

# G SERIES

LARGE FORMAT LASER CUTTING MACHINE WITH LIGHT RAIL BED

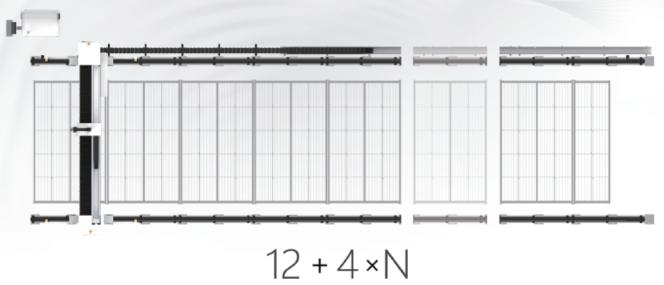
(6kW/12kW/20kW/22kW/30kW/40kW)



For more information, please go to the website: www.bodor.com



# **ULTRA-LARGE FORMAT**



(The modular bed length reaches a maximum of 24M.)

- Various sizes are available with a maximum of 24500mm\*3200mm thanks to the sectional modules of machine bed with uniform stress distribution.
- Achieve overall machining of long workpieces, meet more cutting demands.



# **BODOR THINKER**





- High-end intelligent system, stable and reliable, easy to setup and debug, keep safe in production, rich in functions, and excellent in performance.
- It supports modular, personalized, automated, and informatized solutions.







#### Intelligent Anti-collision of Laser Head

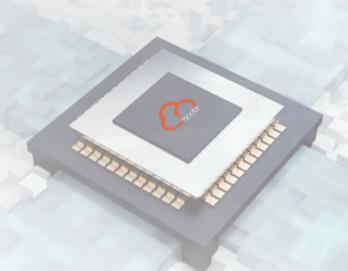
• 360°radar system can detect any obstacles in advance, and Z axis high-speed motion will be activated to immediately avoid obstacles, avoiding collisions.

#### Air Pressure Intelligent Control

- Accurate monitoring of gas pressure, full closed-loop control, ensures stability of cutting and reduces production cost.
- The operation is simplified with no need of manual calibration, and improve the sensitivity and accuracy of air pressure changes through machine autonomous learning.



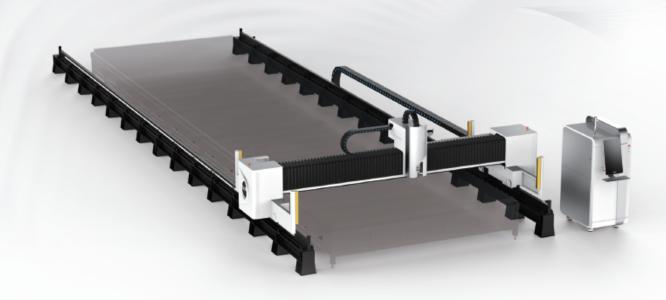
# HIGH SPEED CUTTING EXPERT DATABASE



- Including data for various cutting technologies, such as carbon steel oxygen fast cutting (COF), carbon steel Economic fast cutting (CEF), Low Pressure Nitrogen fast cutting (LNF), etc.
- For COF, the speed is doubled without changing the cutting quality when cutting thick plate
- For LNF, the nitrogen pressure reduces to 4 bar when cutting 10mm stainless steel, the cutting speed can be improved at least 10%.



#### LIGHT RAIL BED



- Light rail type bed with sectional sturcture, featuring flexible installation, easy maintenance and convenient transportation;
- The bed is separated from the table, ensuring the strength and stability by effectively preventing the bed from being deformed by heat;
- The working table is optional and can be configured according to user's need.



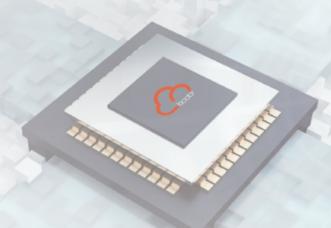
# PROTECTIVE LIGHT CURTAIN



- Two pairs of light curtains on the crossbeam, the machine stops running once the obstacle is detected between the two curtains.
- Greatly improve the safety of equipment use and personnel safety by automatically detecting the movement range of the crossbeam and cutting parts.



