3kw Laser Cut Charts

material	Thickness [mm]	Thickness	Speed [m/min]	Speed	Power [W]	gas	pressure [bar]	Nozzle	Focus position [mm]	Focus position	Cutting height [mm]	Cutting height
carbon steel	1	0.04	32	1260	3000	N_2/Air	10	1.5S	0	0	1	0.039
	2	0.08	18	709	3000		10	2.0S	0	0	0.5	0.02
carbon steel	2	0.08	4	157	2100	O_2	1.6	1.0D	3	0.118	0.8	0.031
	3	0.12	3.4	134	2100		0.6	1.0D	4	0.157	0.8	0.031
	4	0.16	3.1	122	2400		0.6	1.0D	4	0.157	0.8	0.031
	5	0.2	2.85	112	3000		0.6	1.2D	4	0.157	0.8	0.031
	6	0.24	2.35	93	3000		0.6	1.2D	4	0.157	0.8	0.031
	8	0.31	2	79	3000		0.6	1.2D	4	0.157	0.8	0.031
	10	0.39	1.15	45	3000		0.6	1.2D	4	0.157	0.8	0.031
	12	0.47	0.95	37	2400		0.6	3.0D	4	0.157	0.8	0.031
	14	0.55	0.85	33	2400		0.6	3.0D	4	0.157	0.8	0.031
	16	0.63	0.65	26	2400		0.6	3.5D	4	0.157	0.8	0.031
	18	0.71	0.55	22	2400		0.6	4.0D	4	0.157	0.8	0.031
	20	0.79	0.5	20	2400		0.6	4.0D	4	0.157	0.8	0.031
	22	0.87	0.45	18	2400		0.6	4.0D	4	0.157	0.8	0.031
stainless steel	1	0.04	32	1260	3000	N_2	10	1.5S	0	0	0.8	0.031
	2	0.08	21	827			12	2.0S	0	0	0.5	0.02
	3	0.12	8.5	335			12	2.5S	-0.5	-0.02	0.5	0.02
	4	0.16	6	236			14	2.5S	-1.5	-0.059	0.5	0.02
	5	0.2	3.3	130			14	3.0S	-2.5	-0.098	0.5	0.02
	6	0.24	2.4	94			14	3.0S	-3	-0.118	0.5	0.02
	8	0.31	1.1	43			16	3.5S	-4.5	-0.177	0.5	0.02
	10	0.39	0.5	20			16	4.0S	-6	-0.236	0.5	0.02
aluminium	1	0.04	27	1063	3000	N_2	12	1.5S	0	0	0.8	0.031
	2	0.08	16.5	650			12	2.0S	0	0	0.5	0.02
	3	0.12	7.5	295			14	2.0S	-1	-0.039	0.5	0.02
	4	0.16	5.5	217			14	2.5S	-2	-0.079	0.5	0.02
	5	0.2	2.8	110			16	3.0S	-3	-0.118	0.5	0.02
	6	0.24	1.8	71			16	3.0S	-3.5	-0.138	0.5	0.02
	8	0.31	0.65	26			16	3.5S	-4	-0.157	0.5	0.02
brass	1	0.04	25	984	3000	N_2	12	1.5S	0	0	0.8	0.031
	2	0.08	12.5	492			12	2.0S	0	0	0.5	0.02
	3	0.12	5.5	217			14	2.5S	-1	-0.039	0.5	0.02
	4	0.16	2.8	110			14	3.0S	-2	-0.079	0.5	0.02
	5	0.2	2	79			14	3.0S	-2.5	-0.098	0.5	0.02
	6	0.24	0.9	35			16	3.0S	-3	-0.118	0.5	0.02

Note: The red marked parameters in the table are proofing parameters, which are greatly affected by various factors in actual processing, and are only suitable for small batch production, and are not recommended for mass production and processing, and higher power lasers are recommended.

