

Guangdong Hangyu Composite Material Technology Company, Ltd.



| Innovative| Practical |
| Professional| Honesty |

If you don't work hard, no one can get the life you want.



Guangdong Hangyu Composite Material Technology Company, Ltd.



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**Company
Profile**

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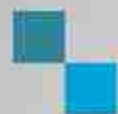
**Core
Process**

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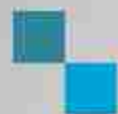


Company Profile

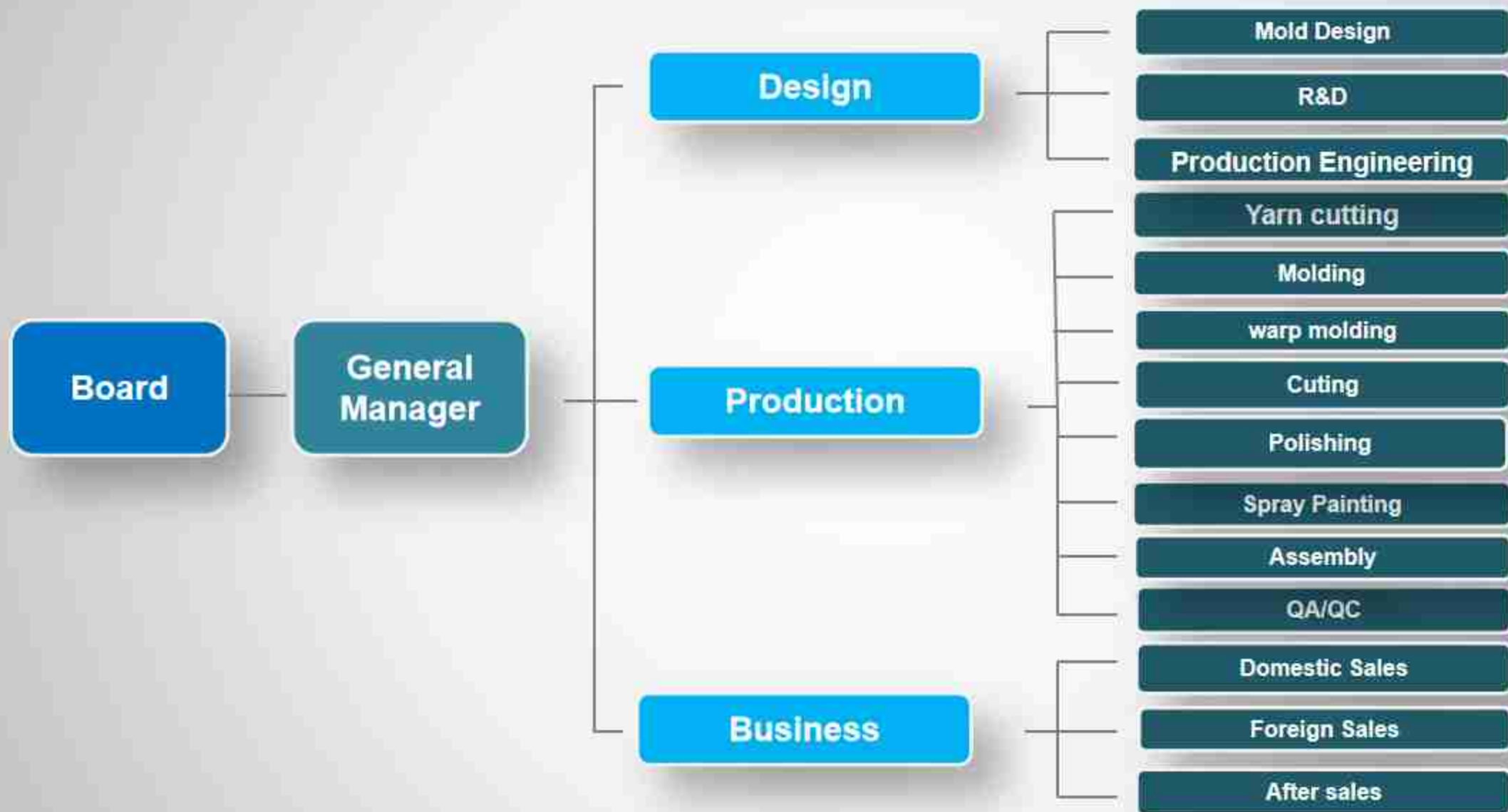


Corporate Profile

- Guangdong Hangyu Composite Material Technology Company,Ltd. Founded in 13th May 2015 in Shenzhen, had merged as a branch of Guangzhou Die and Mould Manufacturing.,co Ltd in 19th Nov 2020.
- Hangyu is a high-tech enterprise integrating mold design, product research and development, manufacturing and sales of carbon fiber and its composites . our company now is located in Huadu , Guangzhou, which is economically developed and convenient for transportation.
- The company has professional experience in the field of carbon fiber or composites. we have two main series of reinforced : thermosetting and thermoplastic carbon fiber composites . Mastering various molding processes that can provide customers with composites of product design, development, and production services.



