AMS ADVANCED MECHATRONICS SOLUTIONS, INC

SMART SERIES

Laser Cutting Machines

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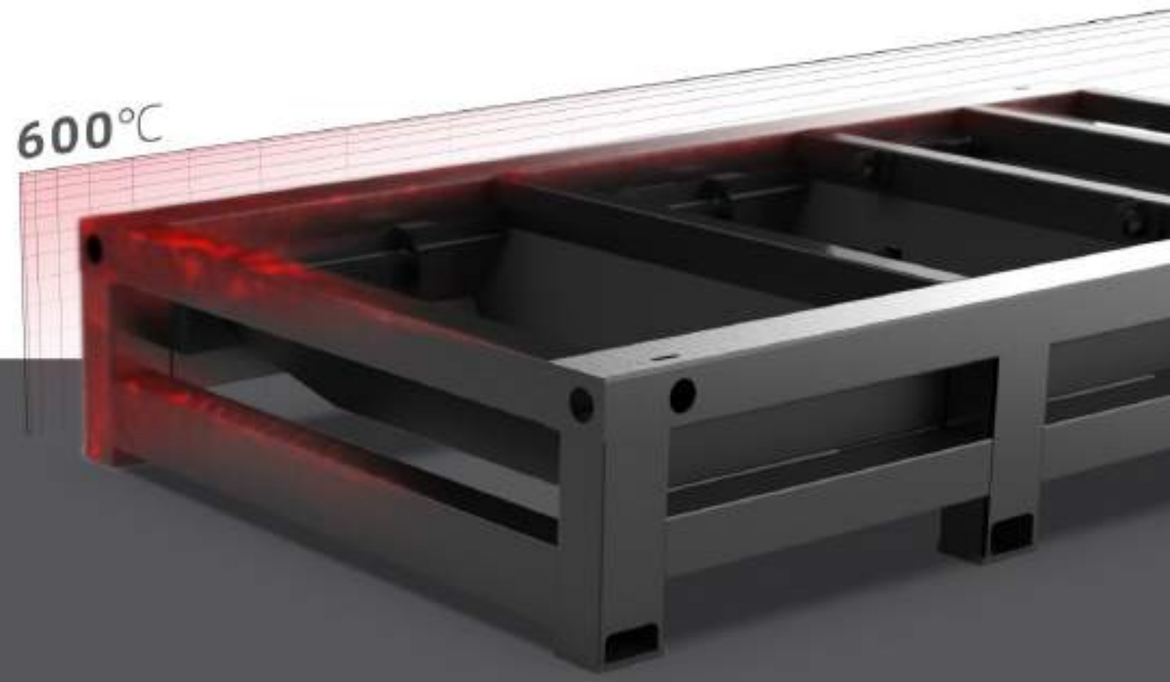
Overview

MODEL	SMART 3015 Pro	SMART 4015 Pro	SMART 4020 Pro	SMART 6015 Pro
Cutting Area (LxW)	3048mm x 1524mm	4064mm x 1524mm	4064mm x 2032mm	6096mm x 1524mm
Laser Source	Fiber & 1000W - 6000W			
CNC System	FSCUT			
Max Moving Speed	120m/min, Acceleration is 1.2G			
Position Accuracy (X and Y axis)	0.05mm			
Reposition Accuracy (X and Y axis)	0.03mm			
Power Supply Requirement	380V 50/60Hz			

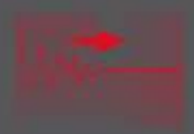
Details Machine bed



High strength machine bed

The machine bed is processed with a stress relief annealing method at 600°C, which ensures a strong structure rigidity