6kw Laser Cut Charts

material	Thickness [mm]	Thickness	Speed [m/min]	Speed	Power [W]	gas	pressure [bar]	Nozzle	Focus position [mm]	Focus position	Cutting height [mm]	Cutting height
carbon steel	1	0.04	37.5	1476	6000	N_2/Air	12	1.5S	0	0	1	0.039
	2	0.08	23	886			12	2.0S	-1	-0.039	0.5	0.02
	3	0.12	13	512			14	2.0S	-1.5	-0.059	0.5	0.02
	4	0.16	9	354			14	2.0S	-2	-0.079	0.5	0.02
	5	0.2	6.5	256			16	3.0S	-2.5	-0.098	0.5	0.02
	6	0.24	5.5	217			16	3.5S	-3	-0.118	0.5	0.02
carbon steel	3	0.12	3.8	150	2400	O_2	0.6	1.2E	3	0.118	0.8	0.031
	4	0.16	3.5	138	2400		0.6	1.2E	3	0.118	0.8	0.031
	5	0.2	3.3	130	3000		0.6	1.2E	3	0.118	0.8	0.031
	6	0.24	2.9	114	3300		0.6	1.2E	3	0.118	0.8	0.031
	8	0.31	2.35	93	4200		0.6	1.2E	3	0.118	0.8	0.031
	10	0.39	2.15	85	5500		0.6	1.2E	4	0.157	0.8	0.031
	12	0.47	2	79	6000		0.6	1.2E	5	0.197	0.8	0.031
	14	0.55	1.55	61	6000		0.6	1.4E	5	0.197	1	0.039
	16	0.63	1.3	51	6000		0.6	1.4E	6	0.236	1	0.039
	18	0.71	0.8	31	6000		0.6	1.6S	12	0.472	0.3	0.012
	20	0.79	0.65	26	6000		0.6	1.6S	13	0.512	0.3	0.012
	22	0.87	0.55	22	6000		0.6	1.6S	13	0.512	0.3	0.012
	25	0.98	0.45	18	6000		0.6	1.8S	14	0.551	0.3	0.012
stainless steel	1	0.04	45	1772	6000	N_2	10	1.5S	0	0	0.8	0.031
	2	0.08	27.5	1083			12	2.0S	-1	-0.039	0.5	0.02
	3	0.12	16.5	650			12	2.5S	-1.5	-0.059	0.5	0.02
	4	0.16	11	433			14	2.5S	-2	-0.079	0.5	0.02
	5	0.2	7.5	295			14	3.0S	-2.5	-0.098	0.5	0.02
	6	0.24	6.5	256			15	3.0S	-3	-0.118	0.5	0.02
	8	0.31	3.65	144			15	3.0S	-4	-0.157	0.5	0.02
	10	0.39	1.8	71			15	3.5S	-6	-0.236	0.5	0.02
	12	0.47	1.1	43			16	3.5S	-7.5	-0.295	0.5	0.02
	14	0.55	0.9	35			16	4.0S	-9	-0.354	0.5	0.02
	16	0.63	0.55	22			18	4.0S	-10.5	-0.413	0.5	0.02
	18	0.71	0.45	18			20	5.0S	-11	-0.433	0.3	0.012
	20	0.79	0.27	11			20	5.0S	-12	-0.472	0.3	0.012
Aluminum alloy	1	0.04	40	1575	6000	N_2	12	1.5S	0	0	1	0.039
	2	0.08	22.5	886			12	2.0S	-1	-0.039	0.5	0.02
	3	0.12	15	591			14	2.5S	-1.5	-0.059	0.5	0.02
	4	0.16	9	354			14	2.5S	-2	-0.079	0.5	0.02
	5	0.2	5.5	217			14	3.0S	-3	-0.118	0.5	0.02
	6	0.24	3.75	148			16	3.0S	-3	-0.118	0.5	0.02
	8	0.31	1.75	69			16	3.0S	-4	-0.157	0.5	0.02
	10	0.39	1.1	43			18	3.5S	-4.5	-0.177	0.5	0.02
	12	0.47	0.65	26			18	4.0S	-5	-0.197	0.5	0.02
	14	0.55	0.5	20			18	4.0S	-5	-0.197	0.3	0.012
	16	0.63	0.35	14			20	5.0S	-8	-0.315	0.3	0.012