Organization Chart



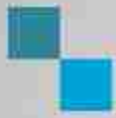
Corporate Cultures



- ◆ Our company treats every project or product for numerous users in light of the work style of keeping on improving and the perseverant spirit of striving for technology.
- ◆ Base on the credibility, highly efficiency and warmly reception, the company dedicated service to every customer.



- ◆ With innovation and research as the core, we provide customers with more cost-effective products with the advantages of industrial chain. Give full play to the high technical level of the aerospace research and development team, sales team quality service attitude, dedicated to provide customers with efficient and convenient service, establish a leading technology, standardized service corporate image.
- ◆ Strengthen application traction, establish long-term cooperative partnership with upper and lower enterprises, strengthen communication and cooperation, carry out systematic innovation under the framework of the whole industrial chain, jointly tackle key problems, and realize industrial brand upgrading.



Corporate In Mexico



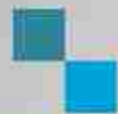
- We will expand our carbon fiber industry in North America, and our Mexican factory is currently under intense construction.



- It is expected to be completed and put into production directly. We look forward to sincere cooperation with you.

Office building



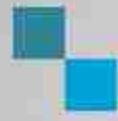


Factory



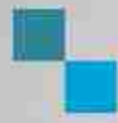
Factory





Cutting department



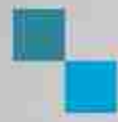


Autoclave



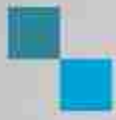
Molding department





Molding department





Mould



Pipe rolling department

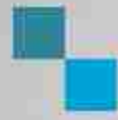


Grinding department



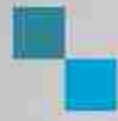
CNC machining center





CNC machining center





Painting department



Polishing department





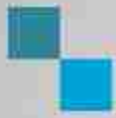
Core Process

Key processes



Process Introduction

- ✓ Our main products include two series, one is the reinforced thermosetting, the other is thermoplastic carbon fiber composites.
- ✓ We have various mature supporting large-scale equipment and forming processes, including molding, blowing molding, autoclave pressing, roll wrapping, RTM and other processes.



Molding Process

Contact low-pressure forming process

Hand-made
ply up

ACM

Blow
molding

Injection
Molding

RTM

Thermal
expansion
molding

Contact low-pressure forming process

Mould design



01

The size and shape of the mold designed according to customer requirement.

Cutting



02

According to product desing, select the right materials ,then cut for required size.

Stacking



03

According to material design , materials stacked manually.

Curing



04

Solidify materials by heating for a period of time or at room temperature.

Demoulding



05

Open the mold and demold the products.

Post processing



06

Polish and spray painting according to product requirements

QC/QA



07

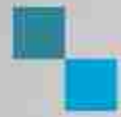
The quality inspection process runs through every step of the process.

Product



08

Final assembly and package of product, ship to the customer for acceptance.

