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# 1.Technical Parameters:

FEATURS	TECHNICAL DATA
Laser power	1500W
Laser wavelength	1060-1080 nm
Working area	3000(L)*1500(W) mm
Z-axis path	120 mm
Machine tolerance	± 0.05 mm/m
Repetition tolerances	± 0.05mm
X,Y-axis location accuracy	≤±0.05mm
X,Y-axis repeat location accuracy	≤±0.05mm
X,Y-axis idle moving speed	120 m/min
Acceleration rate	1 G
Max cutting speed	≤45m/min
Machine dimension	4470mm*2123mm*1800mm
Machine total weight	3.0T





## 2.Machine Confutation

NO.	Model	Name	Quantity	Remarks
1	FE-1530E	Fiber laser cutting machine	1 set	FE & TECH
2	1500W	Laser generator	1 set	RAYCUS
3	Water chiller	Special water chiller for fiber laser generator	1 set	S&A
4	Laser head	High accuracy professional fiber laser head	1 set	Raytools BM110 auto focus
5	Control system	CYPCUT	1 set	CYPCUT2000C
6	Driving system	High speed servo motor	4 sets	Japan Fuji servo motor 400w+850w+1.3kw
7	Reducer	imported	3 sets	Japan Shimpo
8	Electric components	imported	1 set	Schneider
9	Guide rail	imported	1 set	HIWIN
10	Rack	imported	1 set	ҮҮС
11	Proportional valve	imported	1 set	Japan SMC
12	Cast aluminum beam	standard	1 set	FE & TECH
13	display screen	standard	1 set	FE & TECH
14	Protective lens, nozzles	standard	5 set	FE & TECH



# **3.Configuration Brand and Model**

Item	Parts	Brand	Remarks
Viaycus Decision Notice	Laser source	Raycus 1500W	Best laser source in China.
	Cutting head	Raytools BM110	Autofocus laser head; Almost zero fault; Anti-collision design; height adjustment high sensitivity
2017-11-4 06-35	Fabricated bed	Aggravated	Aggravated and reinforced integrated bed with hot processing, to support the gantry moving high speed, and accuracy support 0.02mm. Even after 10 year use, there no any deformation.
	Gantry	Light and stable	We use light and precise gantry made by high quality aluminum, this structure provides high speed and precise movement, maximum speed reaches up to 120m/min. Save 30% time while moving.
	Servo motor & Drives	FUJI(Japan)	FUJI is servo motor and drives from Japan, 4 sets motor power depends on axis traveling, Y & X axis is longest, and Z axis is shortest. Acceleration reaches up to 1.0G.



	Rail Guide	HIWIN (Taiwan)	Accuracy class 6, top level. Classic is 6>5>4>3>2>1.
YYC	Rack and Pinion	YYC (Taiwan)	Long working life, after long time use, the mold can still keep shape, no abrasion in good use condition, add oil always.
	Reducer	Shimpo (Japan)	Large torque, high effect, save kinetic energy, reduce the rotating speed of gear and racks, to longer the life of transmission assembly.
	Machine Software	CYPCUT	Support three-grade perforate automatic focus adjustment fly- cutting. Leapfrog the colling points cutting compensation cutting slightly joined pre-punching cutting. Cutting with film automatic edge finding automatic layout round tube cutting. Non-volatile memory cutting with exchange platform
	Water chiller	S&A	Dual temperature and dual controller to cooling laser source and cutting head, this is high-tech standalone design to provide best cooling effect and avoid failure, support 24 hours continuous working.

