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A SERIES

SINGLE PLATFORM LASER CUTTING MACHINE

LOWER LASER CUTTING COST AND EASY OPERATION

A3/A4/A6: 1.5kW-6kW, A14: 3kW-30kW

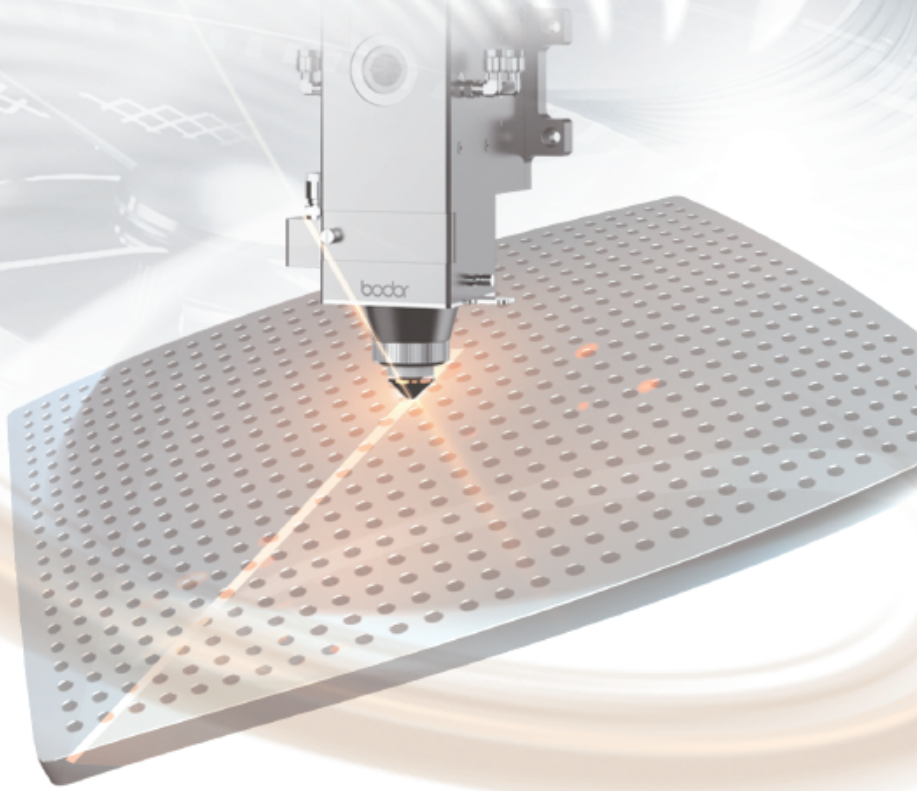


10KW+ CUTTING PROCESS PACKAGE

THE SPECIAL FIBER LASER NOZZLE AND CUTTING PROCESS ENSURE FASTER CARBON STEEL OXYGEN CUTTING, MORE GAS-SAVING LOW-PRESSURE STAINLESS STEEL NITROGEN CUTTING, AND BETTER-QUALITY CARBON STEEL AIR CUTTING.

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

BODOR LIGHTNING PERFORATION TECHNOLOGY



Advantages

- The lightning rapid perforation process reduces perforation time by 90%.
- The perfect combination of lightning rapid perforation process and BodorGenius ensures the laser head complete the whole perforation process during its moving fall.
- No additional action and time to be taken when cutting sheets with medium thickness.

INTELLIGENT ANTI-SHAKE OF SHEET EDGE



Advantages

- Avoid the danger of cutting head stall caused by plate shake, keep continuous and high-effective cutting.
- Ensure continuous processing consistency of materials without repeated modification of processing drawings.
- Intelligent identification of various sheet specifications, improve the dynamic performance of the cutting head and quick response.