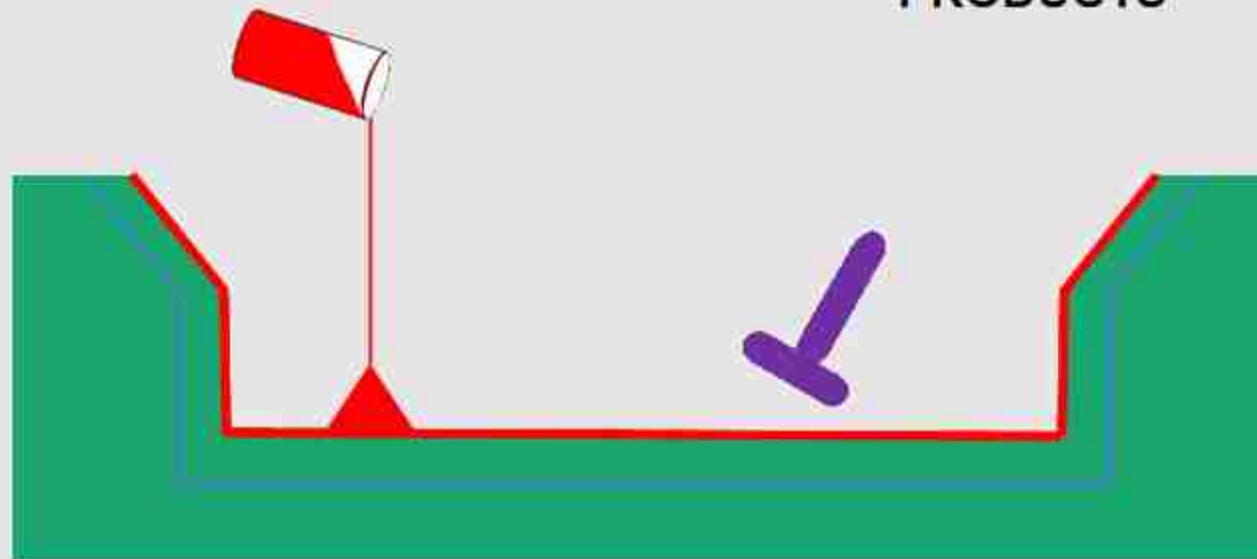


Hand-made ply up

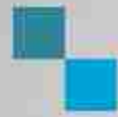
-  Gelcoat
-  Fiber prepreg, felt
-  Resin



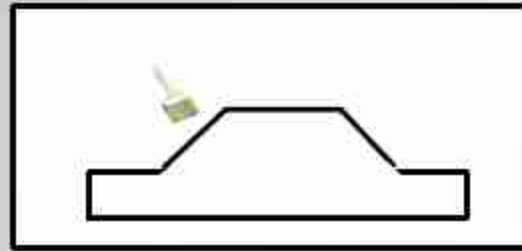
PRODUCTS



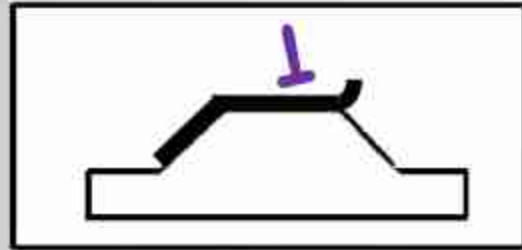
Hand-made ply up schematic diagram



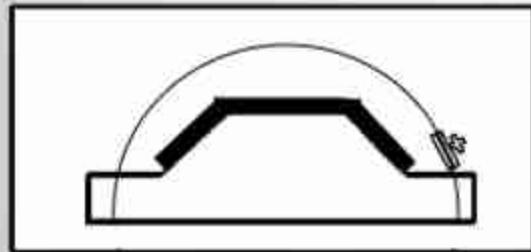
Autoclave Molding (ACM)



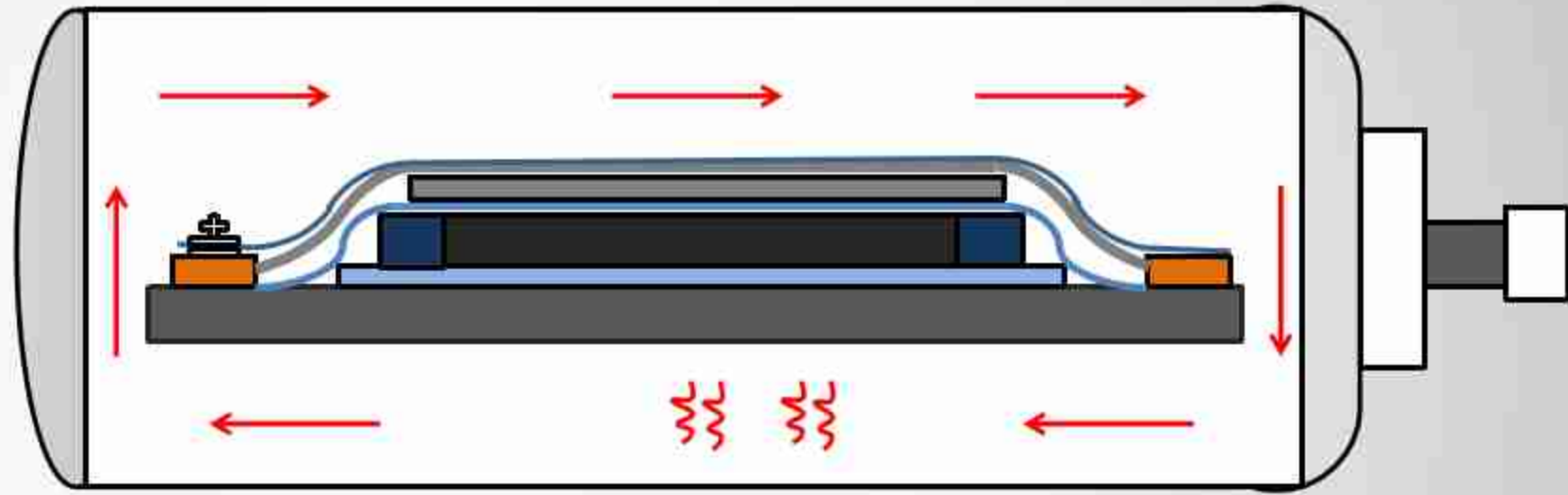
Apply release agent



Laying prepreg layer



Install vacuum bags



Internal condition: 0.1-2 MPa

Formable size: 4.5*4.5 m²



ACM schematic diagram

Autoclave



Autoclave

Autoclave can be a pressure container. It is achieved by laminating the prepreg onto a mold, covering it with an expansion film (used to manufacture a vacuum state film), reducing pressure and then heating and curing it under pressure in the autoclave.