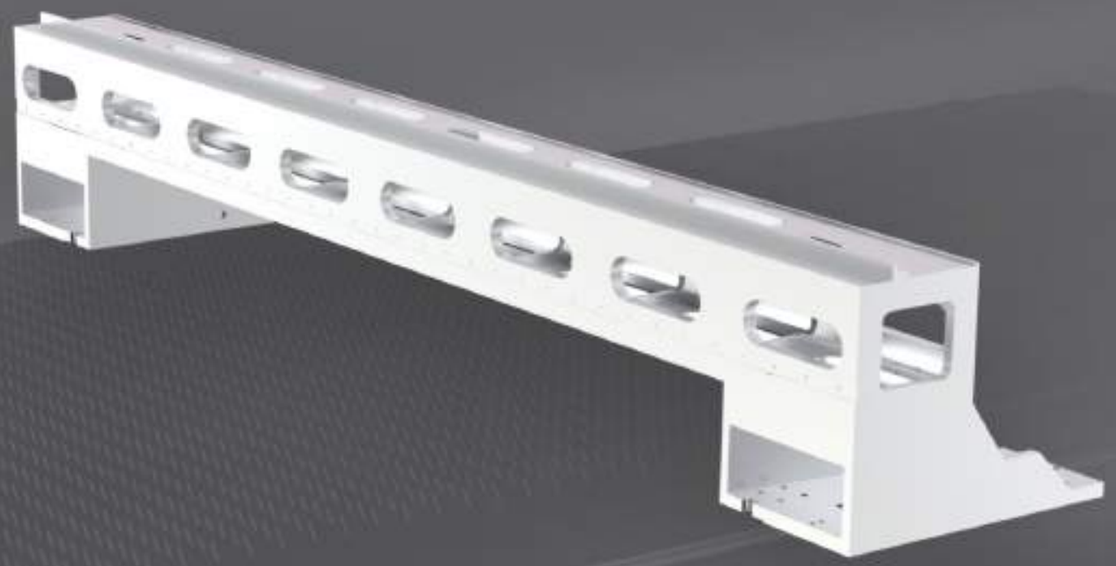
Small Deformation



Low Vibration

High Precision

Details Beam



Beam made of cast aluminum

The beam is formed by integral steel die and die casting technology to improve processing efficiency and quality.

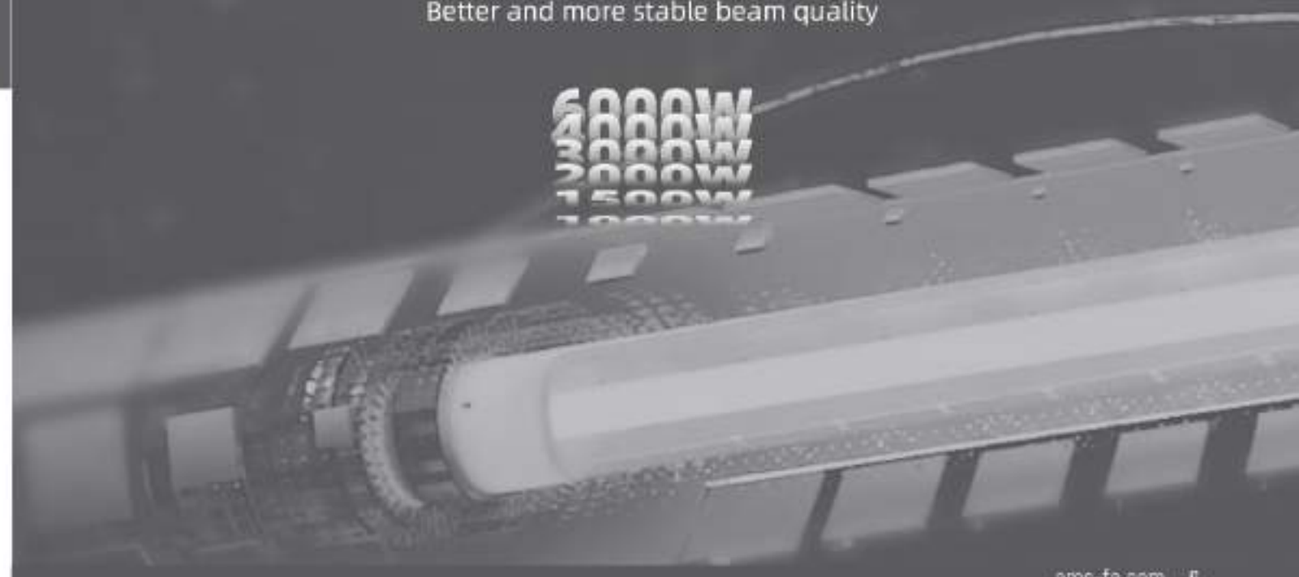
High Speed

The light crossbeam can ensure the machine have high moving speed and improve the processing efficiency.