brass	1	0.04	35	1378	6000	N_2	12	1.5S	0	0	1	0.039
	2	0.08	19	748			12	2.0S	-1	-0.039	0.5	0.02
	3	0.12	13	512			14	2.5S	-1	-0.039	0.5	0.02
	4	0.16	8.5	335			14	3.0S	-1.5	-0.059	0.5	0.02
	5	0.2	5.25	207			14	3.0S	-2	-0.079	0.5	0.02
	6	0.24	3.5	138			16	3.0S	-2.5	-0.098	0.5	0.02
	8	0.31	1.65	65			16	3.5S	-3	-0.118	0.5	0.02
	10	0.39	0.9	35			16	3.5S	-3	-0.118	0.5	0.02
	12	0.47	0.65	26			18	4.0S	-4	-0.157	0.3	0.012
Copper	1	0.04	27.5	1083	6000	O_2	14	2.0S	-0.5	-0.02	1	0.039
	2	0.08	16.5	650			14	2.0S	-1	-0.039	0.5	0.02
	3	0.12	9	354			12	2.0S	-2	-0.079	0.5	0.02
	4	0.16	5.5	217			12	2.0S	-2	-0.079	0.5	0.02
	5	0.2	3.5	138			10	2.5S	-3	-0.118	0.5	0.02
	6	0.24	1.75	69			10	2.5S	-3	-0.118	0.5	0.02

Note: The red marked parameters in the table are proofing parameters, which are greatly affected by various factors in actual processing, and are only suitable for small batch production, and are not recommended for mass production and processing, and higher power lasers are recommended.

12kw Laser Cut Charts

material	Thickness [mm]	Thickness	Speed [m/min]	Speed	Power [W]	gas	pressure [bar]	Nozzle	Focus position [mm]	Focus position	Cutting height [mm]	Cutting height
carbon steel	1	0.04	55	2165	12000	N_2/Air	12	1.5S	0	0	1	0.039
	2	0.08	40	1575			12	2.0S	0	0	0.5	0.02
	3	0.12	32.5	1280			13	2.0S	0	0	0.5	0.02
	4	0.16	24	945			13	2.5S	0	0	0.5	0.02
	5	0.2	16.5	650			13	2.5S	0	0	0.5	0.02
	6	0.24	11.5	453			13	2.5S	0	0	0.5	0.02
	8	0.31	9	354			13	3.0S	-1.5	-0.059	0.5	0.02
	10	0.39	6.5	256			13	4.0S	-3	-0.118	0.5	0.02
	12	0.47	4.5	177			13	5.0B	-4	-0.157	0.5	0.02
carbon steel	10	0.39	2.15	85	7000	O_2 positive focus	0.6	1.2E	8	0.315	0.8	0.031
	12	0.47	2	79	7500		0.6	1.2E	8	0.315	0.8	0.031
	14	0.55	1.75	69	8500		0.6	1.4E	9	0.354	0.8	0.031
	16	0.63	1.5	59	9500		0.6	1.4E	11	0.433	0.8	0.031
	20	0.79	1.3	51	12000		0.6	1.6E	11	0.433	0.8	0.031
	22	0.87	0.95	37			0.7	1.8E	9	0.354	0.8	0.031
	22	0.87	1	39			0.7	1.4SP	11	0.433	0.5	0.02
	25	0.98	0.65	26			0.7	1.8E	11	0.433	0.8	0.031
	25	0.98	0.95	37			0.7	1.5SP	12	0.472	0.5	0.02
	30	1.18	0.45	18			1.3	1.8E	11	0.433	1.2	0.047
	30	1.18	0.7	28			0.8	1.5SP	12	0.472	0.5	0.02
	40	1.57	0.28	11			1.5	1.8E	11.5	0.453	1.2	0.047
carbon steel	12	0.47	3.25	128	12000	O_2 Negative focus	1	1.6SP	-10	-0.394	1.5	0.059
	14	0.55	3.1	122			1	1.6SP	-10	-0.394	1.5	0.059