			Focus Explore Your Identity
CLOUDRAY CLOUDRAY	Control system	FSCUT2000	FSCUT2000S medium power laser cutting system is a full-solution open- loop control system specially designed for sheet metal fabrication industry, with features of easy to install and adjust, excellent performance and fully integrated solutions, it is the upgrade version from FSCUT2000C.
	Proportional valve	SMC(Japan)	This is the valve control the pressure of gas automatically. While penetration, the pressure is small. While cutting, the pressure increasing. Very smart system to save your working time.
	Lubricating oil valve	LOWENT	Store the oil and keep Lubricating for all transmission parts, like gear and racks, lead rail, motors.
WARRANTY	Warranty	24 Months	24 Months for whole machine. In 12 Months guarantee from the machine ship out, we provide free replacement parts (not quick-wear parts),
	Shipment	FOB/ CIF/ DDU/ DDP by sea	Fiber laser cutting machine must ship by sea, for most area the delivery time is around 30 ~ 40 Working days.



#### 4.CUTTINGCAPACITY:

Professional for cutting thin Sheetmetal, high-qualitycarbonsteelplatecutting0.5~12mm,0.5to5mmstainlesssteel plate, and also cutting aluminum alloy plate, galvanized sheet, electrolytic plate, silicon steel, titanium, aluminum zinc plate, thin brass plate and other various metamaterials

MATERIAL	MAX CUTTING THICKNESS	GOOD CUTTING THICKNESS
CARBON STEEL	16MM	12MM
STAINLESS STEEL	6MM	5MM

#### **5. CUTTING PARAMETER FOR REFERENCE**

MATERIAL	THICK NESS	ASSISTANCE GAS	MAX CUTTING SPEED (M/MIN)
	1		25
	3		4
	6	0	1.6
CS	8	2	1.2
	10		1
	12		0.8
	15		0.6
	16		0.4
	1		25
	2		7
SS	3	N	4
	4	2	2
	5		1.3



## 6.RUNNING COST OF MACHINE (REFERENCEONLY)

# A. COST OFELECTRICITY

PARTS	WASTING ELECTRICITY (KW/H)	TOTAL	APPROX COST
LASER SOURCE	≦18		
CNC SYSTEM	≦6		Do 200
WATER CHILLER	≦5	≦ 30	Rs.300 (KW/H, and basic on 70% running Using factor)
AIR COMPRESOR		⊒ 30	
AIR DRY TOOL			
DUST PROTECTIVE DEVICE	≦1		

## **B.COST OF ASSISTANCEGAS**

GAS	PRICE	RUNING TIME	COST PER H	CUTTING RESULT	NOTE
02		180 min		Black edge	1mm CS as sample
N2		15 min		White edge	1mm SS as sample
AIR				Yellow edge	Less than 2mm steel cutting

