

# α Open Series ALFA

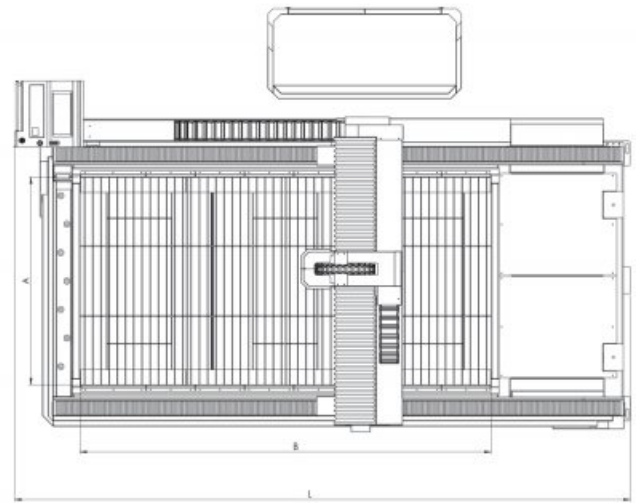
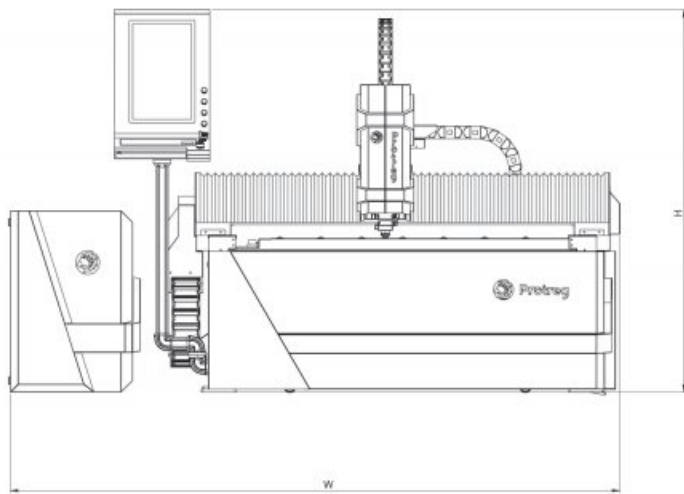
LASER

- 21" LCD Industrial Touch Screen
- Windows Based Cnc Controller
- Operator Panel
- Safe Module Inputs and Outputs
- Chiller
- Automatic Height Control System
- Troubleshooting and service opportunity with remote connection
- Automatic lubrication system
- Laser Cutting Head
- 250 mm Standard Stroke
- 3 Axis (X, Y,Z) Movement
- Servo Motor and drivers set
- Planetary Gearbox
- High Precision Linear Rails
- High Precision Helix Gear and Creamer
- Cable Channels on X,Y, Z Axes
- Table with Cnc Controlled Hydraulic System (optional)
- Fixed Control Panel System
- 3 Emergency Buttons
- Nesting Program



## RESONATOR SPECIFICATIONS

Resonator	watt	1000	2000	3000
Multi-mode BPP	rad		<2.8, 1.7 Typ.	
Power Stability	%		± 1	
Single-mode Fiber Core	µm		100	
Coolant flow rate	l/min		2	
Thickness	-			
BLACK STEEL (S235JR,S355MC)	mm	8	16	18
STAINLESS STEEL (AISI 304)	mm	3	6	8
ALUMINUM (ALMG3)	mm	3	6	8
COPPER (CU-ETP)	mm	2	4	5
COPPER (CUZN37)	mm	2	4	5
Maximum Modulation Rate	kHz		50	
Wavelength	nm		1075 ± 10	
Auxiliary Gases	-			
OXYGEN	-		0,5-6 Bar	
AZOTE	-		0,5-25 Bar	
DRY AIR	-		0,5-25 Bar	



