

I. Product introduction

Robot Laser Cutting Workstation



II. Robot Technical Parameters

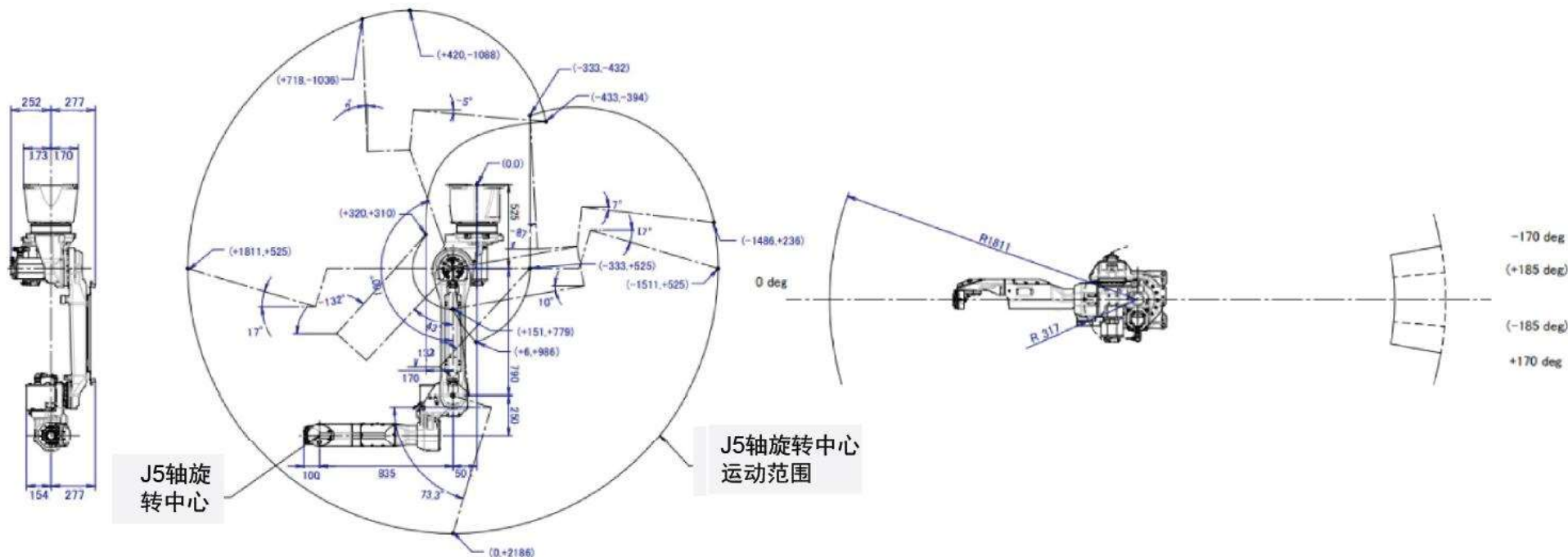
Model	FANUC-M-20iB					
机构 Structure	多关节型机器人 Multi joint robot					
控制轴数 Number of control axes	6轴 (J1、J2、J3、J4、J5、J6)					
可达半径 Reach radius	1853mm					
安装方式 (注释1) Installation method (Note 1)	地面安装、吊挂安装、倾斜安装 Ground installation, hanging installation and inclined installation					
动作范围 (注释2) (最高速度) Action range (Note 2) (maximum speed)	J1	340°/370° (195°/S)	J2	260° (175°/S)	J3	480° (180°/S)
	J4	400° (360°/S)	J5	360° (360°/S)	J6	900° (500°/S)
手腕部最高运动速度 Maximum wrist speed	2000mm/s					
最大负载 Maximum wrist load	25Kg					
手腕允许负载转矩 Allowable load torque of wrist	J4	44Nm	J5	44Nm	J6	22Nm
手腕允许负载惯量 Allowable load inertia of wrist	J4	1.04Kg ^m	J5	1.04Kg ^m	J6	0.28Kg ^m
驱动方式 Driving mode	交流伺服电机驱动 AC servo motor drive					
重复定位精度 Repeated positioning accuracy	±0.02mm					
机器人质量 (注释3) Robot mass (Note 3)	250Kg					
输入电源功率 (平均功率) Input power (average power)	3KVA(1KW)					

