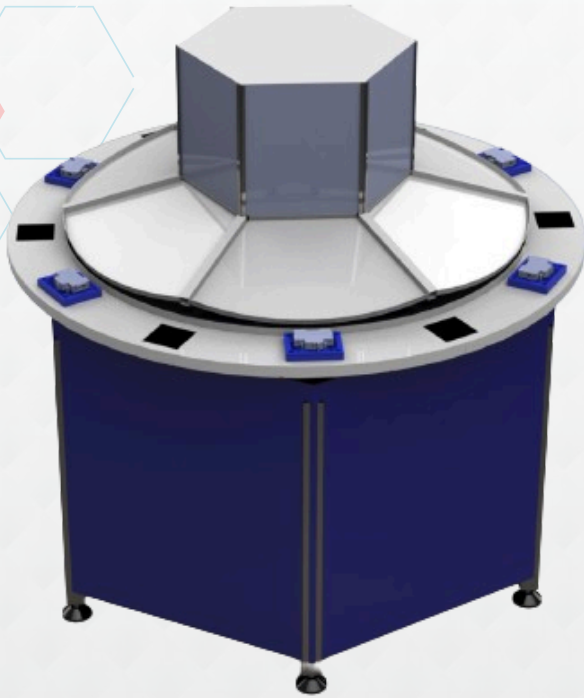
**Custom Solutions :** We understand that every project is unique, which is why we take a collaborative approach to design and manufacturing. Whether you need a simple automation solution or a complex multi-functional machine, we work closely with you to develop custom solutions that address your challenges and enhance your productivity.

**Quality and Reliability :** Quality and reliability are at the heart of everything we do. We adhere to the highest industry standards and best practices throughout the manufacturing process to ensure that our machines meet or exceed your expectations.

Each machine undergoes rigorous testing and quality control checks to guarantee optimal performance and longevity.

