

NEWsheet

**Carbon Fiber Reinforced
Thermoplastic
Composite**

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Carbon Fiber Reinforced
Thermoplastic
Composite

Lightweight



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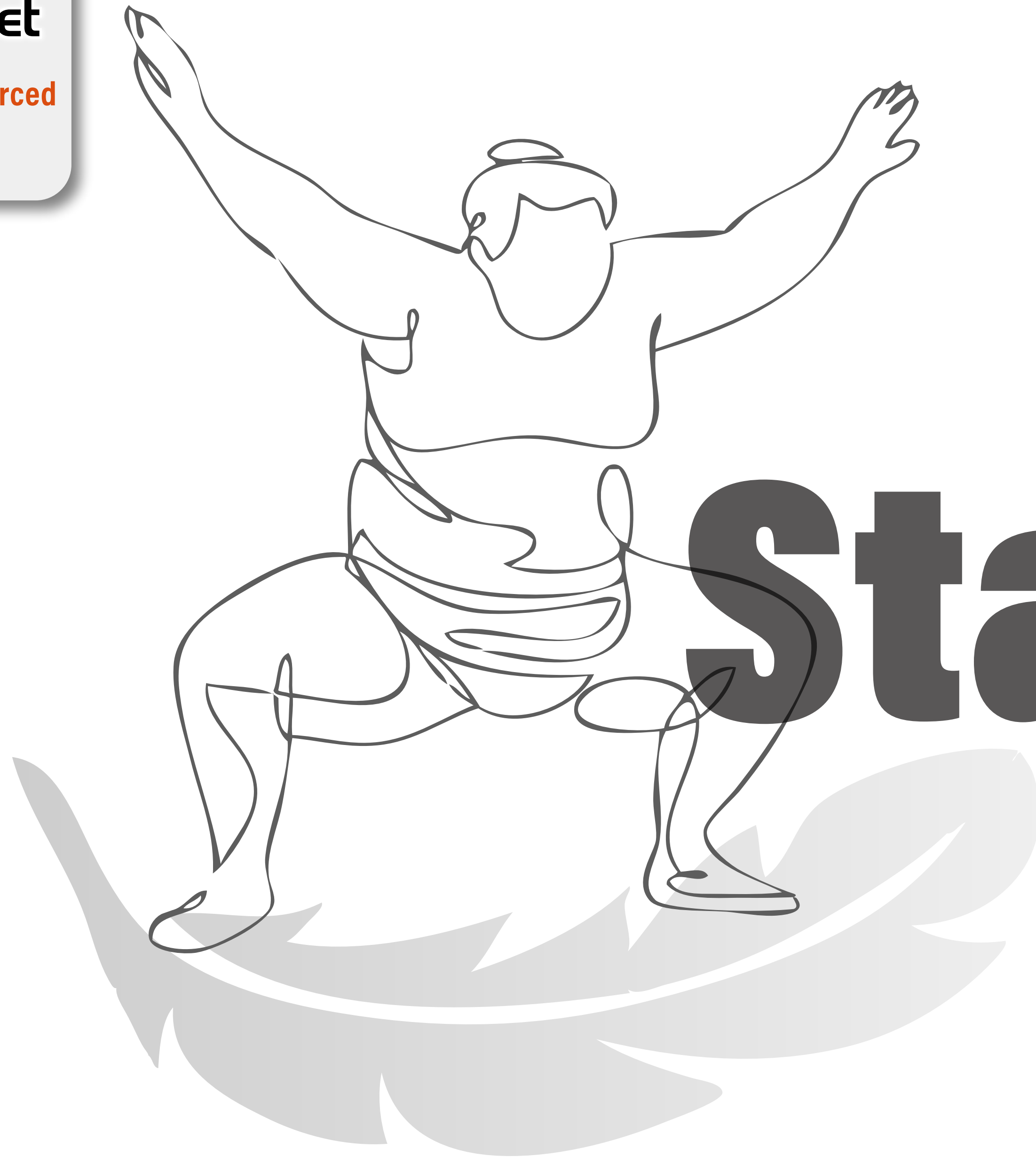
Carbon Fiber Reinforced
Thermoplastic
Composite



Rigidity

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Thermoplastic
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Stability

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Lightweight

Reduce weight by more than
1/3 compared to aluminum alloy

Rigidity

Hardness leads to Durability

Stability

Modular production
Creates quality consistency



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Carbon Fiber Reinforced
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Impact resistance
Non-deformable
High Strength



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High Flame Resistance



V.0. Grade flame resistance

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Automatic System



Applying special process,
forming from tape to sheet to surface.

