



**Upgraded High-End CNC Fiber Laser
Tube Cutting Machine**

Improved Processing Efficiency

Function Upgrade

Performance Upgrade

Processing efficiency increased by 40%

Hardware upgrade

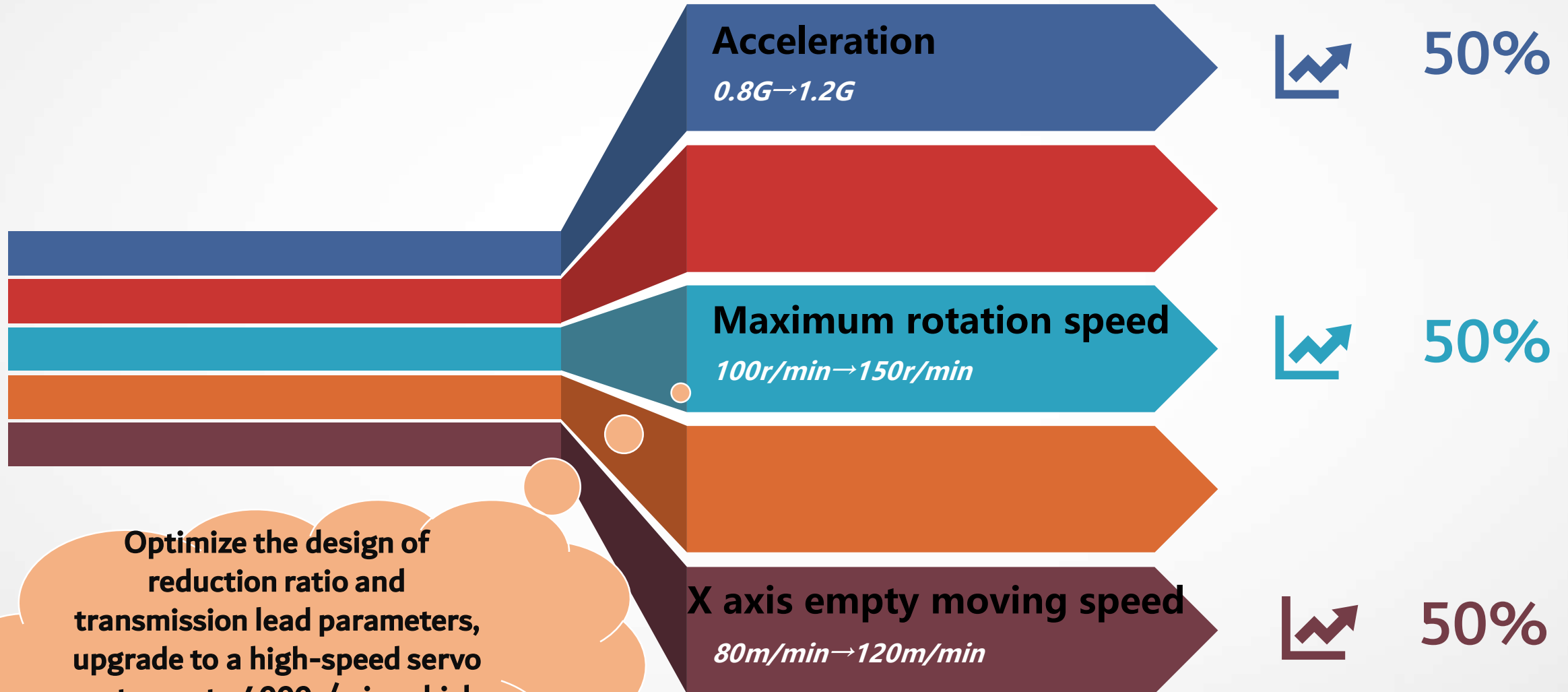
Software Upgrade

Intelligent CNC Fiber Laser Tube Cutting Machine P2060A P3080A

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Performance



Optimize the design of reduction ratio and transmission lead parameters, upgrade to a high-speed servo motor up to 4000r/min, which obtains excellent dynamic performance.

Hardware Upgrade- Chuck

Changing the pipes of different sizes requires adjusting the position of the jaws.

Need to adjust the clamping center.

Single-side single-point clamping.



No need to adjust the jaws to replace any shape of pipe

No need to adjust the clamping center.

Single side double point clamping.