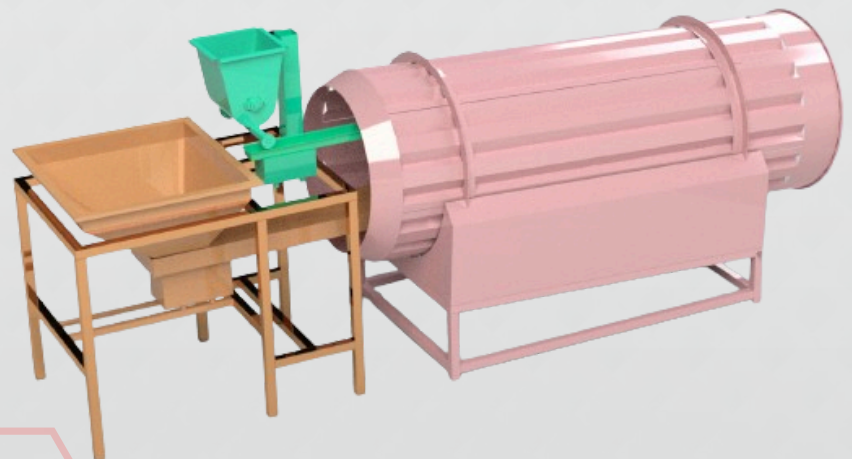
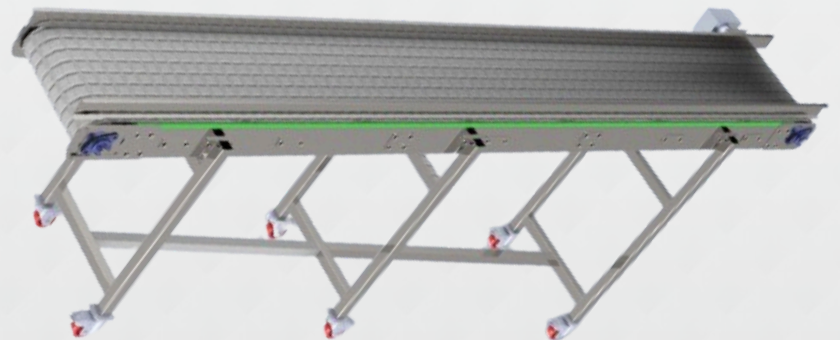
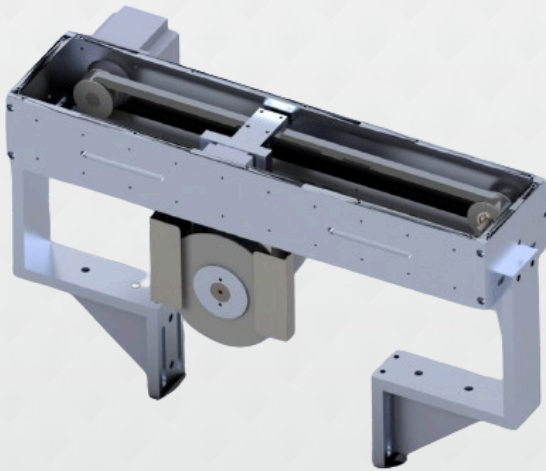
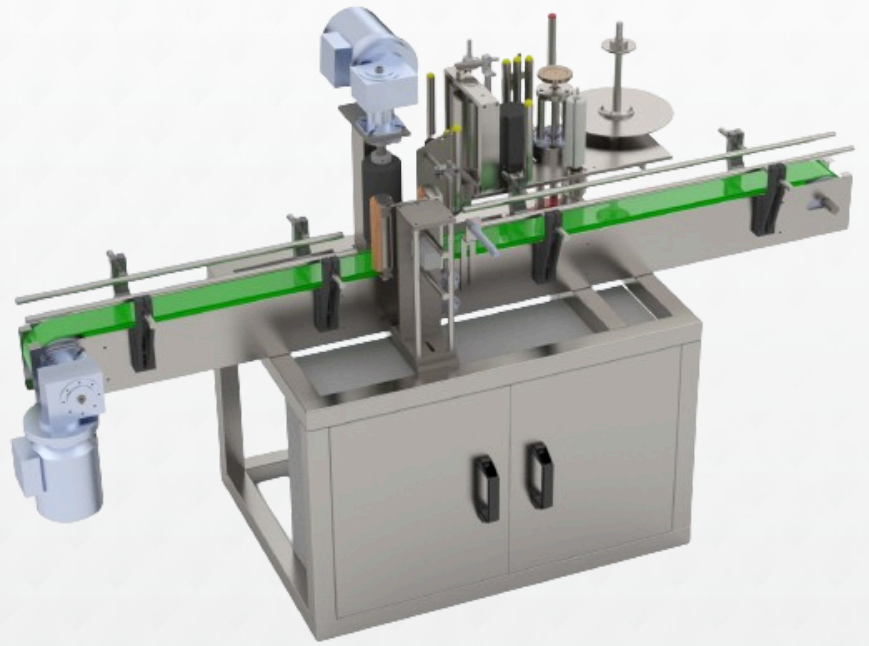
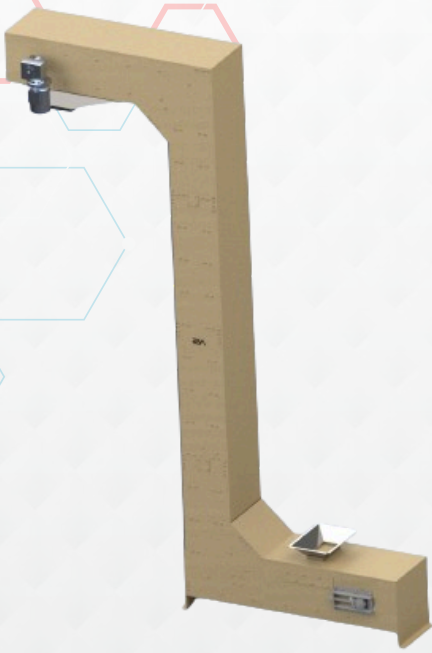
**Customer Satisfaction :** Customer satisfaction is our top priority. We strive to provide exceptional service and support at every stage of the process, from initial consultation to after-sales service. Our dedicated team is here to listen to your needs, answer your questions and provide expert guidance to help you achieve your goals.

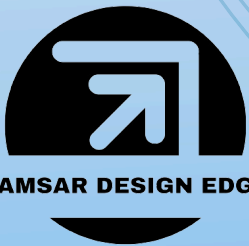
# SPECIAL PURPOSE MACHINE (SPM)





# SPECIAL PURPOSE MACHINE (SPM)





**SAMSAR DESIGN EDGE**

GEAR UP FOR INDUSTRIAL EXCELLENCE

# **SAMSAR DESIGN EDGE**

To know more



**REGISTERED OFFICE ADDRESS**

VS- 223, Siddharth Vihar,  
Sec-7C, Ghaziabad,  
U.P.- 201009 -India

**PHONE NUMBERS**

+91-9625528275  
+91-88823 67879

**EMAIL**

[sales@samsardesignedge.com](mailto:sales@samsardesignedge.com)  
[info@samsardesignedge.com](mailto:info@samsardesignedge.com)  
[ssd091812@gmail.com](mailto:ssd091812@gmail.com)

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