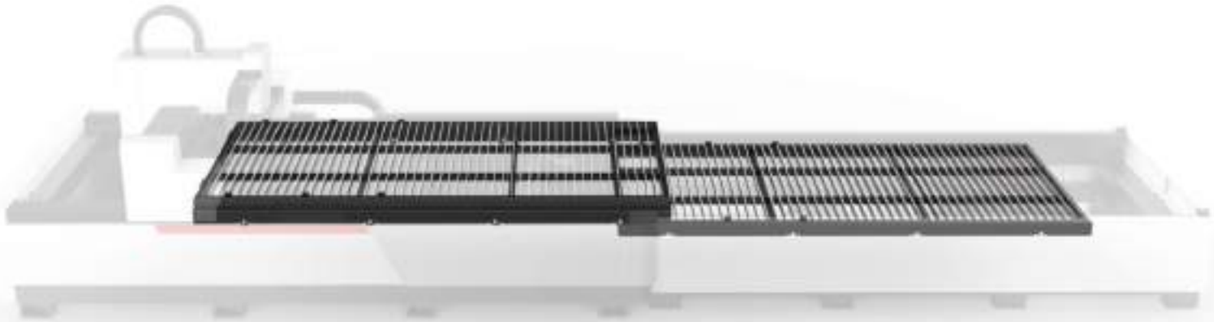
Details Laser source

Higher photoelectric conversion efficiency

Second generation optical fiber transmission system
Better and more stable beam quality



Details Structure



High-speed parallel exchange platform design

Simultaneous exchange of two worktables,
stable and reliable transmission mode, shorter exchange time,
and improved frequency converter.

Security and non-pollution

With a completely enclosed design;
The observation window is made of laser-protective glass
that meets European CE standards.