Combining automated robotic arms to assemble.

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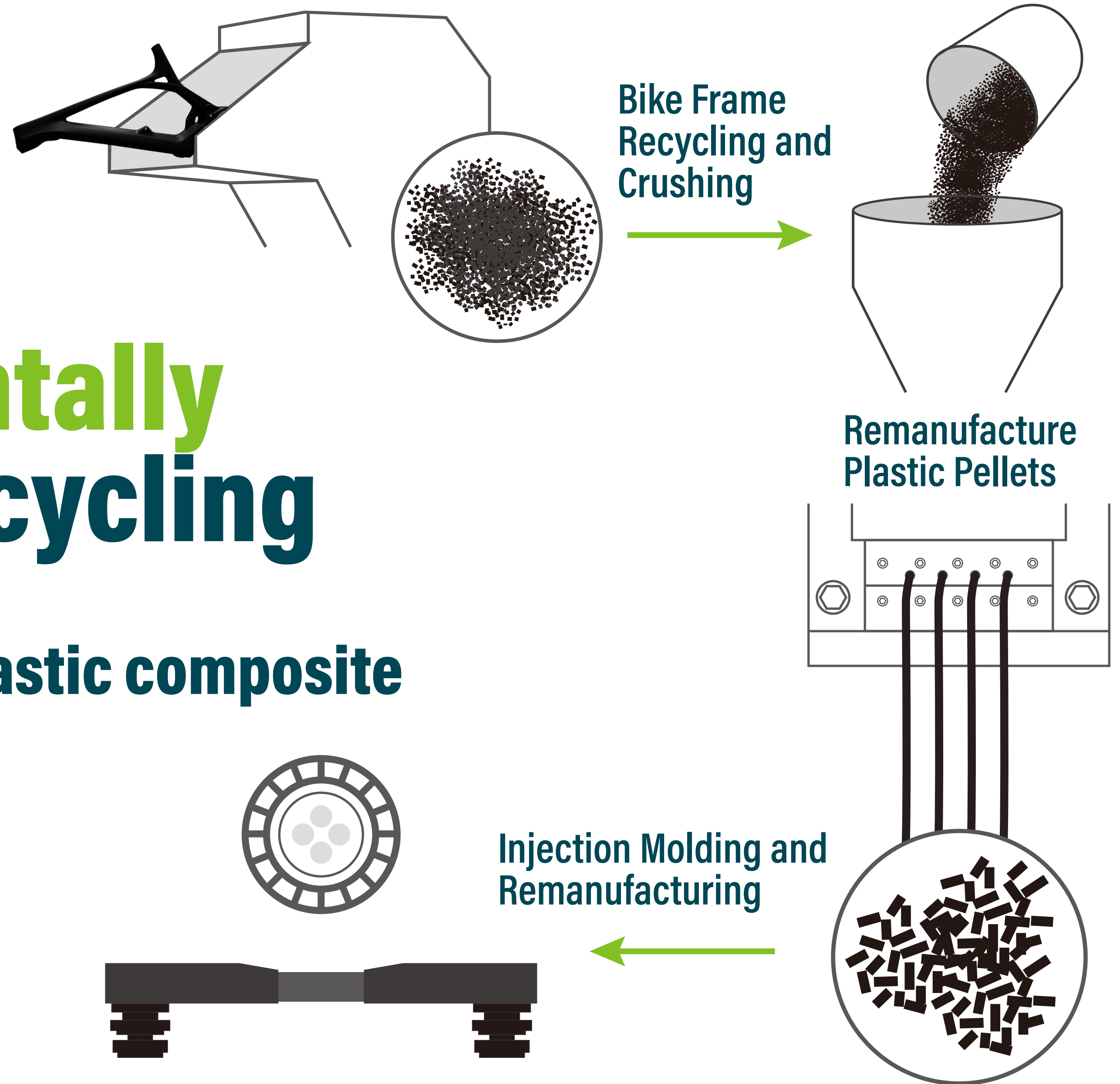
Carbon Fiber Reinforced
Thermoplastic
Composite



Environmentally Friendly Recycling

Carbon fiber reinforced thermoplastic composite

Has the advantages of recyclability, diversified processing and molding, reuse, reduction of process energy consumption, and rapid production, which is quite in line with the current trend of environmental protection.