Pneumatic self-centering chuck

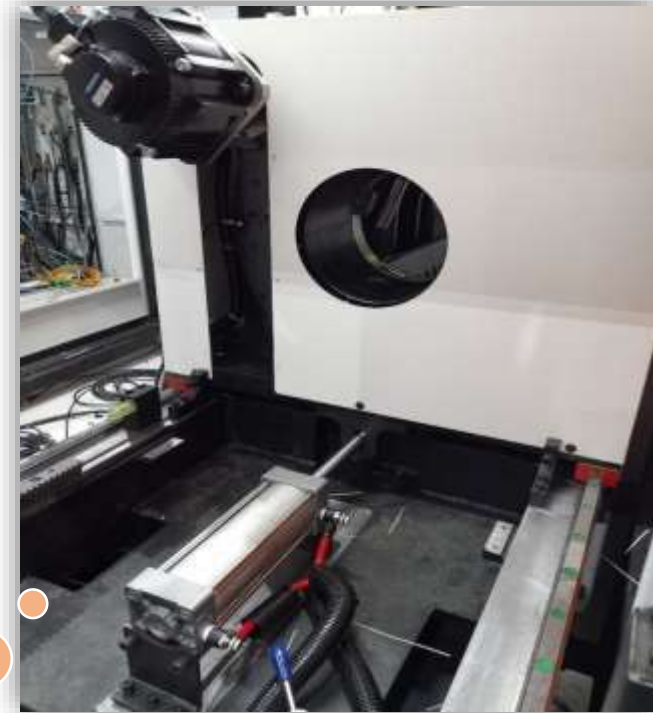
Full stroke pneumatic chuck

After the chuck is upgraded to a full-stroke pneumatic chuck, the adaptability of pipe change processing is increased by 200%, which greatly reduces equipment downtime.

Hardware Upgrade- Innovative chuck installation method



Fixed position installation



Movable limit installation method

- **The time for replacing the chuck can be shortened to half an hour;**
- **The replacement steps are greatly simplified, and the replacement efficiency is increased by 300%;**
- **The maintenance of the chuck is simpler, the operation space is free, and it is convenient and quick.**

Hardware Upgrade- Special Smart Console for Chuck Clamping Force Adjustment

More convenient adjustment

Design a special chuck clamping force adjustment mobile console, placed on the side of the operating table, easy to adjust at any time.

Intelligent adjustment

The adjustment pressure value is displayed in real time, the adjustment value unit is smaller, and the adjustment response is more sensitive.



More precise adjustment

Equipped with a pneumatic proportional valve, the air pressure can be precisely adjusted, and the clamping force of the chuck can be precisely controlled.