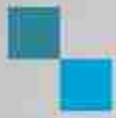
Size

Maximum 4.5m

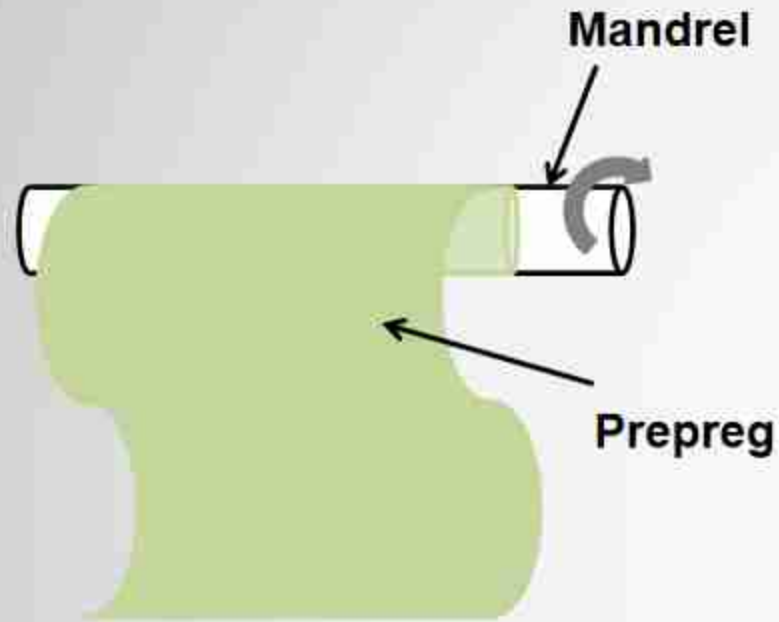
Pressure

1-20 bar





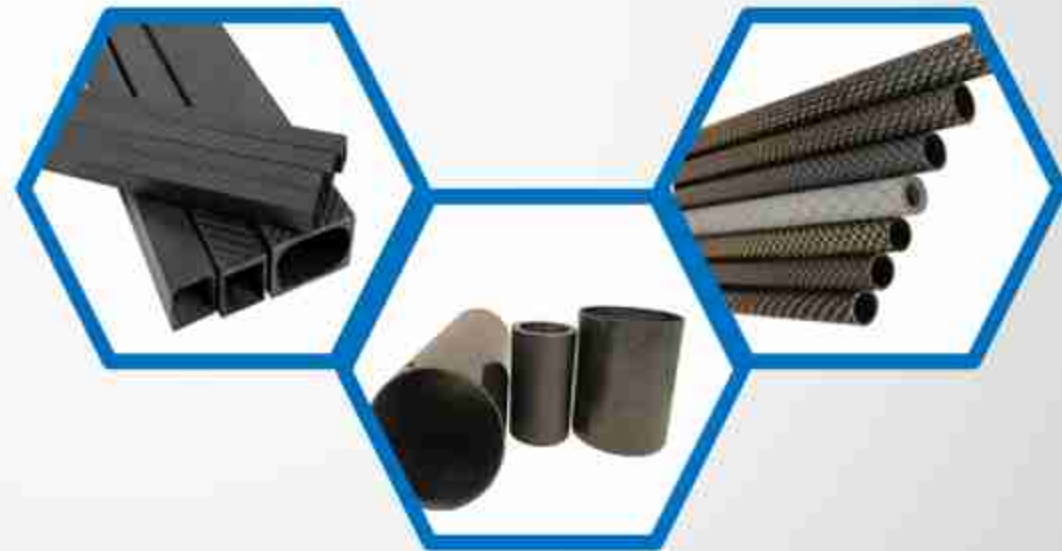
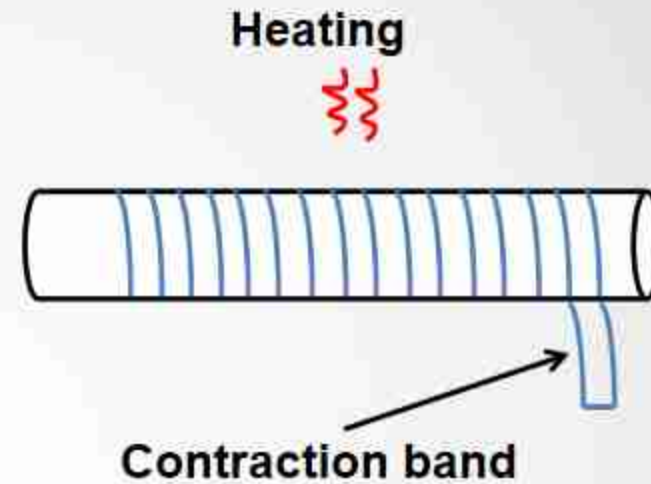
Roll wrapped Molding