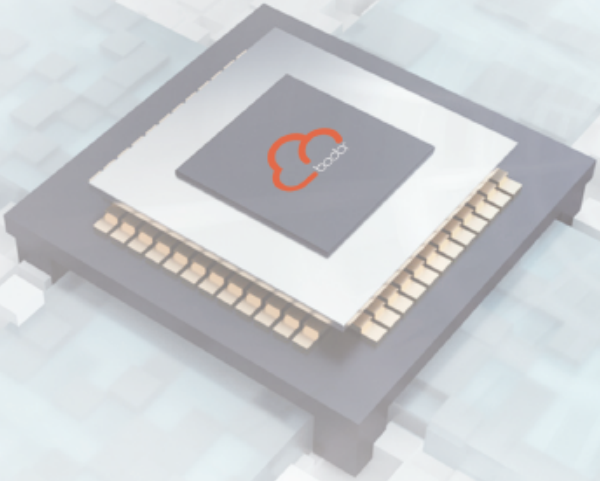
ACTIVE OBSTACLE AVOIDANCE FUNCTION



Advantages

- By optimizing the servo algorithm, predicting the obstacles and exerting the optimal performance of the motor can ensure the stability of the cutting process and the sensitivity and speed of the idle motion process;
- When an obstacle is detected, the Z axis responds at a very high speed and avoids obstacles.
- Avoid to interfering cutting caused by the tilted cutting piece and effectively solve the problem of collision of laser head during the thin plate cutting process.

ETHERCAT BUS CONTROL



Advantages

- The synchronization time of each axis is controlled within 1 microsecond; And the axis is more responsive and with higher control accuracy when using the bus to control multiaxis linkage.
- Easy installation and maitenance, the signal interference problem caused by a large number of wiring is avoided.
- Maximum acceleration increased by 50%, and work efficiency increased by 30%;

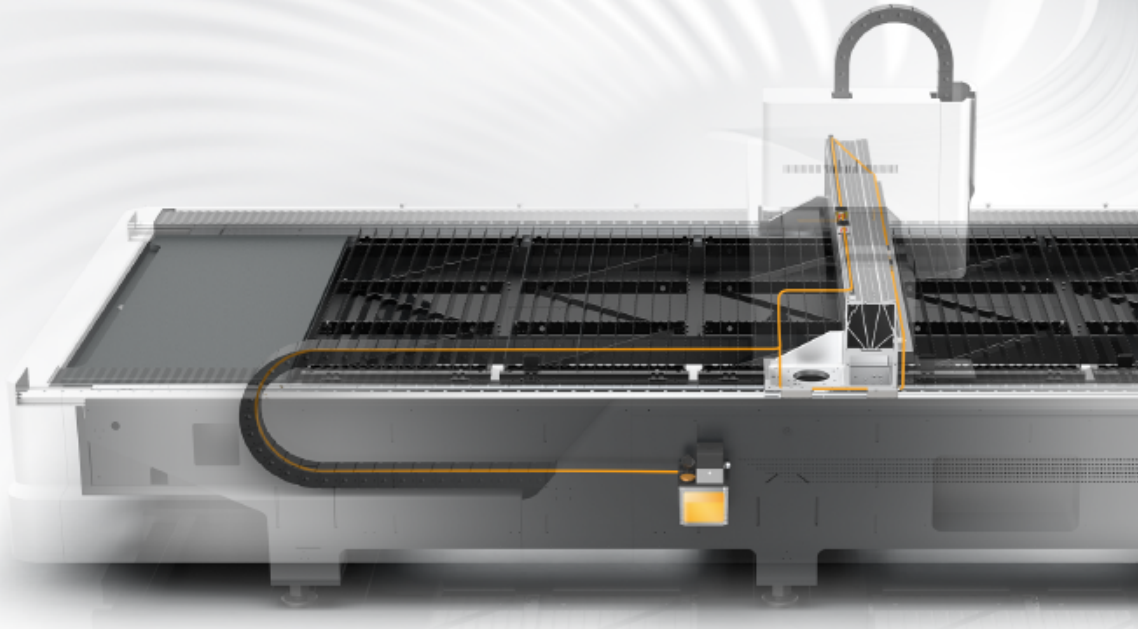
BODOR THINKER



Advantages

- 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.