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Environmentally Friendly Recycling



**Carbon Fiber Reinforced
Thermoplastic Composite**



Abandoned frame recycling operation-
Crushing Process

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To guarantee the quality requirements such as the
centre of gravity and balance of the bicycle.

The frame was made of

Metals

Low cost and
High elasticity

Steel

**Aluminum
Magnesium
and Titanium
Alloy.**

One after another,
aluminum alloy is
the mainstream
material

Higher requirements of comfort.

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Carbon Fiber Reinforced
Thermoplastic
Composite

Replacing Traditional Light Metals

Steel

Aluminum
Magnesium
and Titanium
Alloy.



More durable and
superior performance →

**Thermoplastic
carbon fiber composites**

can reduce weight by
More than 1/3
compared to aluminum
alloys

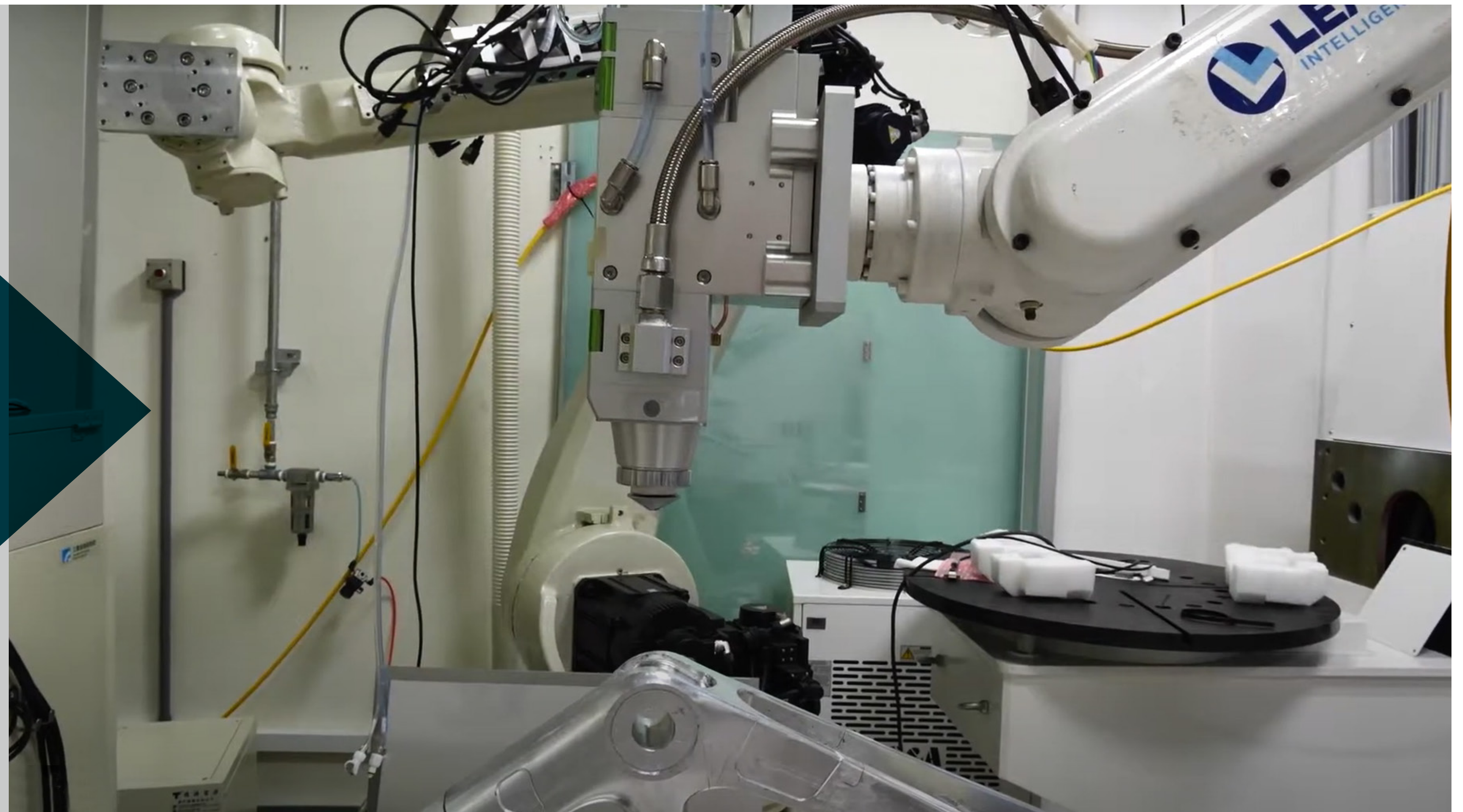
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Carbon Fiber Reinforced
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Short Manufacturing Cycle