	16	0.63	2.9	114			1	1.6SP	-12	-0.472	1.5	0.059
	20	0.79	2.15	85			1.2	1.6SP	-12	-0.472	1.5	0.059
	25	0.98	1.2	47			1.3	1.8SP	-14	-0.551	1.5	0.059
	30	1.18	0.95	37			1.4	1.8SP	-14	-0.551	1.5	0.059
stainless steel	1	0.04	55	2165	12000	N_2	10	2.0S	0	0	1	0.039
	2	0.08	42.5	1673			12	2.0S	0	0	0.5	0.02
	3	0.12	32.5	1280			13	2.0S	0	0	0.5	0.02
	4	0.16	26	1024			12	2.0S	0	0	0.5	0.02
	5	0.2	16.5	650			15	2.5S	0	0	0.5	0.02
	6	0.24	14	551			8	3.5B	0	0	0.5	0.02
	8	0.31	9	354			7	5.0B	0	0	0.5	0.02
	10	0.39	7	276			5	5.0B	-1	-0.039	0.5	0.02
	12	0.47	5.25	207			6	6.0B	-4	-0.157	0.5	0.02
	14	0.55	3.25	128			6	7.0B	-6	-0.236	0.3	0.012
	16	0.63	2.15	85			6	7.0B	-8	-0.315	0.3	0.012
	18	0.71	1.4	55			6	7.0B	-9	-0.354	0.5	0.02
	20	0.79	1.3	51			6	7.0B	-11	-0.433	0.3	0.012
	25	0.98	0.8	31			6	7.0B	-13	-0.512	0.3	0.012
	30	1.18	0.275	11			10	7.0B	7	0.276	0.3	0.012
	40	1.57	0.175	7			15	7.0B	8	0.315	0.3	0.012
stainless steel	1	0.04	55	2165	12000	Air	10	2.0S	0	0	1	0.039
	2	0.08	42.5	1673			10	2.5S	0	0	0.5	0.02
	3	0.12	32.5	1280			10	2.5S	0	0	0.5	0.02
	4	0.16	27.5	1083			10	3.5B	0	0	0.5	0.02
	5	0.2	17.5	689			10	3.5B	0	0	0.5	0.02
	6	0.24	15.5	610			10	3.5B	0	0	0.5	0.02
	8	0.31	10	394			10	3.5B	0	0	0.5	0.02
	10	0.39	7.5	295			10	3.5B	-1	-0.039	0.5	0.02
	12	0.47	5.5	217			10	5.0B	-4	-0.157	0.5	0.02
	14	0.55	3.75	148			10	5.0B	-6	-0.236	0.5	0.02
	16	0.63	2.15	85			10	5.0B	-8	-0.315	0.5	0.02
	18	0.71	1.75	69			10	5.0B	-9	-0.354	0.5	0.02
	20	0.79	1.4	55			10	5.0B	-11	-0.433	0.3	0.012
	25	0.98	0.85	33			10	5.0B	-13	-0.512	0.3	0.012
	30	1.18	0.45	18			10	5.0B	-14	-0.551	0.3	0.012
Aluminum alloy	1	0.04	47.5	1870	12000	N_2	12	2.0S	0	0	0.8	0.031
	2	0.08	32.5	1280			12	2.0S	-1	-0.039	0.5	0.02
	3	0.12	22.5	886			12	2.0S	-1	-0.039	0.5	0.02
	4	0.16	19	748			12	2.0S	-2	-0.079	0.5	0.02
	5	0.2	15	591			14	2.5S	-3	-0.118	0.5	0.02
	6	0.24	11	433			14	2.5S	-3	-0.118	0.5	0.02
	8	0.31	7	276			14	2.5S	-4	-0.157	0.5	0.02
	10	0.39	5	197			14	5.0B	-5	-0.197	0.5	0.02
	12	0.47	2.5	98			16	5.0B	-5	-0.197	0.5	0.02
	14	0.55	2	79			16	5.0B	-5	-0.197	0.5	0.02
	16	0.63	1.6	63			16	5.0B	-5	-0.197	0.5	0.02
	18	0.71	1.3	51			16	5.0B	-5	-0.197	0.5	0.02
	20	0.79	1	39			16	7.0B	-5	-0.197	0.3	0.012
	25	0.98	0.6	24			16	7.0B	-5	-0.197	0.3	0.012
	30	1.18	0.275	11			18	7.0B	7	0.276	0.3	0.012
	40	1.57	0.18	7			18	7.0B	8	0.315	0.3	0.012