## OPEN LASER SERIES COMPACT TYPE CUTTING MACHINES

### TECHNICAL SPECIFICATIONS

Working Area	mm	1500x3000	2000x4000	2000x6000
Max. Loading	kg	1000	1750	2650
Axis movements	-			
X,U AXES/SERVO MOTOR TABLE (B)	mm	3220	4370	6570
Y, AXIS/SERVO MOTOR BRIDGE (A)	mm	1590	2090	2090
Z, AXIS/SERVO MOTOR CUTTING HEAD	mm	150	150	150
Acceleration	G	1-2	1-2	1-2
Max. Axis speeds	m/min	113 (Result speed) (X,Y single axis speed 80 meters/min)		
Machine dimensions (LxWxH)	mm	4750x2650x2005	6000x3150x2005	8200x3150x2005
Weight ≈	kg	3250	4250	5200
Machine Axis	-	4 Eksen (X,Y,Z,U)		
Positioning accuracy	mm	±0,1		
Repetition accuracy	mm	±0,05		
CNC	-	✓	✓	✓
CAD-CAM Software	-	✓	✓	✓
Network	-	EtherCAT		
Control Panel	-	21-inch touch screen,Industrial type psl. keyboard,PLC keys		

## Laser Cutting Thickness & Speed Chart

		500W	1000W	1500	2000W	3000W	4000W	6000W	8000W	10000W	12000W
Thick		speed m/min	speed m/min	speed m/min	speed m/min	speed m/min	speed m/min	speed m/min	speed m/min	speed m/min	speed m/min
Carbon Steel (Q235A)	1	7.0-9.0	8.0-10	15-26	24-30	30-40	33-42	35-42	35-42	35-42	35-42
	2	3.0-4.5	4.0-6.5	4.5-7.0	4.7-6.0	4.8-7.5	5.2-8.0	6.0-8.0	6.2-10	7.0-12	10-13
	3	1.8-3.0	2.4-3.0	2.6-4.0	3.0-4.8	3.3-5.0	3.5-5.5	3.8-6.5	4.0-7.0	4.2-7.5	4.5-8.0
	4	1.3-1.5	2.0-2.4	2.5-3.0	2.8-3.5	3.0-4.2	3.1-4.8	3.5-5.0	3.5-5.5	3.5-5.5	3.5-5.5
	5	0.9-1.1	1.5-2.0	2.0-2.5	2.2-3.0	2.6-3.5	2.7-3.6	3.3-4.2	3.3-4.5	3.3-4.5	3.3-4.8
	6	0.6-0.9	1.4-1.6	1.6-2.2	1.8-2.6	2.3-3.2	2.5-3.4	2.8-4.0	3.0-4.2	3.0-4.2	3.0-4.2
	8		0.8-1.2	1.0-1.4	1.2-1.8	1.8-2.6	2.0-3.0	2.2-3.2	2.5-3.5	2.5-3.5	2.5-3.5
	10		0.6-1.0	0.8-1.1	1.1-1.3	1.2-2.0	1.5-2.0	1.8-2.5	2.2-2.7	2.2-2.7	2.2-2.7
	12		0.5-0.8	0.7-1.0	0.9-1.2	1.0-1.6	1.2-1.8	1.2-2.0	1.2-2.1	1.2-2.1	1.2-2.1
	14			0.5-0.7	0.7-0.8	0.9-1.4	0.9-1.2	1.5-1.8	1.7-1.9	1.7-1.9	1.7-1.9
	16				0.6-0.7	0.7-1.0	0.8-1.0	0.8-1.5	0.9-1.7	0.9-1.7	0.9-1.7
	18				0.4-0.6	0.6-0.8	0.65-0.9	0.65-0.9	0.65-0.9	0.65-0.9	0.65-0.9
	20					0.5-0.8	0.6-0.9	0.6-0.9	0.6-0.9	0.6-0.9	0.6-0.9
	22					0.4-0.6	0.5-0.8	0.5-0.8	0.5-0.8	0.5-0.8	0.5-0.8
	25						0.3-0.5	0.3-0.5	0.3-0.7	0.3-0.7	0.3-0.7
Stainless Steel (201)	1	8.0-13	18-25	20-27	24-30	30-35	32-40	45-55	50-66	60-75	70-85
	2	2.4-5.0	7.0-12	8.0-13	9.0-14	13-21	16-28	20-35	30-42	40-55	50-66
	3	0.6-0.8	1.8-2.5	3.0-5.0	4.0-6.5	6.0-10	7.0-15	15-24	20-30	27-38	33-45
	4		1.2-1.3	1.5-2.4	3.0-4.5	4.0-6.0	5.0-8.0	10-16	14-21	18-25	22-32
	5		0.6-0.7	0.7-1.3	1.8-2.5	3.0-5.0	4.0-5.5	8.0-12	12-17	15-22	18-25