Modular production creates Quality consistency.
Rapid mass production and Customization.

Thermoplastic carbon fiber
UD laminate
Setting robotic arm trajectory



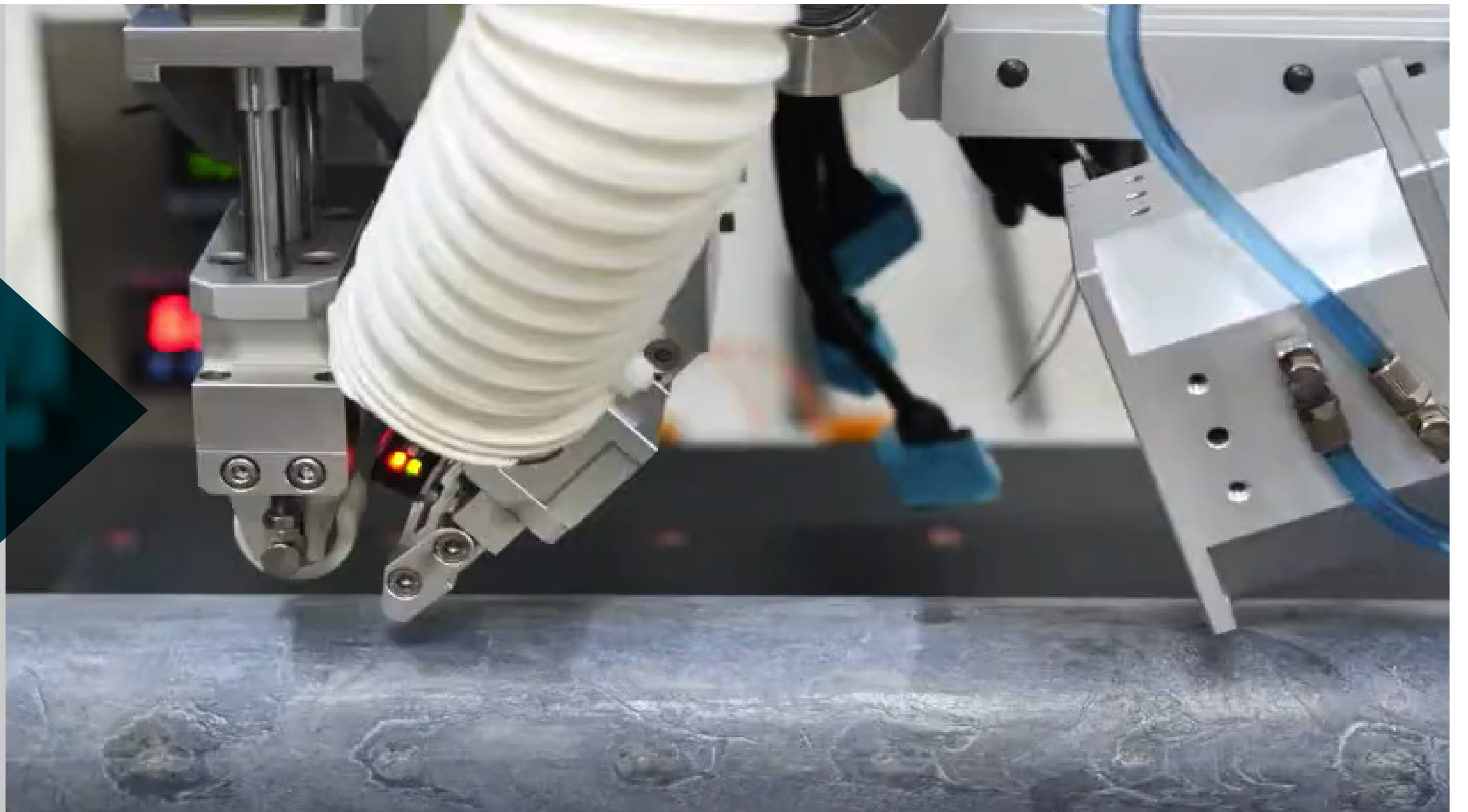
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Short Manufacturing Cycle

Modular production creates Quality consistency.
Rapid mass production and Customization.