AUTOMATIC LUBRICATION

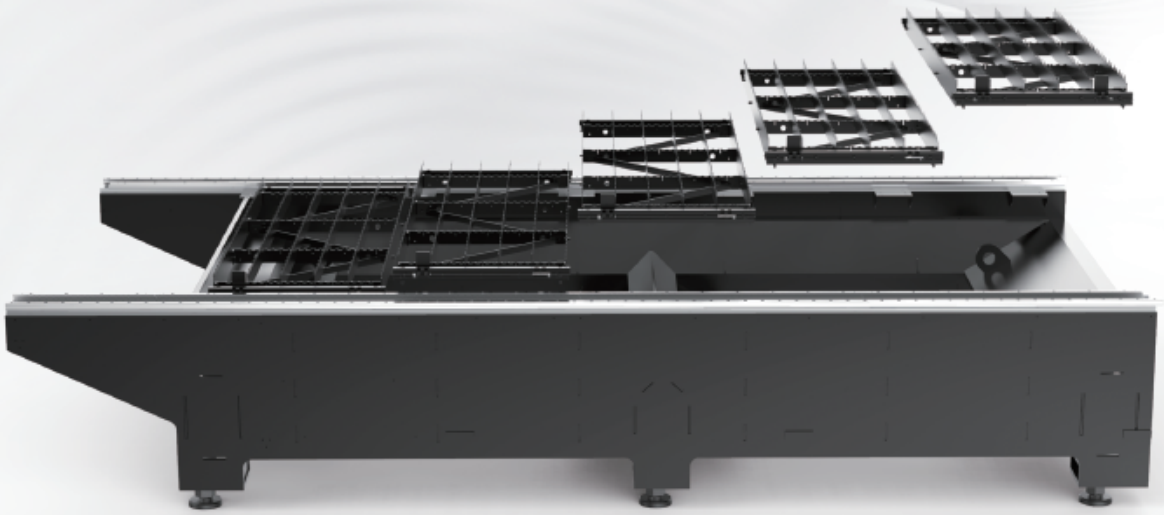


Advantages

- **Lubrication:** Immediate replenishment for the loss of lubrication oil greatly extends the interval of lubrication maintenance, which improves the accuracy and service life of the equipment.

- **Automatic:** Automatically supplied lubricant to the slider, only need to replace the oil pot for the maintenance, easy and fast.

MORTISE-AND-TENON TYPE SEGMENTED BED



Advantages

- Using Chinese traditional tenon-and-mortise structure to provide stronger bearing capacity.
- Solder joint fixing and structural bearing ensure long-standing operation stability.
- Welded structure improves shock absorption effect, lowering deviation caused by shock, offering more accurate cutting.
- Brand new modular platform solves deformation problem caused by heat and facilitates parts replacement.

STRETCHED ALUMINUM GANTRY



Advantages

- Adopt aviation-level aluminum with rigidity enhanced by 60%, high temperature resistance, improve the operation stability.
- Aviation-level aluminum is of light weight with overall weight reduced by 20%, to meet the need of high operation speed and precision of the gantry, and not easy to deformation.
- Processed by 10000 tons extrusion technology, ensures excellent mechanical performance of the gantry, reduce the failure rate.

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BODORGENIUS



Advantages

- The lightweight 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.