brass	1	0.04	40	1575	12000	N_2	12	2.0S	0	0	1	0.039
	2	0.08	32.5	1280			12	2.0S	-1	-0.039	0.5	0.02
	3	0.12	20	787			12	2.0S	-1	-0.039	0.5	0.02
	4	0.16	16.5	650			12	2.0S	-2	-0.079	0.5	0.02
	5	0.2	13.5	531			14	2.5S	-3	-0.118	0.5	0.02
	6	0.24	9	354			14	2.5S	-3	-0.118	0.5	0.02
	8	0.31	6	236			14	2.5S	-4	-0.157	0.5	0.02
	10	0.39	4.5	177			14	5.0B	-5	-0.197	0.5	0.02
	12	0.47	1.9	75			14	5.0B	-5	-0.197	0.5	0.02
	14	0.55	1.3	51			16	5.0B	-8	-0.315	0.5	0.02
	16	0.63	0.9	35			16	5.0B	-11	-0.433	0.3	0.012
Copper	1	0.04	27.5	1083	12000	O_2	5	2.0S	-0.5	-0.02	1	0.039
	2	0.08	22.5	886			5	2.0S	-1	-0.039	0.5	0.02
	3	0.12	17	669			6	2.0S	-2	-0.079	0.5	0.02
	4	0.16	11	433			8	2.0S	-3	-0.118	0.5	0.02
	5	0.2	7	276			8	2.5S	-4.5	-0.177	0.5	0.02
	6	0.24	4.5	177			8	2.5S	-5	-0.197	0.5	0.02
	8	0.31	2.25	89			10	3.0S	-6	-0.236	0.5	0.02
	10	0.39	1.1	43			12	4.0S	-8	-0.315	0.5	0.02

Note: The red marked parameters in the table are proofing parameters, which are greatly affected by various factors in actual processing, and are only suitable for small batch production, and are not recommended for mass production and processing, and higher power lasers are recommended.

20kw Laser Cut Charts

material	Thickness [mm]	Thickness	Speed [m/min]	Speed	Power [W]	gas	pressure [bar]	Nozzle	Focus position [mm]	Focus position	Cutting height [mm]	Cutting height
carbon steel	5	0.2	25	984.3	20000	N_2/Air	8	3.0S	0	0	0.5	0.02
	6	0.24	19	748			8	3.0S	-0.5	-0.02	0.5	0.02
	8	0.31	15	590.6			8	3.0S	-1	-0.039	0.5	0.02
	10	0.39	10.5	413.4			8	3.5S	-1.5	-0.059	0.5	0.02
	12	0.47	9	354.3			8	3.5S	-2	-0.079	0.5	0.02
	14	0.55	7	275.6			8	4.0S	-3	-0.118	0.5	0.02
	16	0.63	5.5	216.5			8	5.0S	-4	-0.157	0.5	0.02
	18	0.71	3.6	141.7			10	6.0S	-6	-0.236	0.5	0.02
	20	0.79	3	118.1			10	6.0S	-8	-0.315	0.5	0.02
carbon steel	10	0.39	2.15	84.6	6000	O_2 positive focus	0.6	1.2E	8	0.315	0.8	0.031
	12	0.47	1.9	74.8	7500		0.6	1.2E	9	0.354	0.8	0.031
	14	0.55	1.7	66.9	8500		0.6	1.4E	10	0.394	0.8	0.031
	16	0.63	1.55	61	9500		0.6	1.4E	11	0.433	0.8	0.031
	20	0.79	1.35	53.1	12000		0.6	1.6E	12	0.472	0.8	0.031
	22	0.87	1.25	49.2	20000		0.7	1.8E	12.5	0.492	0.8	0.031
	22	0.87	1.45	57.1			0.7	1.4SP	13	0.512	0.5	0.02
	25	0.98	1.3	51.2			1	1.5SP	13	0.512	0.4	0.016
	30	1.18	1.25	49.2			1.2	1.5SP	13.5	0.531	0.4	0.016