Automatic System
Thermoplastic carbon fiber
UD laminate



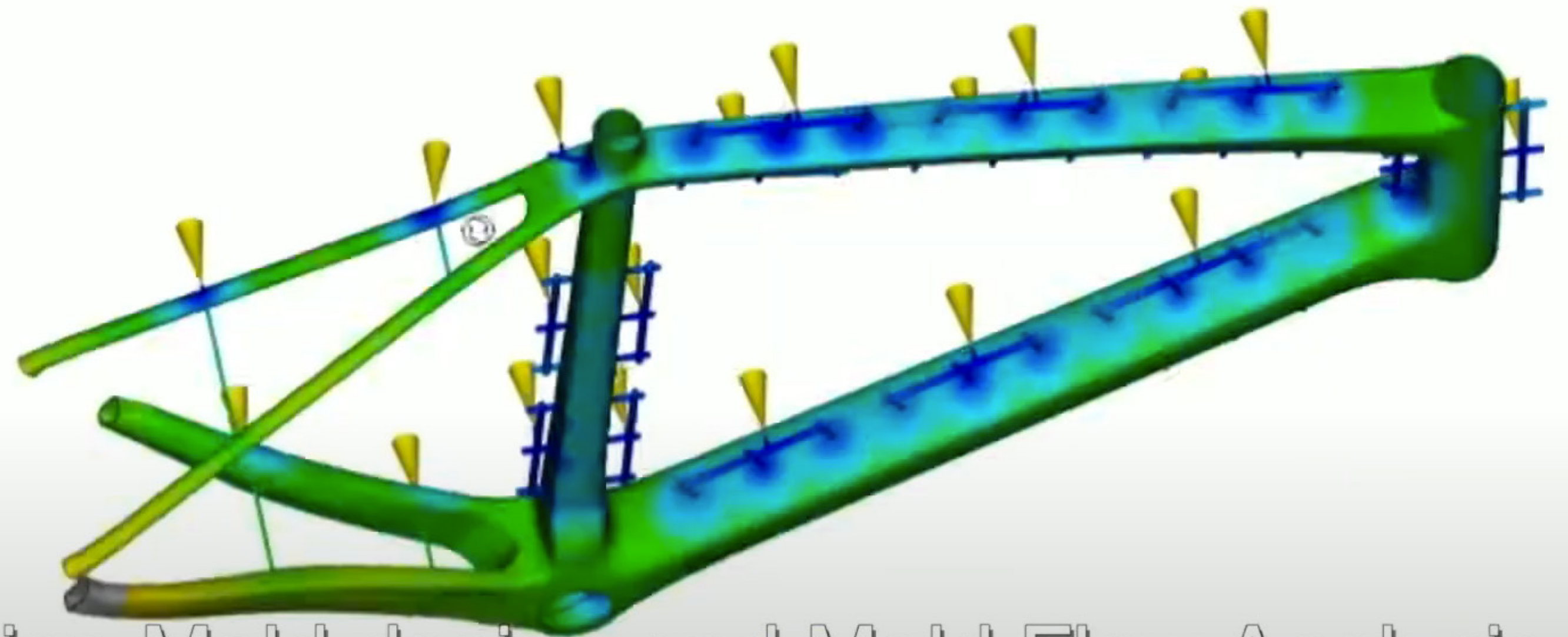
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Short Manufacturing Cycle

Modular production creates Quality consistency.
Rapid mass production and Customization.

Injection molding mold design
and mold flow analysis



Injection Mold design and Mold Flow Analysis

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Short Manufacturing Cycle

Modular production creates Quality consistency.
Rapid mass production and Customization.

Injection molding mold
CNC machining



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Short Manufacturing Cycle

Modular production creates Quality consistency.
Rapid mass production and Customization.