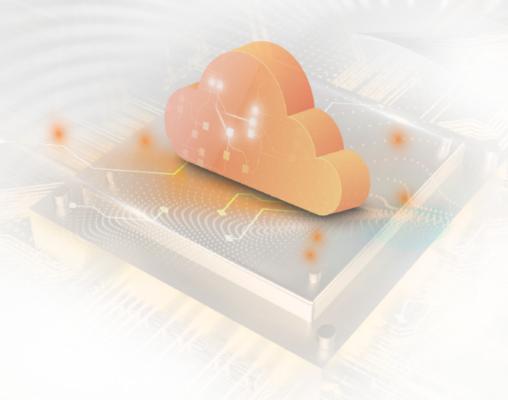
# BODORGENIUS LASER HEAD (RANGE FROM 6KW TO 22KW)



- The light-weight design ensures excellent acceleration performance and cutting speed.
- Excellent design in air flow and water-cooling structure enables the laser-head to continuously and efficiently operate at high power.
- Built-in drive unit, the automatic focus adjustment range is +10~ -12 mm, adjustment accuracy of 0.05mm.
- Collimation mirrors and focus mirrors are all using composite lenses, which can obtain the optimal optical quality and cutting effect.
- Distance detection device has no drift, ensures rapid reaction.



# **BODOR CLOUD**



- Daily equipment status management (processing data, report forms)
- Alarm and maintenance reminder
- Cloud transmission for processing programs
- Remote online service access with one key
- Real-time information of the latest cutting process



#### Technical Data

ITEM	G24	G20	G16	G12	
Working area	24500mm*3200mm	20500mm*3200mm	16500mm*3200mm	12500mm*3200mm	
Max. linkage speed	50m/min	50m/min	50m/min	50m/min	
Max. acceleration	0.5G	0.5G	0.5G	0.5G	
Table load bearing	34000KG	28000KG	23000KG	17000KG	
Distance between rails	4300mm	4300mm	4300mm	4300mm	
Machine overall dimensions	27150*4600*2200	22850*4600*2200	18550*4600*2200	14250*4600*2200	
Overall weight	4640kg	4260kg	3880kg	3500kg	
Z axis travel	135mm	135mm	135mm	135mm	
Positioning accuracy	0.1mm/m	0.1mm/m	0.1mm/m	0.1mm/m	
Repositioning accuracy	0.1mm/m	0.1mm/m	0.1mm/m	0.1mm/m	
Total power capacity/current with 40KW MAX source	×	×	268.6KVA/408.1A	266.1KVA/404.3A	
Total power capacity/current with 30KW MAX source	×	×	208.6KVA/317A	206.1KVA/313.2A	
Total power capacity/current with 22KW source	×	×	130.8KVA/200.1A	143.5KVA/219.5A	
Total power capacity/current with 20KW source	157.9KVA239.9A	152.4KVA/231.5A	127.8KVA/194.1A	140.5KVA/213.5A	
Total power capacity/current with 12KW source	114.0KVA/173.2A	108.5KVA/164.9A	99.1KVA/150.6A	96.6KVA/146.8A	
Total power capacity/current with 6KW source	79.3KVA/120.4A	73.8KVA/112.1A	64.4KVA/97.8A	61.9KVA/94A	

#### Configuration And Components

laser head	Bodor Genius		
Laser source	Bodor Power		
Machine bed	Segmented type rail lathe bed		
Gantry structure	High strength welding beam		
X-axis、Y-axis、Z-axisServo motor and driver	Bodor		
Linear Rails	Bodor		
Rack	Bodor		
Control system	BodorThinker		
Display size	21.5 inches		
Water Chiller	•		