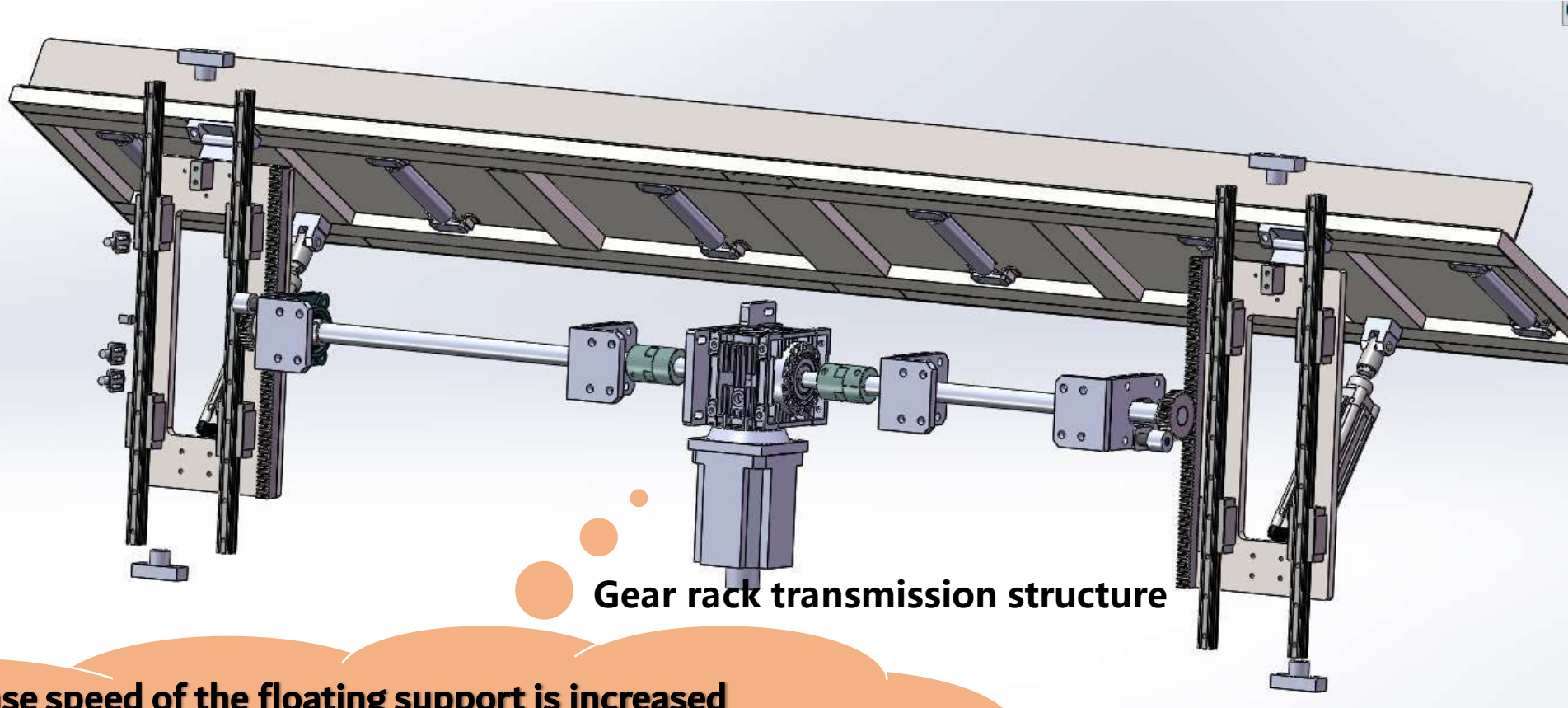
More digital

In the future, based on the CNC platform of the cutting system, the manual adjustment mode will be integrated into the control system operation interface, so as to realize the digital adjustment mode in the control system.

Hardware Upgrade- Floating Support Upgraded to Rack and Pinion Transmission



Pulley transmission structure

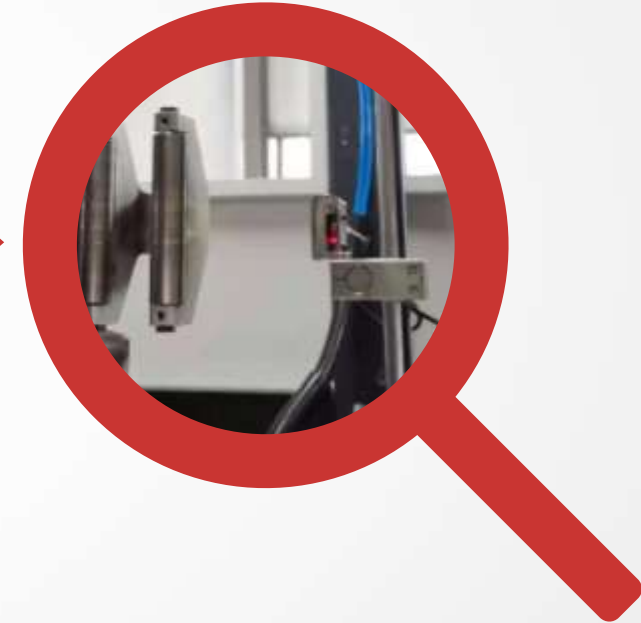
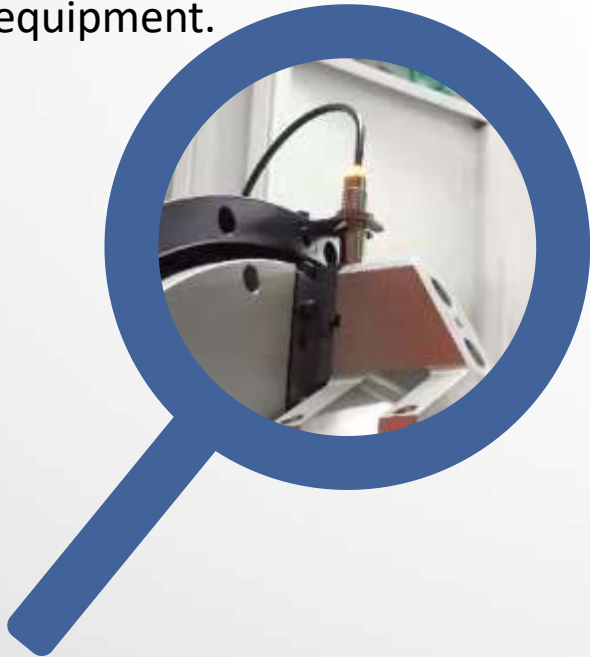


Gear rack transmission structure

The response speed of the floating support is increased by 30%, the support displacement is accurate and there is no instantaneous jitter, and the hidden trouble of the original transmission structure is also eliminated.