Injection molding operation
thermoplastic
carbon fiber UD structural parts



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Short Production Cycle

Modular production creates Quality consistency.
Rapid mass production and Customization.

Injection molding finish
and demolding

Injection Process-
Finished Part Releasing



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Short Production Cycle

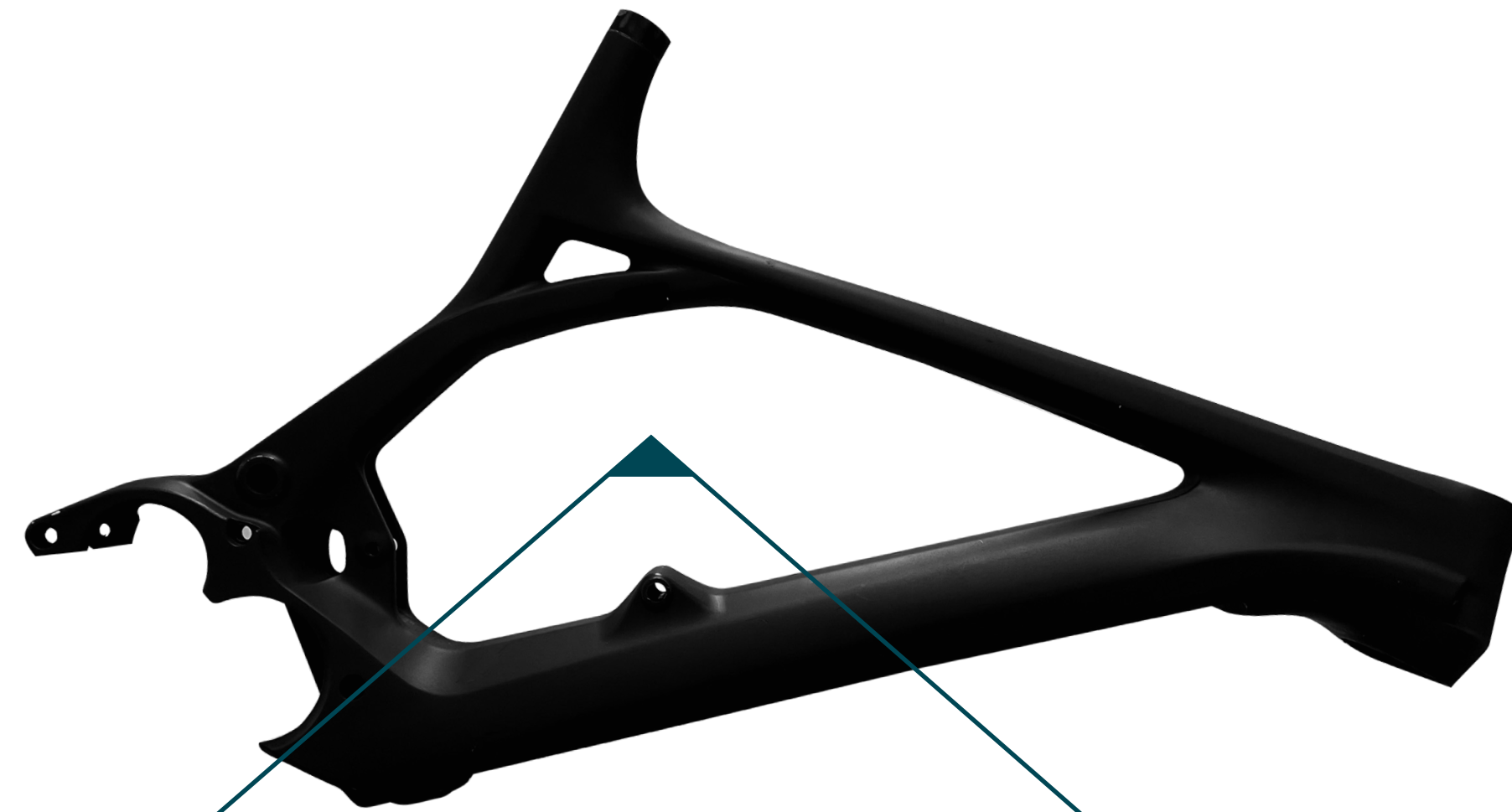
Modular production creates Quality consistency.
Rapid mass production and Customization.