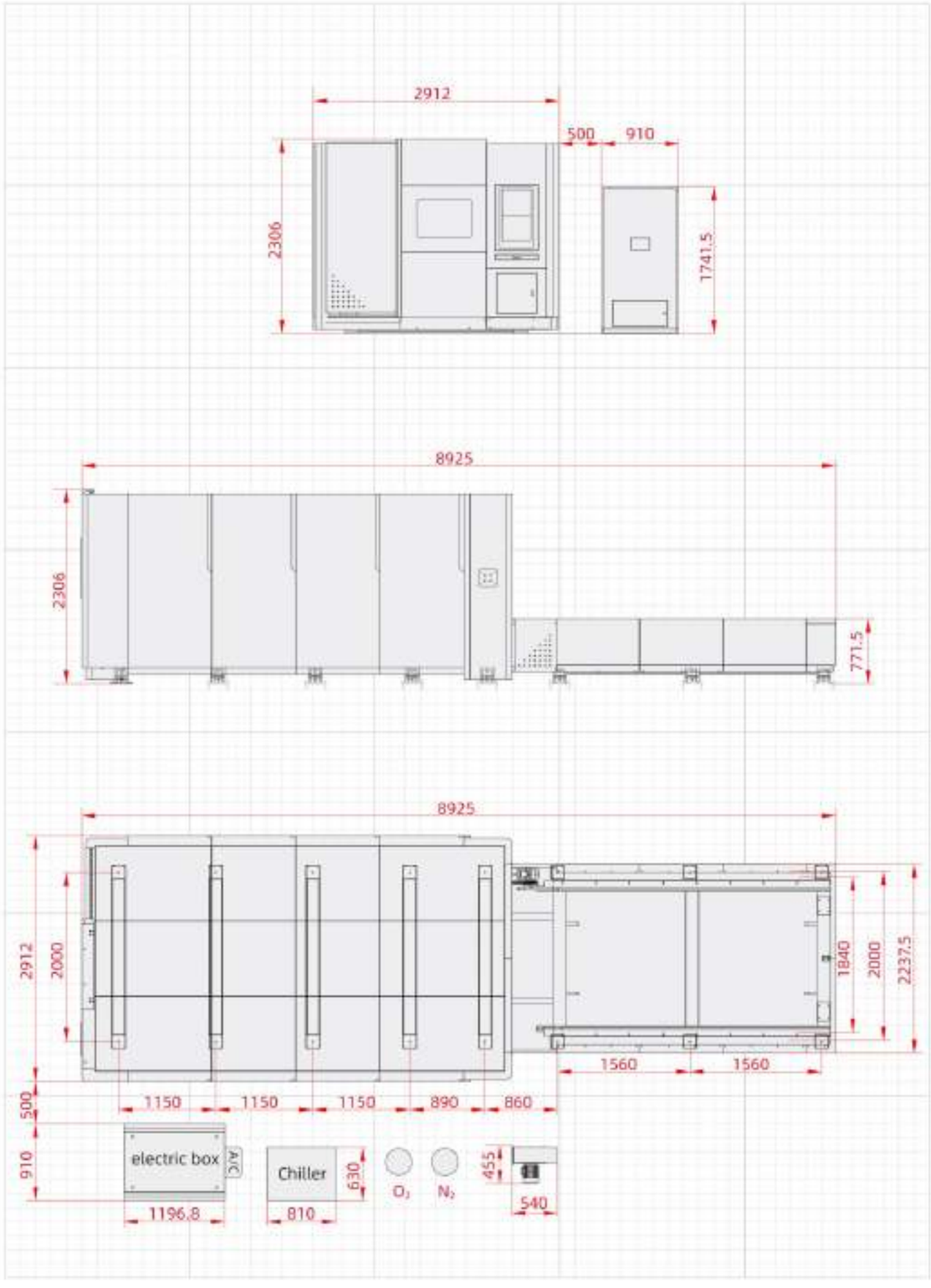
Details Technical Specification

Machine Model	SMART3015 Pro-3000
Cutting Area (L×W)	3048mm×1524mm
Laser Source	Raycus Fiber & 3000W
Transmission system	Dual sides driven gantry structure
CNC System	FSCUT 2000
Servo Motor	Fuji (JAPAN)
Laser Cutting Head	Raytools
Display	21" Industry LCD
Max Moving Speed	120m/min, Acceleration is 1.2G
Position Accuracy (X and Y axis)	0.05mm
Reposition Accuracy (X and Y axis)	0.03mm
Lubrication system	Full-automatic
Power Supply Requirement	380V 50/60Hz
Max loading (KG)	900 KG
Machine weight	6000 Kg
Appearance size	9000mm*3000mm*2400mm
Working environment	Temp:0- 40 ℃,humidity:≤80%,

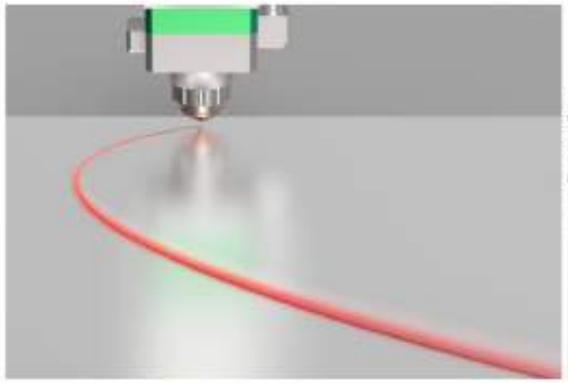
Details Machine configuration

NO.	Model	Name	Quantity	Remarks
1	SMART3015 Pro-3000W	Fiber laser cutting machine (3048mm*1524mm)	1 set	HGSTAR
2	3000W	Laser generator	1 set	RAYCUS
3	Water chiller	Special water chiller for fiber laser generator	1 set	HANLI 3000W
4	Laser head	High accuracy professional fiber laser head	1 set	Swiss Brand Raytools Auto Focus
5	Control system	FSCUT2000	1 set	FSCUT2000
6	Software	CYPCUT	1 set	CYPCUT
7	Driving system	High speed servo motor	4 set	Japan Fuji servo motor X axis 850w Y axis 1300w，Z axis 400w
8	Reducer	imported	4 set	Motovario Franch
9	Electric components	imported	1 set	Chint/Schneider
10	Guide rail	imported	1 set	ITALY PEK
11	Rack	imported	1 set	T-win Taiwan

Details Machine Occupation Map

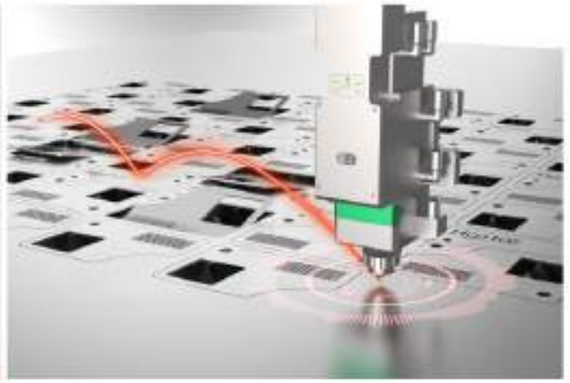


Ability Excellent function



Vibration Suppression

One key quick setting can easily solve the vibration problem of thick plate processing