Function Upgrade- Intelligent Detection

Avoid automatically feeding the pipe to the front card position. Or, when the rear chuck claws extend into the front chuck to cut the shortest tail material, the claws of the front chuck are not released, causing an impact to protect the safety of the equipment.

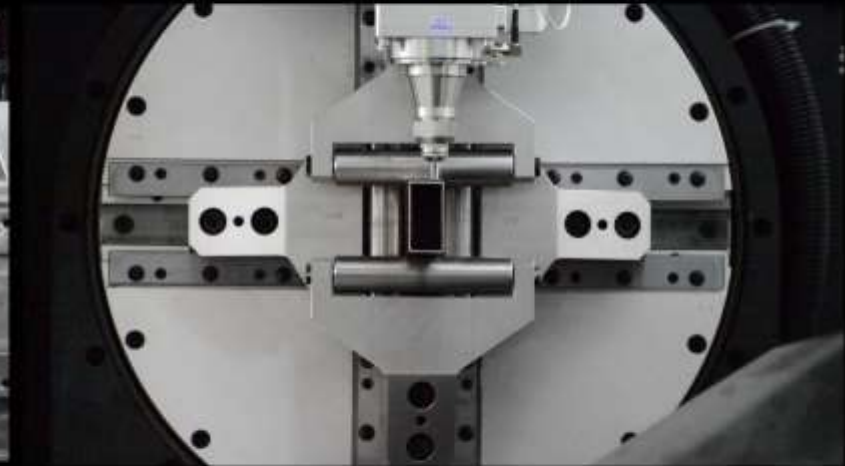
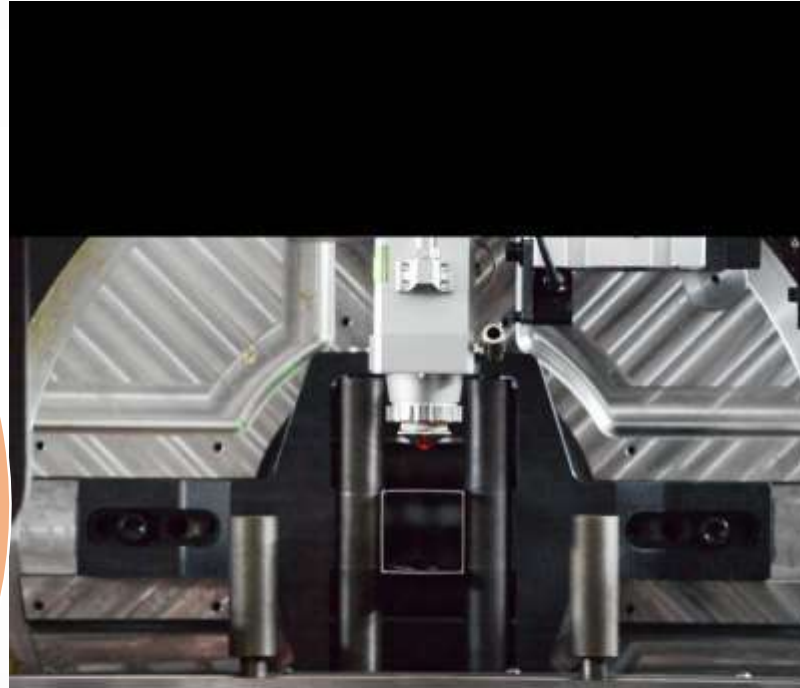


It can detect whether the pipe is cut or not, avoiding that the equipment continues to cut the workpiece because the workpiece is not cut, causing shaking and avoiding safety risks.

Function Upgrade- Integration of Follow-Up and Control

In the process of cutting rectangular pipes, square pipes, channel steel and other pipes, the cutting head can adaptively follow the height change as the pipe rotation posture changes.