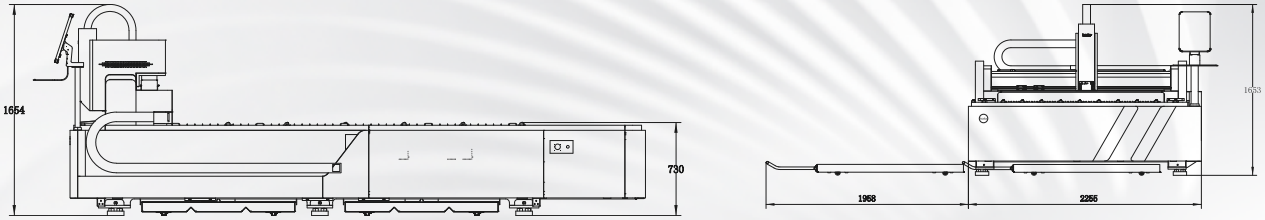
BODOR CLOUD

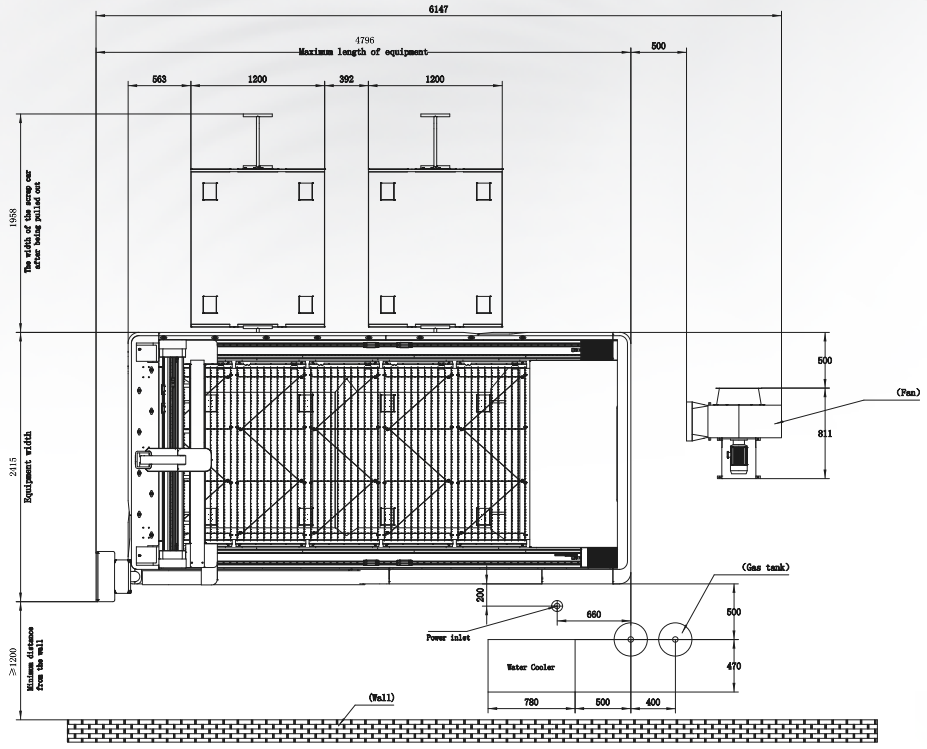


Advantages

- 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

Layout





The above layout drawings and figures are for reference only, the actual drawing shipped with machine prevails.



A3	A4	A4 Plus	A6	A6 Plus	A8	A14
3048mm*1524mm	4000mm*1524mm	4000mm*2000mm	6100mm*1524mm	6100mm*2500mm	8050mm*2500mm	14000mm*3100mm

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Technical Data

ITEM	A14	A8	A6 Plus	A6	A4 Plus	A4	A3
Working area	14000mm*3100mm	8050mm*2500mm	6100mm*2500mm	6100mm*1524mm	4000mm*2000mm	4000mm*1524mm	3048mm*1524mm
Max. linkage speed	100m/min	100m/min	100m/min	100m/min	100m/min	100m/min	100m/min
Max. acceleration	1.5G	1.5G	1.5G	1.5G	1.5G	1.5G	1.5G
Table load bearing	10220kg	6319kg（≥6kw）	2394kg（1-3kw） 2992kg（6kw）	1459kg（1-3kw） 1824kg（6kw）	1256kg（1-3kw） 1570kg（6kw）	957kg（1-3kw） 1196kg（6kw）	583kg（1-2kw） 729kg（3kw） 911kg（6kw）
Machine overall dimensions	17400*4010*2000	10377*3950*1830	8121*3925*1830	8108*2910*1755	5699*3396*1828	5726*2901*1757	4748*2901*1762
Overall weight	About 18000kg	About 7800kg	About 4000kg	About 3600kg	About 2800kg	About 2600kg	About 1900kg
Z axis travel	120mm	100mm	100mm	100mm	100mm	100mm	100mm
Positioning accuracy	±0.03mm/m	±0.05mm/m	±0.05mm/m	±0.05mm/m	±0.05mm/m	±0.05mm/m	±0.05mm/m
Repositioning accuracy	±0.02mm/m	±0.03mm	±0.03mm	±0.03mm	±0.03mm	±0.03mm	±0.03mm
Total power capacity/current with30KW source	178.8KVA/271.6A	×	×	×	×	×	×
Total power capacity/current with 22KW source	123KVA/190A	×	×	×	×	×	×
Total power capacity/current with 12KW source	83.1KVA/126.3A	86.8KVA/131.8A	×	×	×	×	×
Total power capacity/current with 6KW source	52.6KVA/79.9A	48.1KVA/73.1A	48.1KVA/73.1A	45.6KVA/69.3A	46.8KVA/71.2A	45.6KVA/69.3A	45.6KVA/69.3A
Total power capacity/current with 3KW source	×	×	41.8KVA/63.4A	39.3KVA/59.6A	40.5KVA/61.5A	39.3KVA/59.6A	39.3KVA/59.6A
Total power capacity/current with 1.5KW source	×	×	30.4KVA/46.2A	27.9KVA/42.4A	29.1KVA/44.3A	27.9KVA/42.4A	27.9KVA/42.4A