Notes:

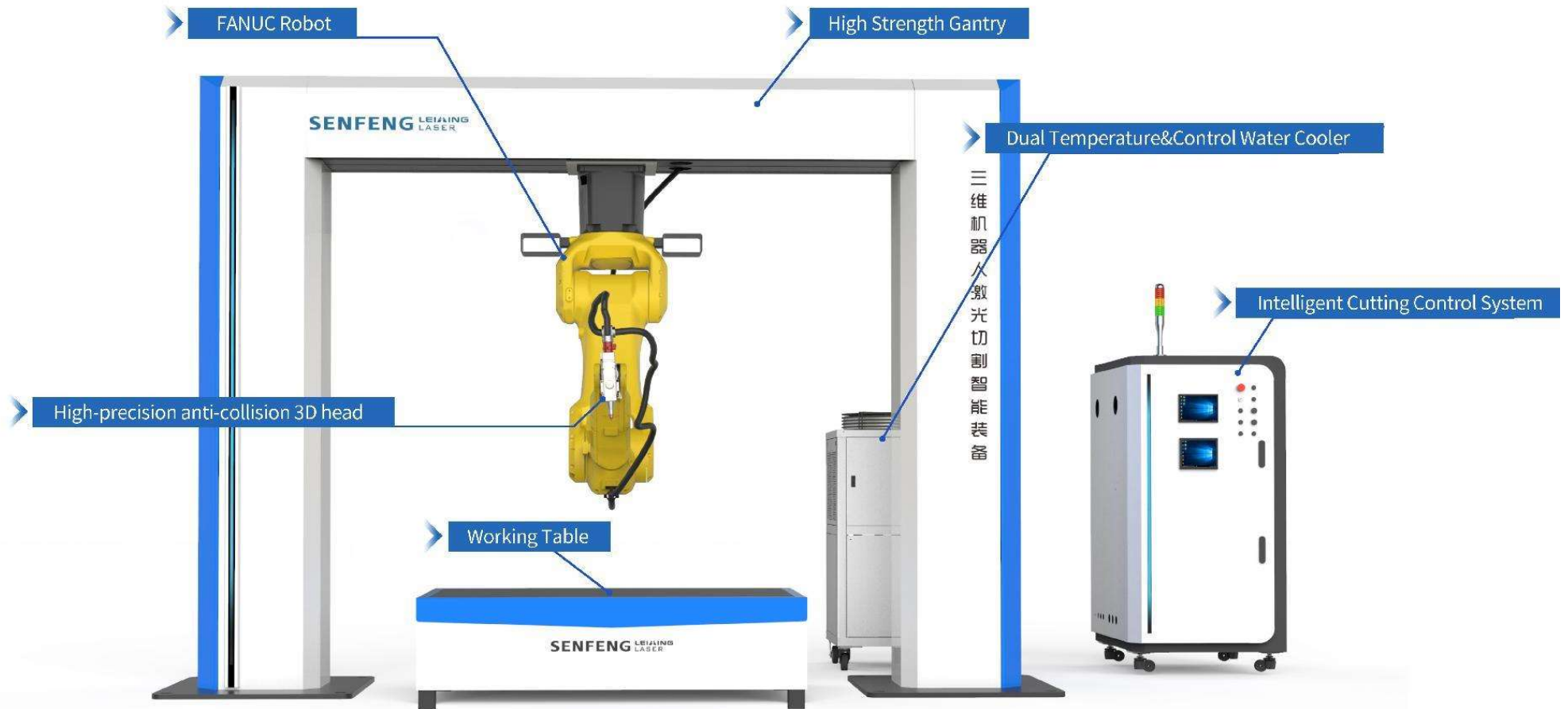
1. The obtainable workpiece accuracy depends to some extent on factors such as workpiece type, preprocessing, workpiece size as well as the workpiece position within the work area.