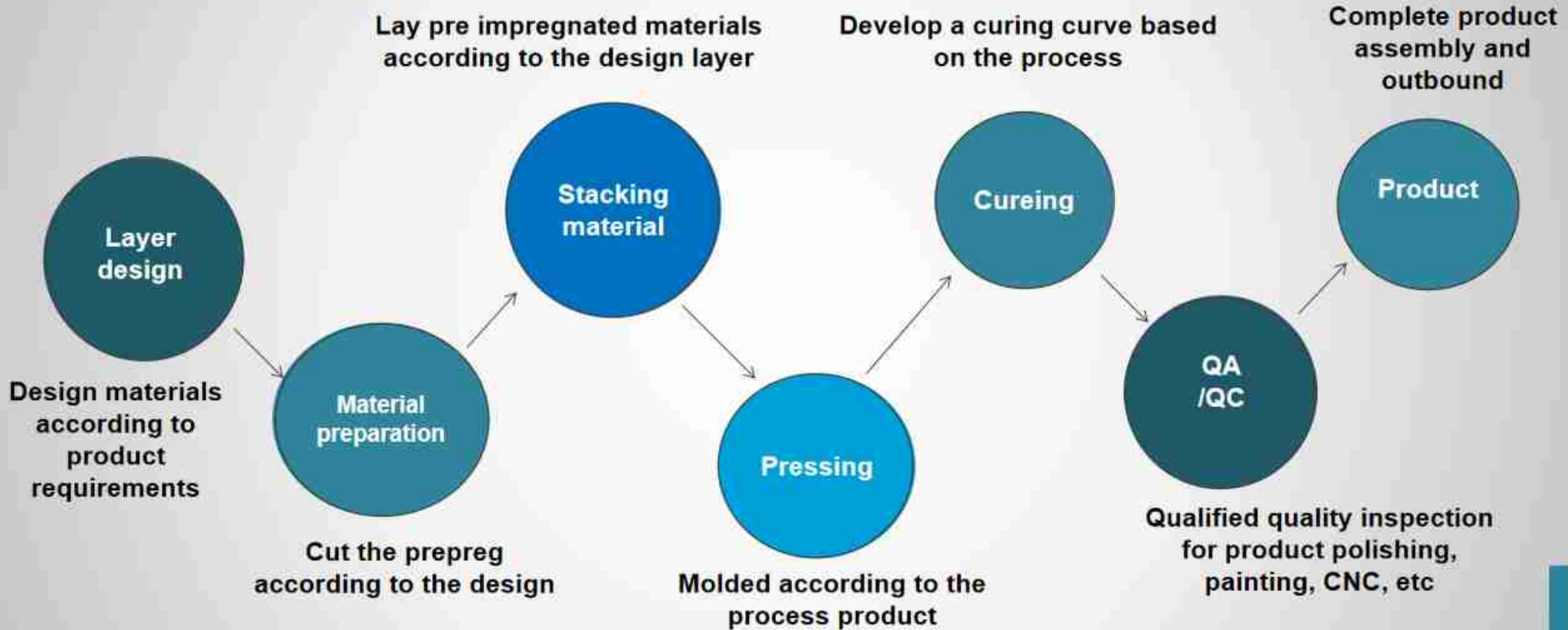
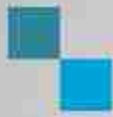
checklists