Configuration And Components

laser head	Bodor Genius					
Laser source	Bodor Power					
Machine bed	Tenon and mortise structure bed					
Gantry structure	Triangular type ultra-high pressure honeycomb aluminum gantry	Stretched Aluminum gantry				
X-axis、Y-axis、Z-axisServo motor and driver	BODOR					
Linear Rails	BODOR					
Protective Enclosure	BODOR					
Control system	BodorThinker					
Display size	21.5 inches					
Water Chiller	●	●	●	●	●	●

Additional options

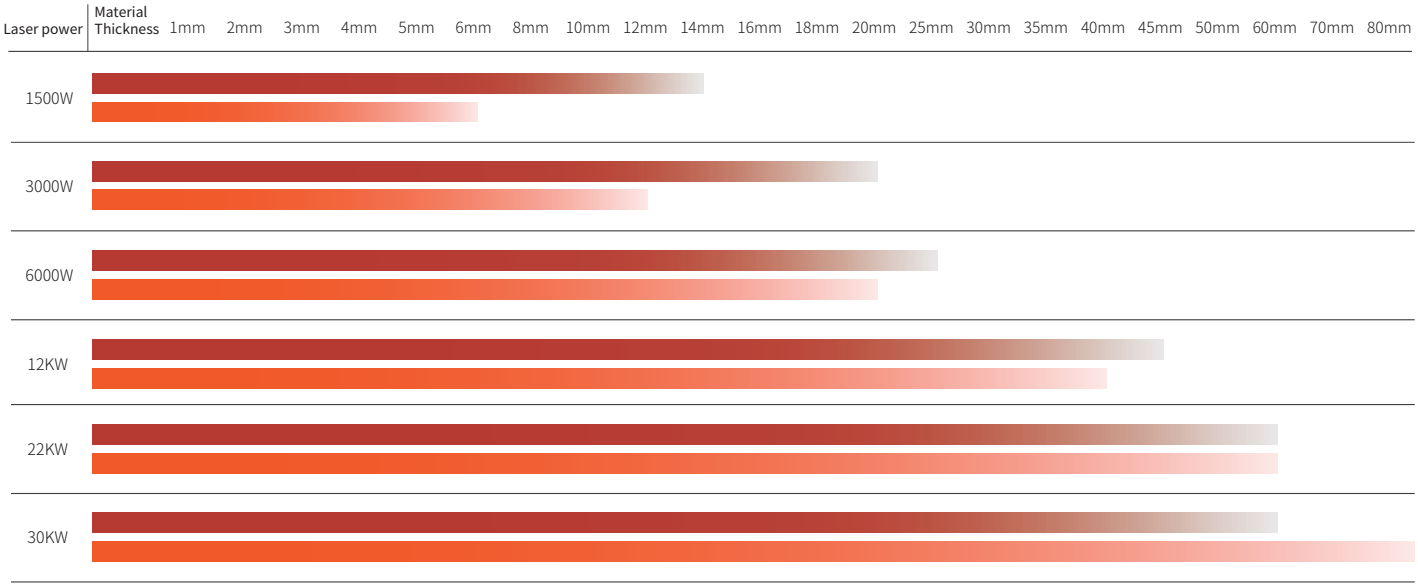
125mm focus distance laser head（3-4kw）	○	groove cutting modular	○
Integrated compressed air system	○	security light curtains	○
Parker Gas post-treatment device	○A8、A14	Air conditioning room	○A8、A14
Parker Gas post-treatment device Integrated compressed air system	○A8、A14	Laser case plus air conditioner	○A8、A14
laser fume filter	○	Electric cabinet with air conditioner	○
centrifugal fan	○	iCleaner	○
Dust removal	○A14	Bodor MES（Digital Factory Management System）	○A14