- Compared with the conventional follow mode, it greatly shortens the Z-axis idling distance and idling time.
- The cutting process is more flexible and continuous, and the cutting time of the same program can be shortened by 10%.



Regular follow method

Integration of Follow-Up and Control

Function Upgrade- Intelligent interconnection, feeding, processing prediction

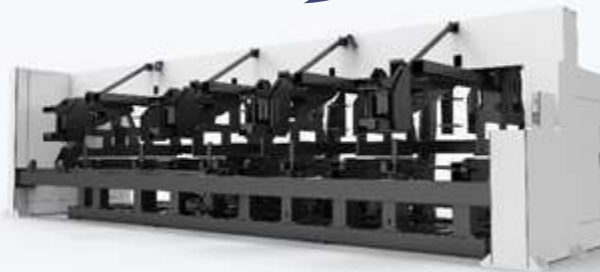
Intelligent interconnection

The automatic feeding system can realize data interconnection with the pipe cutting machine control system.

Intelligent feeding

It supports mixed loading of similar pipes with different lengths. After the length of each pipe is measured on the loading system, the data will be transmitted to the cutting control system in real time.

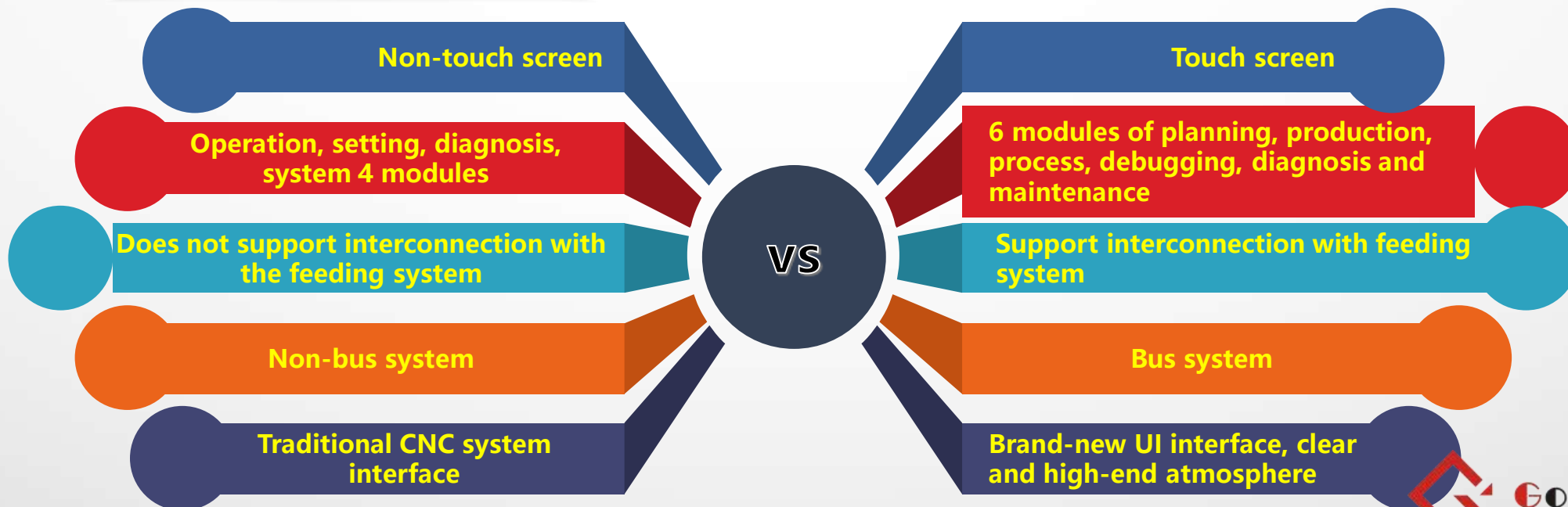
The pipe cutting machine chuck clamps the pipe, and the position is adaptively changed without manual intervention. Realize the fully automatic mode of feeding.



Intelligent processing prediction

According to the measured length data of the feeding pipe, the pipe cutter will not stop processing or give an alarm even if the upper pipe does not match the length of the nested pipe. Instead, it automatically calculates the number of workpieces and the length of the tailings according to the actual pipe length, and the corresponding end unload tailings at the material position.