QC and Package for
Finished Product



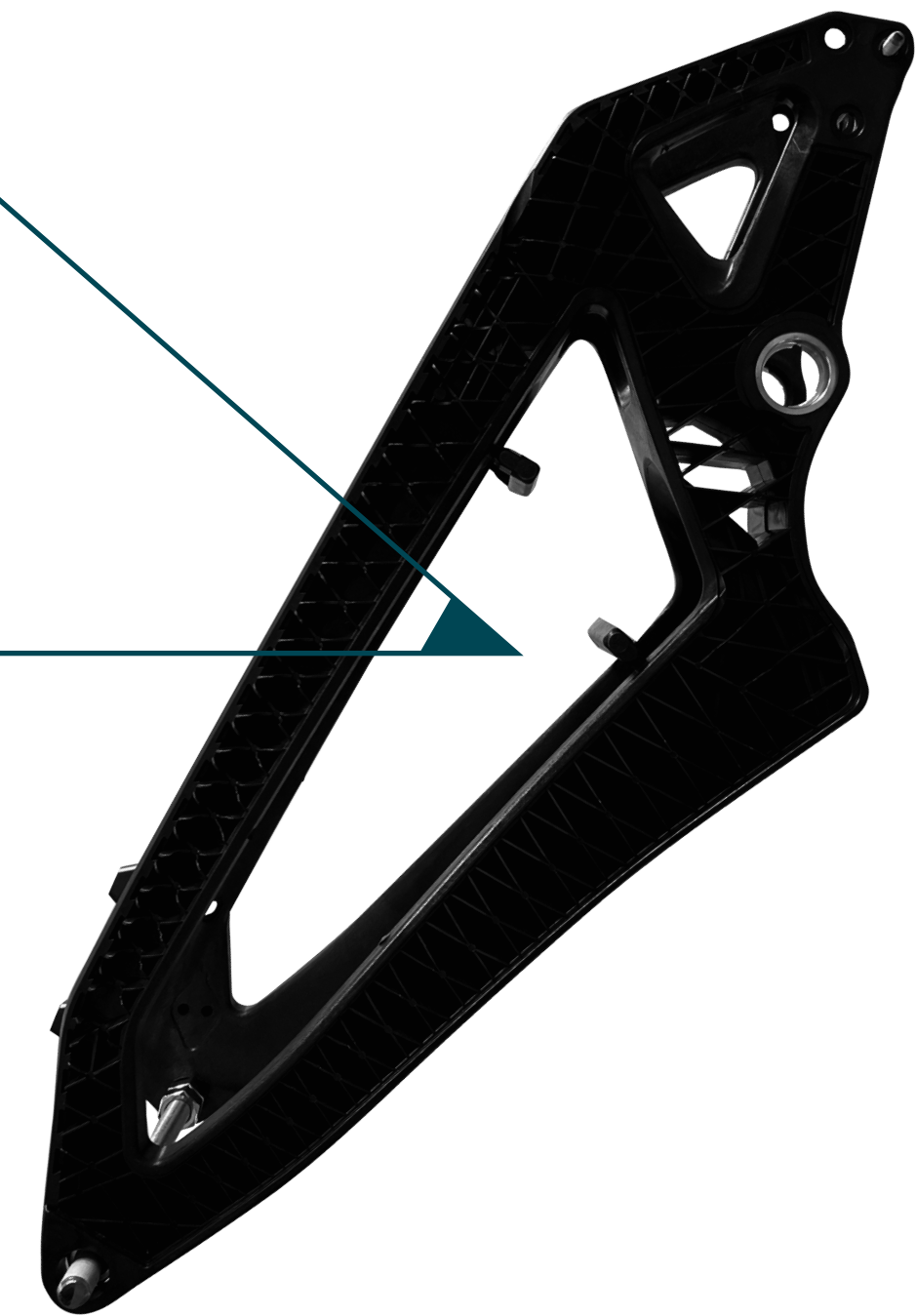
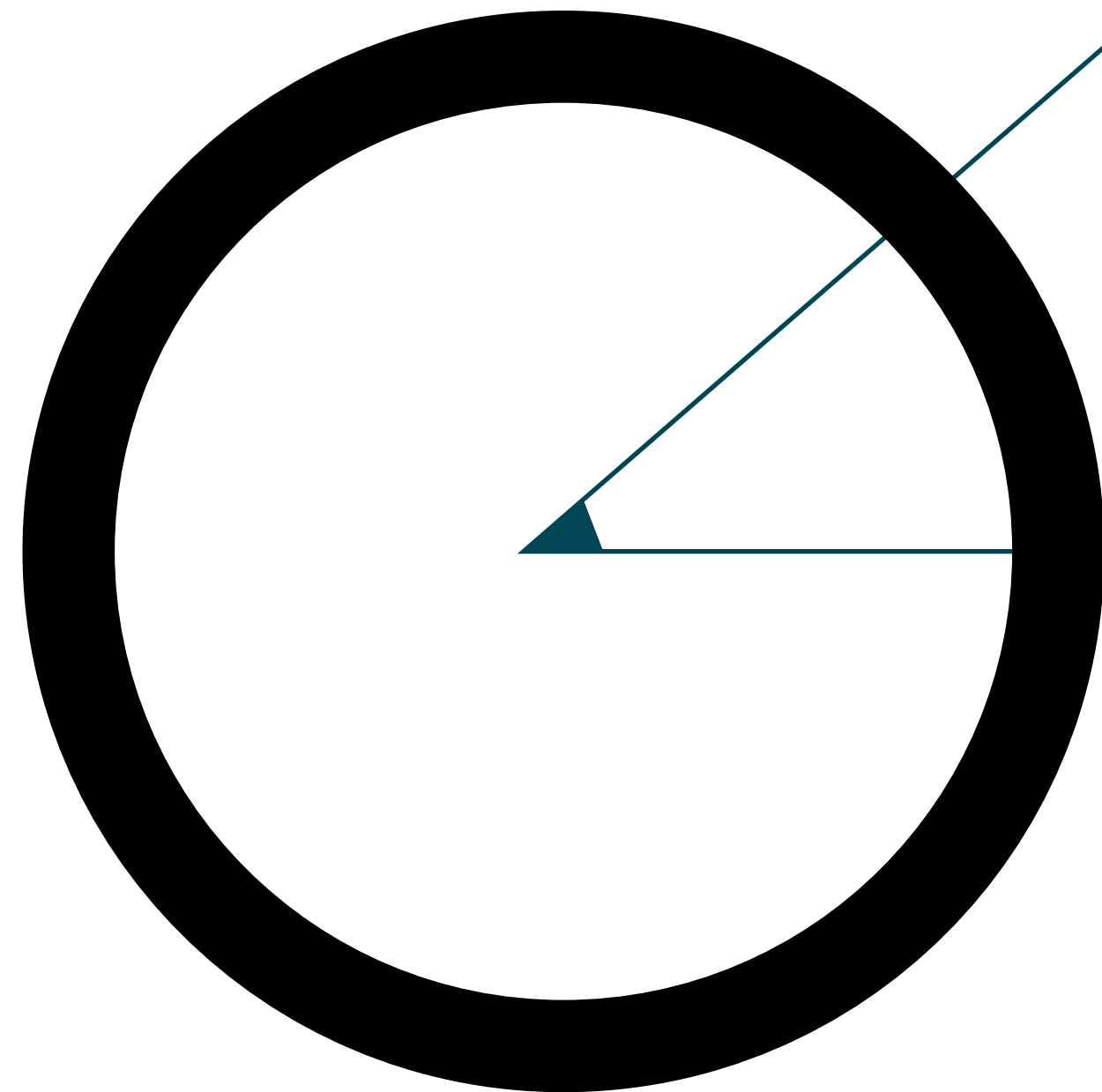
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Fast **Molding**

One set of E-bike frame production
will be finished within **1 hour**.



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E-mountain Bike **Frame + Rim**



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Carbon Fiber Reinforced
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Lightness
Thinness
Strength

Replacing Traditional
Light Metal
Strong Hardness

Modular Production
Stable Quality

Customization
Production



Environmentally
Friendly Recycling

E-mountain Bike **Frame + Rim**



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About HYC

- The largest professional manufacturer of rubber conveyor belts in Taiwan.
- The global largest production base of the rubber conveyor belts with chemical fiber FACTORY SITE.

HYC

Since 1964



FACTORY SITE

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ISO 9001
BSMI

REGISTERED

Quality
Policy

ISO 14001
BSMI

REGISTERED

Environmental
Policy

ISO 45001
BSMI

REGISTERED

Industrial Safety
Policy

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