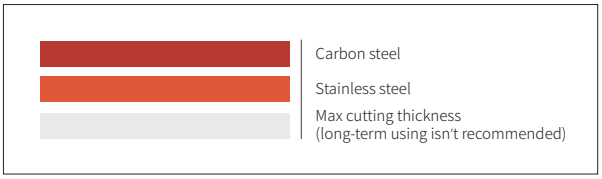
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Cutting Parameters

		1000W	1500W	2000W	3000W	6000W	12kW	15kW	22kW	30kW
	Thickness	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) O2"	1	8.0--10	8.0--10	8.0--10	8.0--10	8--10	9--11	9--11	9--11	9--11
	2	4.5--5.5	4.5--5.5	4.0--6.0	5.5--7.5	5--7.5	5--7.5	5--7.5	5--7.5	5--7.5
	3	2.4--3.0	2.5--3.4	3.0--4.0	3.0-4.0	3.5--5	3.5--5.5	3.5--5.5	3.5--5.5	3.5--5.5
	4	1.8-2.2	2.1--2.4	2.8-3.3	2.8-3.5	3.0--4.5	3.5--5	3.5--5	3.5--5	3.5--5
	5	1.6-1.8	2.0--2.5	2.2--2.8	2.6-3.2	3.0--4.2	3.3--4.8	3.3--4.8	3.3--4.8	3.3--4.8
	6	1.2-1.3	1.6--1.8	1.8-2.3	2.5-2.6	2.5--3.5	3.0--4.2	3.0--4.2	3.0--4.2	3.0--4.5
	8	0.6-0.8	1.0--1.2	1.2-1.7	1.6-1.8	2.2--3.2	2.5--3.8	2.5--3.8	2.5--3.9	2.5--3.9
	10		0.7--0.9	1.0-1.2	1.4-1.6	1.8--2.5	2.2--3.6	2.2--3.6	2.0--3.8	2.2--3.8
	12		0.7--0.8	0.8-1.0	1.0-1.4	1.2--2.1	1.2--3.5	1.2--3.6	1.6--3.8	1.6-3.8
	14		0.5--0.7	0.6-0.85	0.8-0.9	1.2--1.8	1.7--3.3	1.5--3.5	1.5--3.8	1.6-3.8
	16			0.6-0.75	0.7-0.8	0.8--1.5	1.2--3.1	1.2--3.5	1.4--3.7	1.5--3.7
	18				0.6-0.7	0.6--1.2	1.0--2.7	1.2--3.0	1.4--3.6	1.4--3.6
	20				0.5-0.6	0.5--0.8	0.6--2.4	1.2--2.7	1.5--3.5	1.5--3.5
	25					0.3--0.55	0.5--1.6	0.8--1.8	1.0-3.0	1.0-3.1
	30						0.3--1.0	0.6--1.4	0.8--2.2	1.2-2.6
	35						0.3--0.7	0.4--0.7	0.6--1.0	0.9--2.2
	40						0.2--0.4	0.3--0.5	0.5--1.1	0.8-1.7
	45						0.2--0.3	0.2--0.5	0.3--0.6	0.5--0.8
	50								0.2--0.6	0.4--0.6
	60								0.2--0.5	0.2--0.4
"Stainless steel (201) N2"	1	18-20	20-30	24--50	30-55	42--52	70--85	72--100	72--100	72--100
	2	5.0-7.0	8.0-16	9.0-17	12-30	20--33	40--66	45--70	50--75	50--75
	3	2.2-4.0	3.0-5.5	4.0-7.0	6.0-10.0	15--22	35--45	38--50	38--55	38--55
	4	1.2-2.3	1.5-3.2	3.2-4.0	4.0-6.0	10--15	20--32	25--35	25--33	30-35
	5		0.7-1.5	2.0-2.7	3.0--5.0	7.0--12	18--25	20--30	22--30	25--32
	6		0.7-1.3	1.2-1.8	2.0-3.2	4.8--9.0	12--15	15.0--25.0	17--25	18-26
	8			0.7-1.2	1.0-1.8	3.0--4.0	8--12	8.0--12.0	12--18	15-20
	10				0.5-0.85	1.6--2.5	6.0--8.0	6.0--10.0	8.0--12.0	12--15
	12				0.4-0.5	0.8--1.5	4.0--5.5	4.0--6.0	6.0--9	8--12
	14					0.6--1.2	3.0--5.0	3.5--5.5	5.0--7.0	6--10.5
	16					0.5--1.0	2.2--2.8	2.5--3.0	3.0--5.0	5--9