Software Upgrade- New Architecture Bus Touch Screen Control System



Software Upgrade-Touch Screen

- The touch screen has the advantages of sensitive response speed, easy communication, sturdiness and durability, and space saving.
- It is currently the most convenient, simple and natural way of human-computer interaction.
- The user only needs to tap the icon on the display with a finger. It can be operated by text, which has a sense of modern technology.
- It also supports mouse and keyboard operations.



Software upgrade- bus system has Obvious Advantages

Simplified wiring steps

The PLC host computer only needs to connect two wires to complete the control wiring of dozens or even hundreds of motors, making the wiring layout easier and saving wires.

Strong anti-interference

Bus control only needs two signal lines to achieve strong anti-interference.

Reduced failure rate

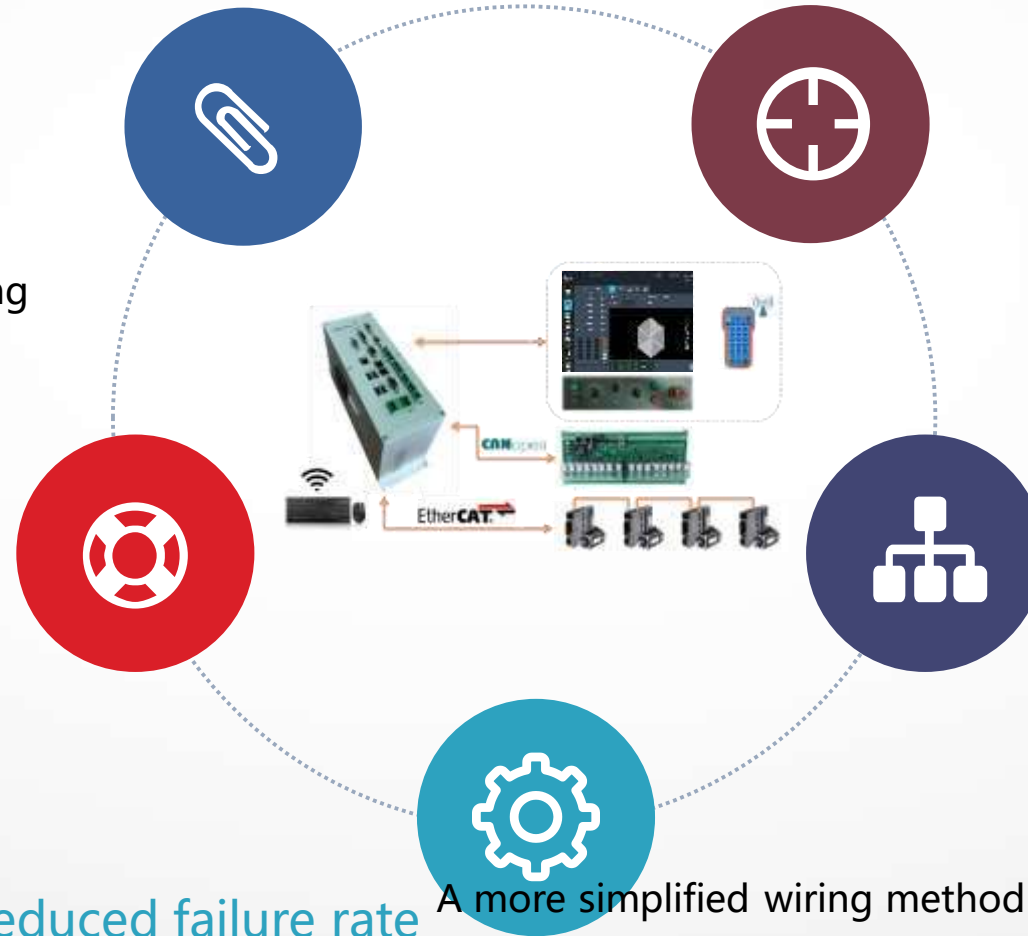
A more simplified wiring method reduces equipment failure problems caused by wiring problems.

Strong synchronization

The bus-type signal transmission rate is as high as 1M, and the synchronization error of the control of multiple motors can be achieved without synchronization error.

Strong scalability

Bus control, whether it is a slave station such as a motor drive or a master station such as a PLC, can generally be configured for multiple networked control. These reserved interfaces can be configured for configuration, which is very helpful for the increase of later functions or the change of control methods. .



Software Upgrade- 6 Modules



Plan

Produce

Craft

Debugging

Diagnosis

Maintenance

Software Upgrade- MES system docking-automated production process