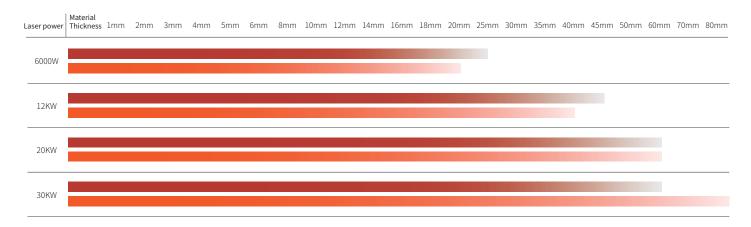


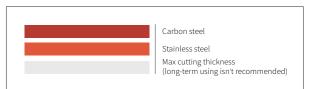
#### **Cutting Parameters**

		1000W	1500W	2000W	3000W	6000W	12kW	20kW	30kW
	Thickness	speed m/min	speed m/min						
	1	8.010	8.010	8.010	8.010	810	911	911	911
	2	4.06.5	4.56.5	4.76.5	4.87.5	57.5	57.5	57.5	57.5
	3	2.43.0	2.64.0	3.04.8	3.35.0	3.55	3.55.5	3.55.5	3.55.5
	4	2.02.4	2.53.0	2.83.5	3.04.2 2.63.5	3.04.5	3.55	3.55 3.34.8	3.55
	5	1.52.0 1.41.6	2.02.5 1.62.2	2.23.0 1.82.6	2.33.2	3.04.2 2.53.5	3.34.8	3.34.8	3.34.8
	8	0.81.2	1.01.4	1.21.8	1.82.6	2.23.2	2.53.8	2.53.9	2.53.9
	10	0.61.0	0.81.1	1.11.3	1.22.0	1.82.5	2.23.6	2.03.8	2.23.8
	12	0.50.8	0.71.0	0.91.2	1.01.6	1.22.1	1.23.5	1.63.7	1.6-3.7
"Carbon steel	14		0.50.7	0.81.0	0.91.2	1.21.8	1.73.3	1.53.6	1.6-3.6
(Q235A)	16			0.6-0.8	0.71.0	0.81.5	1.23.1	1.43.5	1.53.5
O2"	18			0.50.7	0.60.8	0.61.2	1.02.7	1.43.4	1.43.4
	20				0.50.8	0.50.8	0.62.4	1.53.3	1.53.3
	25 30					0.30.55	0.51.6 0.31.0	1.0-2.8 0.82.0	1.0-2.8 1.2-2.0
	35						0.30.7	0.60.9	0.91.1
	40						0.20.4	0.51.0	0.8-1.0
	45						0.20.3	0.30.5	0.50.8
	50							0.20.5	0.40.6
	60							0.20.4	0.20.4
	1	1825	2027	2450	3035	4252	7085	72100	72100
	2	57.5	8.012 3.05.0	9.015	1321	2033	4066	5075	5075
	3 4	1.82.5 1.21.3	3.05.0 1.52.4	4.87.5 3.24.5	6.010 4.06.0	1522 1015	3545 2032	3855 2533	3855 30-35
	5	0.60.7	0.71.3	2.0-2.8	3.05.0	7.012	1825	2230	2532
	6		0.71.0	1.2-2.0	2.04.0	4.89.0	1215	1725	18-26
	8			0.7-1.0	1.52.0	3.04.0	812	1218	15-20
	10				0.60.8	1.62.5	6.08.0	8.012.0	1215
	12				0.40.6	0.81.5	4.05.5	6.08.5	812
"Stainless steel	14 16					0.61.2 0.51.0	3.05.0 2.22.8	5.07.0 3.05.0	610.5 59
(201)	18					0.40.8	1.22.0	1.82.7	36.5
N2"	20					0.30.6	1.01.6	1.53.2	24.7
	25						0.50.8	1.52.0	1.8-2.5
	30						0.30.6	1.01.5	1.51.8
	35						0.30.5	0.40.8	1.0-1.5
	40						0.30.5	0.30.6	0.6-1.3
	45 50							0.20.6 0.20.5	0.8-1.0 0.25-0.5
	60							0.1-0.3	0.2-0.3
	70							0.1 0.0	0.17-0.3
	80								0.15-0.3
	1	6.010	1020	2030	2538	4255	6085	70100	
	2	2.83.6	5.07.0	1015	1018	2040	3850	4070	
	3		2.04.0	5.07.0	6.58.0	1525	3040	3560	
	4		1.01.5	3.55.0	3.55.0	9.512	2030	3043	
	5			1.82.5 1.01.5	2.53.5 1.52.5	5.08.0 3.85.0	1525 1015	2032 1526	
	8			1.01.5	0.71.0	2.02.5	7.012	1018	
11.0 1	10				0.40.7	1.01.5	4.58.0	6.010.0	
"Aluminum N2"	12					0.81.3	4.05.0	4.06.0	
INZ	14					0.91.2	1.82.7	2.23.2	
	16					0.50.8	1.52.5	2.03.0	
	18					0.50.7	1.01.8	1.52.0	
	20					0.50.7	0.91.5	1.31.8	
	25						0.60.9	0.61.2	
	30 35						0.30.8 0.30.6	0.51.0 0.30.8	
	40						0.30.4	0.30.5	
"Brass N2"	1	6.010	8.013	1218	2035	3545	5565	65-75	
	2	2.83.6	3.04.5	6.08.5	6.010	2030	3842	4060	
	3		1.52.5	2.54.0	4.06.0	1218	1830	25-40	
	4		1.01.6	2.03.0	3.0-5.0	8.012.0	1520	2035	
	5			0.91.2	1.52.0	6.08.0	1015	1825	
	6				1.01.8	3.06.5	6.08.0	1018	
	8					1.62.2	5.07.0	8.010.0	
	10					0.81.2	4.56.0	5.09.0	
	12 14					0.30.5	2.44.0 0.81.5	2.84.2 1.55.0	
	16						0.81.5	1.55.0	
	18						0.40.6	0.82.2	
	20							0.42.0	
	25							0.30.5	



#### Cutting Capacity





Above data is only for reference



#### Cutting Samples





