	18					0.4--0.8	1.2--2.0	1.2--2.2	1.8--4.2	3--6.5
	20					0.3--0.6	1.0--1.6	1.3--1.8	1.5--3.3	2--4.7
	25						0.5--0.8	0.6--1.2	1.5--2.0	1.8-2.5
	30						0.3--0.6	0.5--1.0	1.0--1.5	1.5--1.8
	35						0.3--0.5	0.4--0.8	0.4--0.8	1.0-1.5
	40						0.3--0.5	0.3--0.6	0.3--0.6	0.6-1.3
	45							0.2--0.5	0.2--0.6	0.8-1.0
	50							0.1--0.5	0.2--0.5	0.25-0.5
	60							0.1--0.2	0.1-0.3	0.2-0.3
	70									0.17-0.3
	80									0.15-0.3
"Aluminum N2"	1	8-10	10-15	15-25	25-30	42--55	60--85	70--100	70--100	70--100
	2	2.8-3.6	5.0-7.0	7-10	13-20	20--40	38--50	40--55	40--70	40--70
	3	0.7-1.1	2.0-2.6	4.0-8.0	6.5-7.5	15--25	30--40	35--45	35--60	35--60
	4		1.0-1.4	2.5-3.0	3.5-5.0	9.5--12	20--30	30--40	30--43	30--45
	5		0.5-0.7	1.2-2.5	2.5-3.5	5.0--8.0	15--25	20--30	22--35	22--340
	6			0.6-0.9	1.5-2.5	3.8--5.0	10--15	15--24	18--28	18--32
	8				0.7-1.0	2.0--2.5	7.0--12	8.0--12.0	12--20	12--23
	10					1.0--1.5	4.5--8.0	5.0-9.0	7.0--12.0	7.0--16
	12					0.8--1.3	4.0--5.0	4.0--6.0	4.5--6.5	4.5--12
	14					0.9--1.2	1.8--2.7	2.5-3.2	3.0--4.0	3.0--8.0
	16					0.5--0.8	1.5--2.5	2.0--3.0	2.5--3.5	2.5--6
	18					0.5--0.7	1.0--1.8	1.5--1.9	1.8--2.2	1.8--2.2
	20					0.5--0.7	0.9--1.5	1.3--1.8	1.5--2.0	1.5--2.0
	25						0.6--0.9	0.6--1.2	0.8--1.5	0.8--1.5
	30						0.3--0.8	0.5--1.0	0.6--1.2	0.6--1.2
	35						0.3--0.6	0.3--0.8	0.4--0.9	0.4--0.9
	40						0.3--0.4	0.3--0.5	0.3--0.5	0.4--0.6
"Brass N2"	1	6.0--10	8.0--13	10-16	20--30	35--45	55--65	60-70	65-75	65-75
	2	2.8-3.2	3.0--4.5	5.0--6.0	6.0--10	20--30	38--42	40--45	40--60	40--60
	3		1.5--2.5	2.5--7.0	3.0--8.0	12--18	18--30	20--35	25-40	25-40
	4		0.8-1.2	1.8-3.0	2.5-4.0	8.0--12.0	15--20	18--30	20--35	20--35
	5				1.5--2.0	6.0--8.0	10--15	15--20	20--28	20--30
	6				1.0--1.8	3.0--6.5	6.0--8.0	8--15	12--20	12--22
	8					1.6--2.2	5.0--7.0	8.0--10.0	9.0--12	9.0--15
	10					0.8--1.2	4.5--6.0	5.0--6.5	6.0--10	6.0--13
	12					0.3--0.5	2.4--4.0	2.8--4.2	3.0--4.5	5.0--10
	14						0.8--1.5	1.0--1.8	1.8--4.0	3.0--7.0
	16						0.6--1.2	0.8--1.5	1.5--3.0	1.5--3.0
	18						0.4--0.6	0.6--0.8	1.0--2.5	1.2--2.5
	20							0.4--0.6	0.4--2.0	1.2--2.0
	25								0.3--0.5	0.5--0.8
	30									0.4--0.6