It can also be made into a conical shape



Roll-wrap Molding schematic diagram



Preformed billet molding procession

UD\Frabric
prepreg

PCM

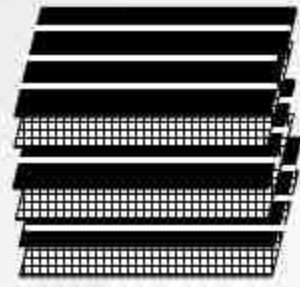
+

Maxium

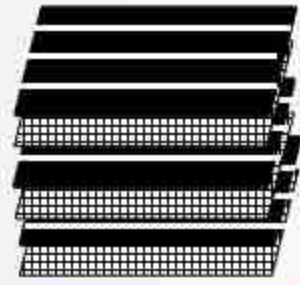
PCM

SMC

SMC



Layering



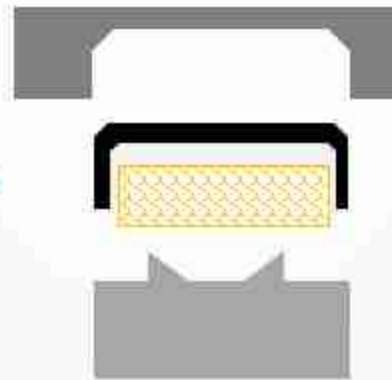
SMC can forming complex shapes



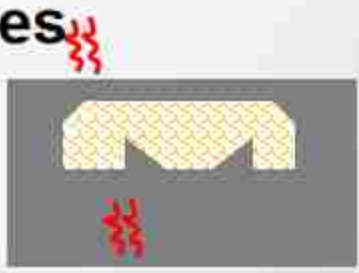
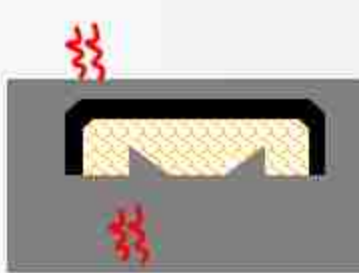
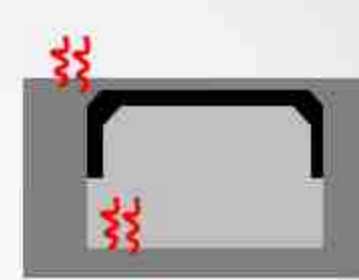
Prepartion



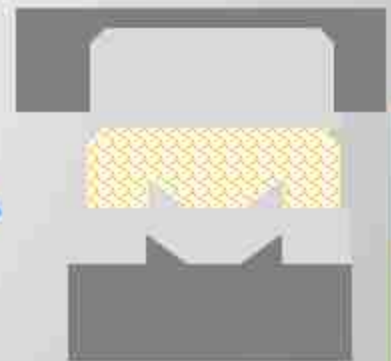
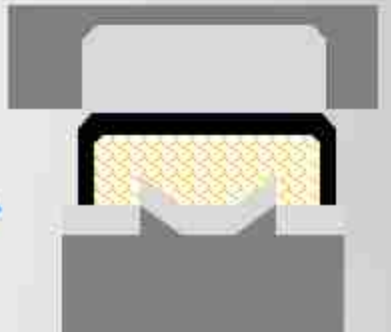
100% Cutting, requires preforming