	6			0.7-1.0	1.2-2.0	2.0-4.0	2.5-4.5	6.0-9.0	8.0-14.0	12-15	15-21
	8				0.7-1.0	1.5-2.0	1.6-3.0	4.0-5.0	6.0-8.0	8.0-12.0	10-16
	10					0.6-0.8	0.8-1.2	1.8-2.5	3.0-5.0	6.0-8.0	8.0-12
	12					0.4-0.6	0.5-0.8	1.2-1.8	1.8-3.0	3.0-5.0	6.0-8.0
	14						0.4-0.6	0.6-0.8	1.2-1.8	1.8-3.0	3.0-5.0
	20							0.4-0.6	0.6-0.7	1.2-1.8	1.8-3.0
	25								0.5-0.6	0.6-0.7	1.2-1.8
30								0.4-0.5	0.5-0.6	0.6-0.7	
40									0.4-0.5	0.5-0.6	
Aluminum	1	4.0-5.5	6.0-10	10-20	15-25	25-38	35-40	45-55	50-65	60-75	70-85
	2	0.7-1.5	2.8-3.6	5.0-7.0	7-10	10-18	13-25	20-30	25-38	33-45	38-50
	3		0.7-1.5	2.0-4.0	4.0-6.0	6.5-8.0	7.0-13	13-18	20-30	25-35	30-40
	4			1.0-1.5	2.0-3.0	3.5-5.0	4.0-5.5	10-12	13-18	21-30	25-38
	5			0.7-1.0	1.2-1.8	2.5-3.5	3.0-4.5	5.0-8.0	9.0-12	13-20	15-25
	6				0.7-1.0	1.5-2.5	2.0-3.5	4.0-6.0	4.5-8.0	9.0-12	13-18
	8				0.6-0.8	0.7-1.0	0.9-1.6	2.0-3.0	4.0-6.0	4.5-8.0	9.0-12
	10					0.4-0.7	0.6-1.5	1.0-2.0	2.2-3.0	4.0-6.0	4.5-8.0
	12					0.3-0.45	0.4-0.6	0.8-1.4	1.5-2.0	2.2-3.0	4.0-6.0
	16						0.3-0.4	0.6-0.8	1.0-1.6	1.5-2.0	2.2-3.0
	20							0.5-0.7	0.7-1.0	1.0-1.6	1.5-2.0
	25								0.5-0.7	0.7-1.0	1.0-1.6
35									0.5-0.7	0.7-1.0	
Brast	1	4.0-5.5	6.0-10	8.0-13	10-16	20-35	25-30	45-55	55-65	65-75	75-85
	2	0.5-1.0	2.8-3.6	3.0-4.5	4.5-7.5	6.0-10	8.0-12	25-30	30-40	33-45	38-50
	3		0.5-1.0	1.5-2.5	2.5-4.0	4.0-6.0	5.0-6.5	12-18	20-30	25-40	30-50
	4			1.0-1.6	1.5-2.0	3.0-5.0	3.2-5.5	8.0-10	10-18	15-24	25-33
	5			0.5-0.7	0.9-1.2	1.5-2.0	2.0-3.0	4.5-6.0	7.0-9.0	9.0-15	15-24
	6				0.4-0.7	1.0-1.8	1.4-2.0	3.0-4.5	4.5-6.5	7.0-9.0	9.0-15
	8					0.5-0.7	0.7-1.0	1.6-2.2	2.4-4.0	4.5-6.5	7.0-9.0
	10						0.2-0.4	0.8-1.2	1.5-2.2	2.4-4.0	4.5-6.5
	12							0.2-0.4	0.8-1.5	1.5-2.2	2.4-4.0
	14								0.4-0.6	0.6-0.8	0.8-1.5

**Note: This table data is for reference only!**

1. Different fiber optics, material quality, gases, optical lenses, cutting patterns, etc., will affect the cutting speed and need to be adjusted according to site conditions;
2. The yellow part is nitrogen (pure nitrogen) cutting, the green part is oxygen (pure oxygen) cutting;
3. Laser cutting in the processing of the limit material is inefficient and the effect will be reduced, can not be continuous processing;
4. For the cutting of high anti-corrosive materials such as copper and aluminum, attention should be paid to adjusting the process. It is not recommended to continuously process for a long time.