Cutting Capacity





Above data is only for reference

Cutting Samples





















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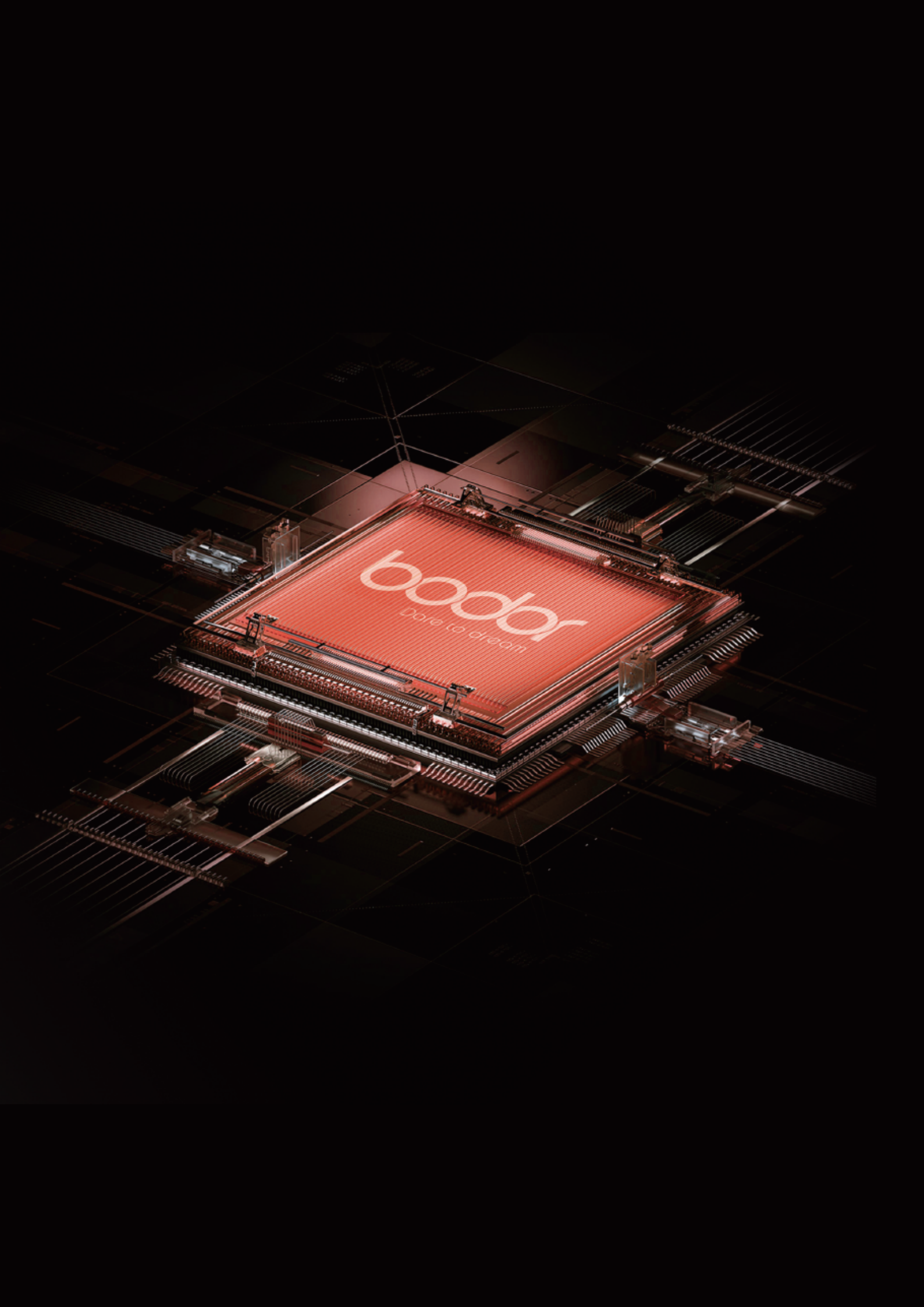
THE BLACK GO CHESS



Black Go chess — inspired by Go

Circular — endless loop, endless exploration

Black — derived from obsidian crystal, steady and deep


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