2. The above parameters are subject to change without notice. The ultimate technical parameters are subject to the actual order agreement. **3**

Motion range and external size



<p>安装条件 Installation conditions</p>	<p>环境温度 Ambient temperature: 0-45°C 环境湿度: 通产在75%RH以下 (无结露现象), 短期在95%RH以下(1个月以内) Ambient humidity: General production below 75% RH (no condensation), short term below 95% RH (within 1 month)</p>
	<p>振动加速度 Vibration acceleration: 4.9m/S²</p>
<p>注释 Notes</p>	<p>注释1) 如果采用倾斜安装方式, 机器人的J1和J2轴的运动范围将受到限制。 Note 1) if tilt mounting is used, the range of motion of the robot's j 1 and j 2 axes will be limited. 注释2) 短距离运动时, 可能达不到各轴的最高标称速度。 Note 2) the maximum nominal speed of each axis may not be achieved for short distances. 注释3) 不含机器人控制器的质量。 Note 3) the mass of the robot controller is not included.</p>



III. Configuration

Name	Quantity	Brand
2000W fiber laser	1 unit	Raycus
Laser cutting head and accessories	1 set	EC/RayTools/WXS
Robot body and control cabinet	1set	Fanuc
Gantry accessories	1 set	Senfeng Laser
Electric control cabinet	1 set	Senfeng Laser
Electrical and pneumatic systems	1 set	France SCHNEIDER, Japan SMC/Taiwan AIRTAC
Water cooling unit	1 set	HANLI

Notes:

1. This configuration is the optimal one verified by our company. If the brand and configuration are changed, irreversible effects may occur, please be aware of this.
2. The warranty period of the whole machine is one year (except for wearing parts and consumables/force majeure natural disasters/damage of war and illegal operations/man-made sabotage).

IV. Main Features

Laser Device: Raycus Laser Device



- Minimum fiber core is 50nm
- New generation of intelligent control system
- Multi-level security and a protection against high-reflective damage;
- Electro-optical efficiency up to 35%

Cutting Head



- Multiple protective lenses, efficient protection of collimating and focusing lenses
- Automatic focusing, reducing human intervention
- Highly dustproof, IP65 dustproof, patented protection lens holder cover, dustproof and no dead ends
- High-speed cutting

V. Cutting Capability and Application

Cutting Materials

Carbon steel,
stainless steel,
aluminum alloy,
brass,
copper,
galvanized sheet,
silicon steel
sheet,
electrolytic sheet,
titanium alloy,
manganese alloy,
etc.



Application Industry



Sheet Metal Fabrication



Manufacturing industry



Refrigeration equipment



Mechanical processing

SENFENG

Cutting | Cladding | Cleaning | Welding | Bending | Automation



Elevator production



Advertising industry



Metal Cabinet Industry

VI. Cutting Parameter

Materials	厚度Thickness (MM)	切割速度Speed (m/min)	气体Gas
Stainless steel	1	15-25	N2
	2	9-11	N2
	3	4.8-6	N2
	4	1.8-2.1	N2
	5	1.2-1.5	N2
Carbon steel	1	10-12	N2
	2	7-9	N2
	3	3.3-3.6	O2
	4	2.7-3	O2
	5	2.4-2.7	O2
	6	1.8-2.1	O2
Aluminum	8	1-1.2	O2
	10	0.8-1	O2
	1	18-24	N2
	2	6-9	N2
	3	4.2-4.8	N2
	4	1.8-2.4	N2
	5	1.2-1.5	N2