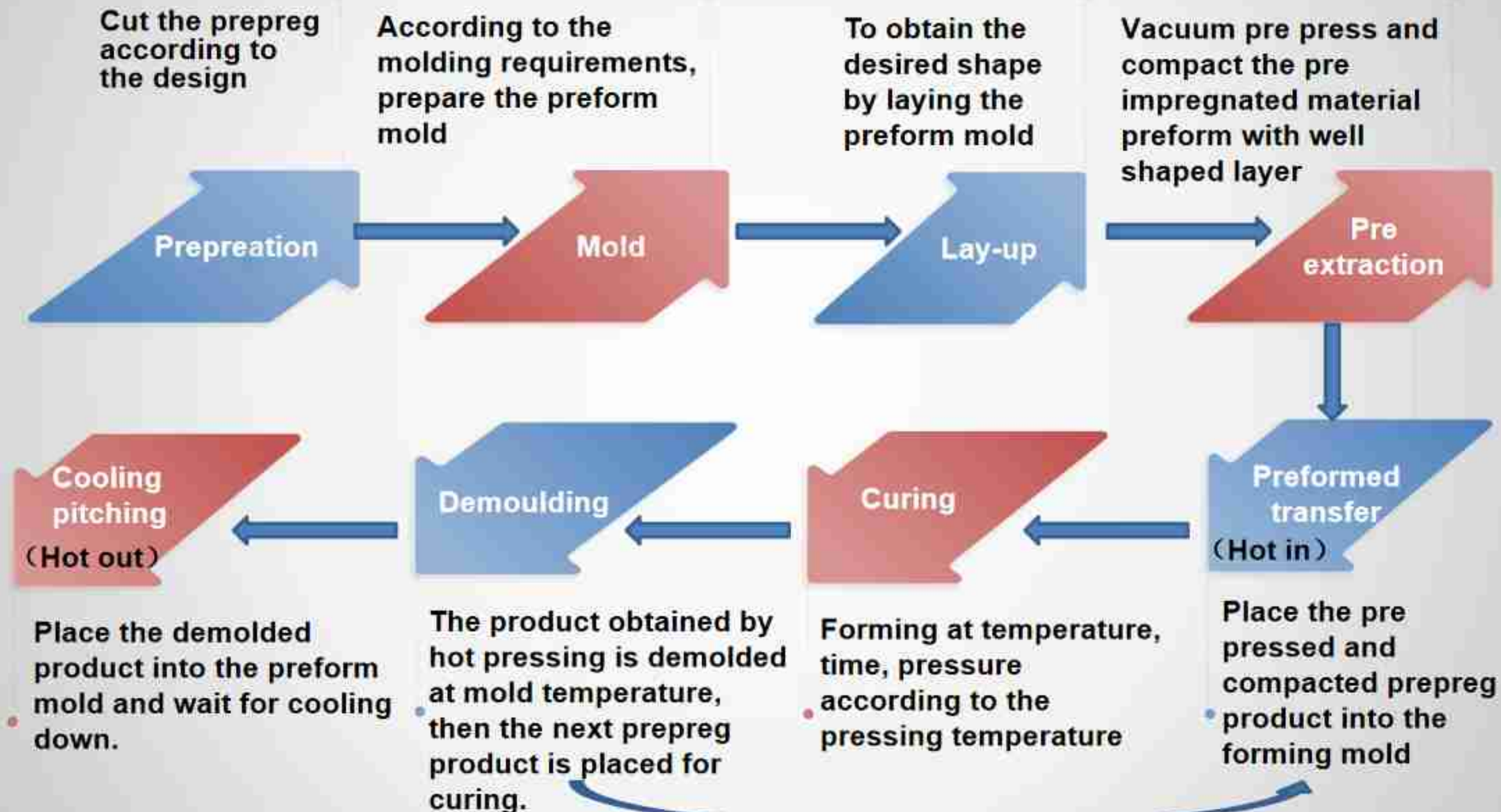
Heat/Pressure



Demoulding



Preformed billet molding procession



Sheet Molding Compound (SMC)

Sheet material cutting

Cut sheet materials according to the product and prepare for mold feeding

Product

- Deliver the obtained products to customers for inspection and acceptance.

Mold feeding

After calculation, when SMC sheets are put into the mold. (the usual feeding area is between 50-90%)

Package

Assemble and package according to storage requirements and conditions

Mold pressing

After the mold is closed, keep high temperature and pressure, and adjust the time according to the product.

Polishing

Polish, modify, and trim the excess burrs on the product

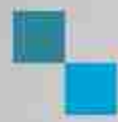
Mold demolding

Control the press mold open and guide the product from the mold.

CNC processing

Cutting waste edges, trimming burrs, adjusting product dimensions, etc

- The Sheet Molding Compound (SMC) is easy to operate automated and has high production efficiency help to improve the working environment and labor conditions of wet forming.
- By changing the type and ratio of components, the molding process and products performance can be altered.
- By changing the type and amount of fillers, costs can be reduced or the product can be lightweight.
- Good molding fluidity is capable of forming complex structural or large components.
- The product has good dimensional stability, smooth surface, good gloss and less fiber floating, thus convenient for the post-treatment.
- The reinforcing material has no damage during production and molding and the product has high strength, making it suitable for lightweight structural design.



Elastic Reservoir Molding (ERM)



**Sheet material
cutting**



**Flexible material
injection**



Molding



Curing



Product



**Quality
inspection**



**Polishing
and painting**



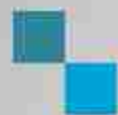
**CNC
processing**

The Elastic Resilient Molding (ERM) may require multiple operations and adjustments to the CNC and polishing spray painting processes depending on the requirements of different products.

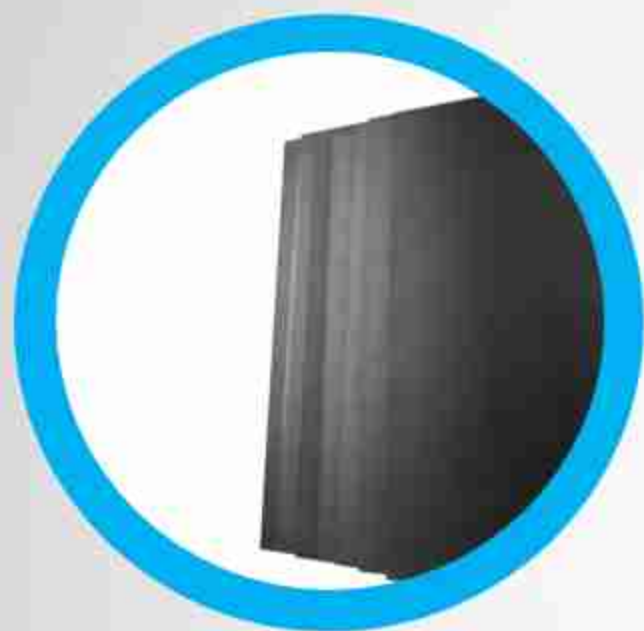


Product services

- Service Area
- Equipment
- Testing



Service items



Plate

Various types of fiber board components



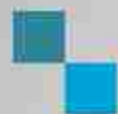
Tube

Customize fiber tubes of various sizes



Irregular

Various complex shapes and sizes of workpieces



Service Area

Aerospace

Backrest,
support
frame, leg
frame, etc

Vehicle

Engine hood,
battery
compartment,
front and rear
mudguards,
seats, steering
gear, etc