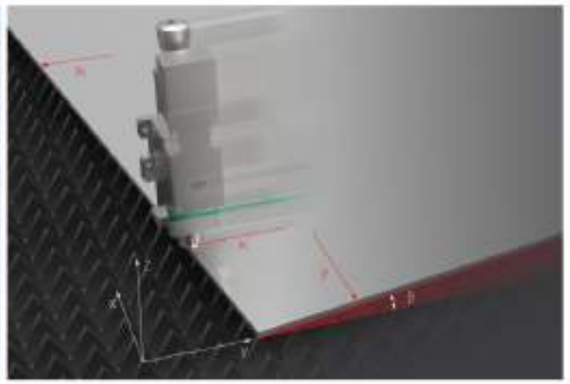


Intelligent obstacle avoidance

Intelligently avoid random raised areas in the cutting process and reduce the risk of head collision

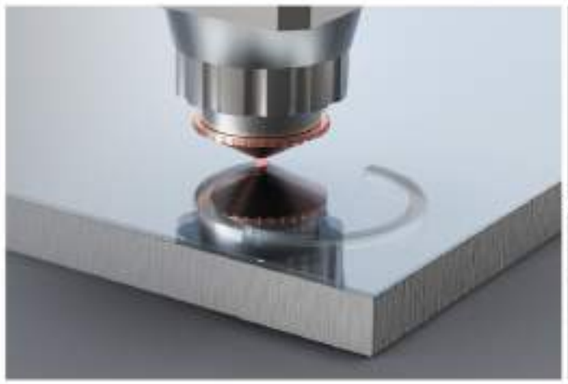
Exclusive tuning database

All you need to do is a simple touch, and the complicated operations are handed over to us



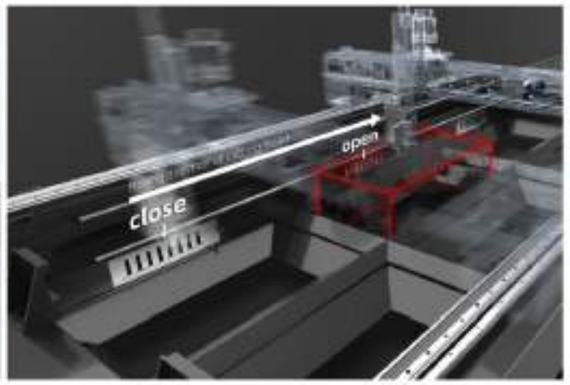
Three point edge finding

The inclination angle and origin of sheet metal are sensed through automatic edge-finding to avoid waste and save time



Membrane removal process

The sequence of film removal and pre perforation can be set flexibly and make workpiece cutting more perfect



Partition dust removal

Through fine setting, the dust removal tuyere can be opened and closed with the movement of the cutting head. Under the same fan configuration, the dust removal effect is effectively enhanced