# **C.CONSUMABLE PARTS**

Name	Replacement Time
Protective Mirror	2 pcs/month
Nozzle	depends on your usage



## 7.Cutting Parameters

		500W	1000W	1500	2000W	3000W	4000W	6000W	8000W	10000W	12000W
Material	Thickness	speed m/ min	peed m/min	peed m/min	speed m/min	speed m/min	speed m/min	peed m/min	speed m/min	speed m/min	peed m/mir
	1	7.09.0	8.010	1526	2430	3040	3342	3542	3542	3542	3542
	2	3.0-4.5	4.06.5	4.57.0	4.76.0	4.87.5	5.28.0	6.08.0	6.210	7.012	1013
	3	1.83.0	2.43.0	2.64.0	3.04.8	3.35.0	3.55.5	3.86.5	4.07.0	4.27.5	4.58.0
	4	1.3-1.5	2.02.4	2.53.0	2.83.5	3.04.2	3.14.8	3.55.0	3.55.5	3.55.5	3.55.5
	5	0.91.1	1.52.0	2.02.5	2.23.0	2.63.5	2.73.6	3.34.2	3.34.5	3.34.5	3.34.8
	6	0.60.9	1.41.6	1.62.2	1.82.6	2.33.2	2.0-3.0	2.84.0	3.04.2	3.04.2	2.53.5
Carbon steel	10		0.61.0	0.8-1.1	1.11.3	1.22.0	1.52.0	18-25	2.22.7	2.22.7	2.2-2.7
(Q235A)	12		0.50.8	0.71.0	0.91.2	1.01.6	1.21.8	1.22.0	1.22.1	1.22.1	1.22.1
	14			0.50.7	0.70.8	0.91.4	0.91.2	1.51.8	1.71.9	1.71.9	1.71.9
	16				0.6-0.7	0.71.0	0.81.0	0.81.5	0.91.7	0.91.7	0.91.7
	18				0.40.6	0.60.8	0.650.9	0.650.9	0.650.9	0.650.9	0.650.9
	20					0.50.8	0.60.9	0.60.9	0.60.9	0.60.9	0.60.9
	22			-		0.40.6	0.50.8	0.50.8	0.50.8	0.50.8	0.50.8
	25	0.0.10	10.00	20.00	21.20	20.00	0.30.5	0.30.5	0.30.7	0.3-+0.7	0.30.7
	1	8.013	1825	2027	2430	3035	3240	4555	5066	6075	7085
	2	2.45.0	7.012	8.013	9.014 4.06.5	1321 6.010	1628	2035	3042 2030	4055	5066 3345
	4	0.00.8	1.82.5	1.52.4	3.04.5	4.06.0	5.08.0	1016	1421	1825	2232
	5		0.60.7	0.71.3	1.8-2.5	3.05.0	4.05.5	8.012	12-17	1522	1825
3 6 5	6			0.71.0	1.2-2.0	2.04.0	25-4.5	6.09.0	8.014.0	1215	1521
Stainless steel	8				0.7-1.0	1.5-2.0	1.63.0	4.05.0	6.08.0	8.012.0	1016
(201)	10					0.60.8	0.81.2	1.82.5	3.05.0	6.08.0	8.0-12
at an	12					0.40.6	0.50.8	1.21.8	1.83.0	3.05.0	6.08.0
	14				S		0.40.6	0.60.8	1.21.8	1.83.0	3.05.0
	20			4	X			0.40.6	0.60.7	1.21.8	1.83.0
	25			N	-				0.50.6	0.60.7	1.21.8
	30 40		-	_					0.40.5	0.50.6	0.60.7
	1	4.0++5.5	6.010	1020	1525	2538	3540	4555	5065	6075	7085
	2	0.7-1.5	2.83.6	5.07.0	710	1018	1325	2030	2538	3345	3850
	3		0.71.5	2.04.0	4.06.0	6.58.0	7.0-13	1318	2030	2535	3040
	4			1.01.5	2.03.0	3.55.0	4.05.5	1012	1318	2130	2538
	5			0.71.0	1.21.8	2.53.5	3.04.5	5.08.0	9.012	1320	1525
ener can	6				0.71.0	1.52.5	2.03.5	4.06.0	4.58.0	9.012	1318
Aluminum	8			-	0.60.8	0.71.0	0.91.6	2.03.0	4.06.0	4.58.0	9.0-12
	10					0.40.7	0.61.5	1.02.0	2.23.0	4.06.0	4.58.0
	12					0.3-0.45	0.40.6	0.81.4	1.52.0	2.23.0	4.06.0
	16 20					-	0.5-40.4	0.60.8	0.71.0	1.01.6	2.23.0
	25							0.0-0.1	0.50.7	0.71.0	1.01.6
	35									0.50.7	0.71.0
	1	4.05.5	6.010	8.013	1016	2035	2530	4555	5565	6575	7585
	2	0.51.0	2.83.6	3.04.5	4.57.5	6.010	8.012	2530	3040	3345	3850
	3		0.51.0	1.52.5	2.54.0	4.06.0	5.06.5	1218	2030	2540	3050
	4			1.01.6	1.52.0	3.0-5.0	3.25.5	8.010	1018	1524	2533
Brass	5			0.50.7	0.91.2	1.52.0	2.03.0	4.56.0	7.09.0	9.015	1524
	6		_	_	0.40.7	1.0-1.8	1.42.0	3.04.5	4.56.5	7.09.0	9.015
	8					0.50.7	0.71.0	1.62.2	2.44.0	4.56.5	7.09.0
	10						0.20.4	0.81.2	1.52.2 0.81.5	2.44.0	4.56.5

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