UAV

Body, hood,
arm, battery
compartment,
propeller
blades, tripod
tubes, etc

Digital 3C

PCB panel,
case,
keyboard,
mouse case,
headphone
case, phone
case, etc

Robot

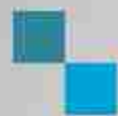
Masks,
robotic arms,
connecting
arms,
rotating
tables, etc

Sport

Sailing
sports series,
diving series,
ball series,
protective
gear series,
etc

Others

Decorative
parts,
structural
components,
piano boxes,
luggage,
playing
cards, etc



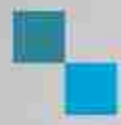
Vehicles

> Automotive components



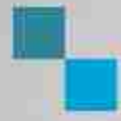
➤ UVA parts





> Shell and cover

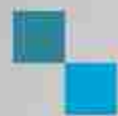




Robot

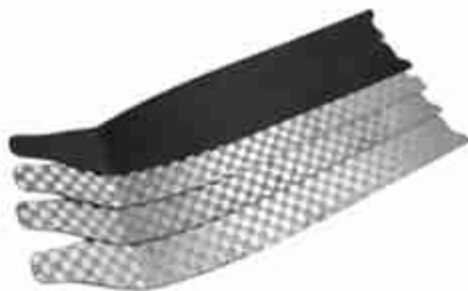
> Robot components

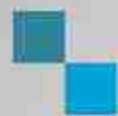




Sport

> Ball games and extreme sports

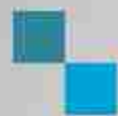




Others

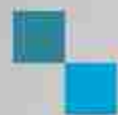
> Instrument, luggage, decoration





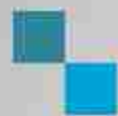
Product Display





Product Display

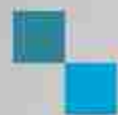




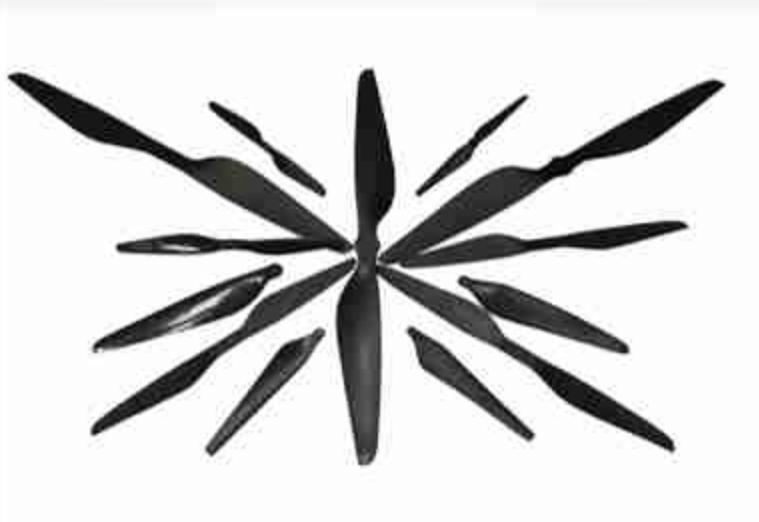
Product Display

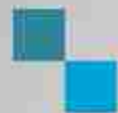


For more dazzling carbon fiber forged pattern plates, please refer to Hangyu Products 2-PPT



Product Display





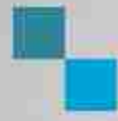
Equipment



Accessorial equipment

We can meet the different product needs of our customers and provide quality assurance for our products.





Laboratory

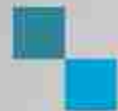


Sample exhibition



Sample exhibition





Laboratory



Testing



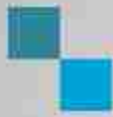
Carbon rod fatigue testing machine



Multi functional alcohol rubber friction testing machine



Universal testing machine



Testing



Muffle furnace



Constant temperature and humidity box



Color matching lightbox



Integrity provides customers with the necessary testing for products.
Rest assured to create a unique product and service experience for customers.

Thanks for listening

Persistence is the key to cultivating good habits, and the effect is visible.



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