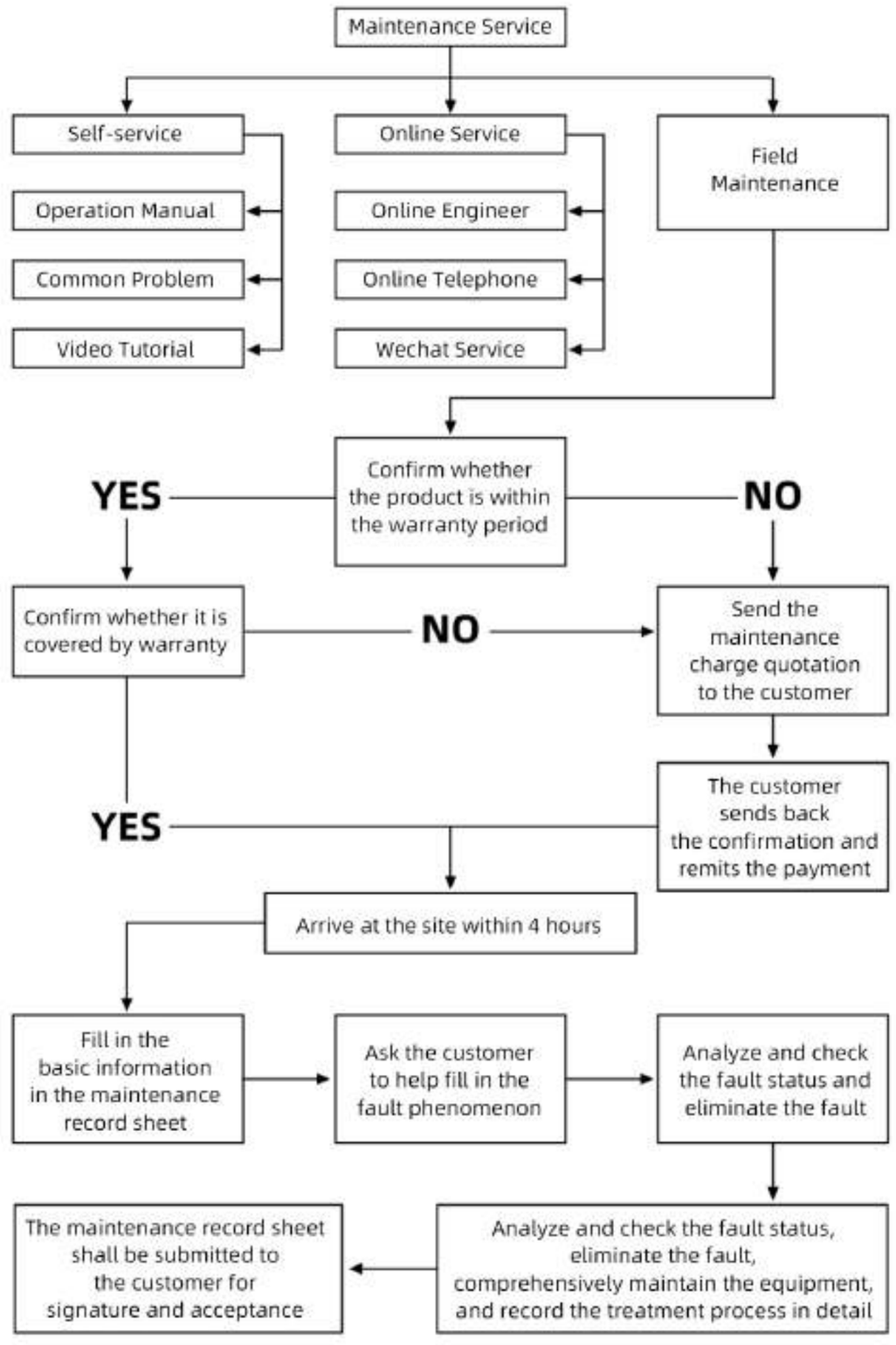
Ability Cutting parameter

Cutting Samples

Applicable to cutting carbon steel, stainless steel, aluminum, brass , alloy metals, etc.

Service Process

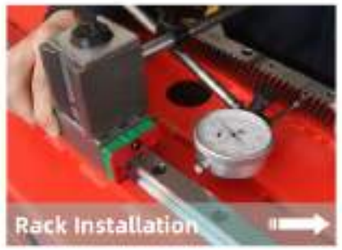
Service Maintenance Process



Service Quality Inspection

Adjust the height of the feet according to the test results of the strip level to ensure the accuracy of subsequent installation

Use photoelectric autocollimator to detect the straightness and flatness of the guiderail to ensure that the detection value is within the standard range



The relative position of the guide rail and the guide rail is locked and clamped by the measuring rod. Statistics and analysis of measure-ment data to ensure that they are parallel

After the beam is installed , use a three -coordinate measuring instrument to check the coaxiality to ensure the relative perpendicularity of the X / Y / Z three-axis

The laser interferometer tests the X-axis positioning accuracy to ensure the accuracy of the whole machine

The laser interferometer tests the Y-axis positioning accuracy to ensure the accuracy of the whole machine

The laser interferometer tests the Z-axis positioning accuracy to ensure the accuracy of the whole machine

Simulate the high-intensity test of various harsh conditions in the actual use of the equipment , and at the same time , according to the requirements of use , rationalize the improvement to ensure the factory pass rate and improve the reliability of the equipment

Adopt sealed composite aluminum foil moisture-proof low-pressure packaging and thick wooden boards to protect the fuselage to prevent bumps and collisions during shipping , and minimize unnecessary mechanical losses that may occur during transportation

Service Delivery Process

1

Machine Inspection

2

Component Fixing

3

Protective Film Wrapping

4

Wooden Boxseal

5

Edge Reinforcement

6

Separate Packaging

7

Lifting Rail Transfer

8

Container Loading

9

Transportation