	40	1.57	0.75	29.5			1.4	1.6SP	14	0.551	0.4	0.016
	50	1.97	0.25	9.8			1.6	1.8E	13	0.512	2	0.079
	60	2.36	0.2125	8.4			1.6	1.8E	13.5	0.531	2	0.079
	70	2.76	0.19	7.5			1.7	1.8E	13.5	0.531	2	0.079
	80	3.15	0.135	5.3			1.8	1.8E	14	0.551	2	0.079
carbon steel	12	0.47	3.35	131.9	20000	O_2 positive focus	1	1.6SP	-10	-0.394	1.5	0.059
	14	0.55	3.1	122			1	1.6SP	-10	-0.394	1.5	0.059
	16	0.63	3.05	120.1			1	1.6SP	-12	-0.472	1.5	0.059
	20	0.79	3.9	153.5			1.2	1.6SP	-12	-0.472	1.5	0.059
	25	0.98	2.5	98.4			1.3	1.8SP	-14	-0.551	1.5	0.059
	30	1.18	1.8	70.9			1.4	1.8SP	-14	-0.551	1.5	0.059
	35	1.38	1.5	59.1			1.4	2.0SP	-15	-0.591	1.5	0.059
	40	1.57	1.1	43.3			1.5	2.5S	-15	-0.591	1.5	0.059
	45	1.77	0.85	33.5			1.6	2.5S	-17	-0.669	1.5	0.059
stainless steel	1	0.04	60	2362.2	12000	N_2	8	2.0S	0	0	1	0.039
	2	0.08	55	2165.4			8	2.0S	0	0	0.5	0.02
	3	0.12	42.5	1673.2	20000		8	2.5S	0	0	0.5	0.02
	4	0.16	32.5	1279.5			8	2.5S	0	0	0.5	0.02
	5	0.2	23	905.5			8	3.0S	0	0	0.5	0.02
	6	0.24	20	787.4			8	3.5B	0	0	0.5	0.02
	8	0.31	14.5	570.9			8	5.0B	-1	-0.039	0.5	0.02
	10	0.39	11	433.1			8	5.0B	-1.5	-0.059	0.3	0.012
	12	0.47	9	354.3			8	6.0B	-2	-0.079	0.5	0.02
	14	0.55	7	275.6			8	6.0B	-4	-0.157	0.3	0.012
	16	0.63	5.5	216.5			8	6.0B	-5	-0.197	0.3	0.012
	18	0.71	3.6	141.7			8	6.0B	-6	-0.236	0.3	0.012
	20	0.79	3.1	122			12	6.0B	-7.5	-0.295	0.3	0.012
	25	0.98	1.75	68.9			12	7.0B	-12	-0.472	0.3	0.012
	30	1.18	1.1	43.3			12	7.0B	-16	-0.63	0.3	0.012
	40	1.57	0.65	25.6			16	7.0B	-16	-0.63	0.3	0.012
	50	1.97	0.25	9.8			16	8.0B	11	0.433	0.3	0.012
	60	2.36	0.175	6.9			20	8.0B	11	0.433	0.3	0.012
	70	2.76	0.115	4.5			20	8.0B	11	0.433	0.3	0.012
	80	3.15	0.09	3.5			20	8.0B	11	0.433	0.3	0.012
	90	3.54	0.055	2.2			20	8.0B	11	0.433	0.3	0.012
	100	3.94	0.045	1.8			20	8.0B	11	0.433	0.3	0.012
stainless steel	1	0.04	60	2362.2	12000	Air	8	2.0S	0	0	1	0.039
	2	0.08	55	2165.4			8	2.5S	0	0	0.5	0.02
	3	0.12	42.5	1673.2	20000		8	2.5S	0	0	0.5	0.02
	4	0.16	32.5	1279.5			8	3.5B	0	0	0.5	0.02
	5	0.2	23	905.5			8	3.5B	0	0	0.5	0.02
	6	0.24	20	787.4			8	3.5B	0	0	0.5	0.02
	8	0.31	14.5	570.9			10	3.5B	0	0	0.5	0.02
	10	0.39	12	472.4			10	3.5B	-1.5	-0.059	0.3	0.012
	12	0.47	10	393.7			10	5.0B	-4	-0.157	0.3	0.012
	14	0.55	8	315			10	5.0B	-6	-0.236	0.3	0.012
	16	0.63	6.5	255.9			10	5.0B	-7	-0.276	0.3	0.012
	18	0.71	4.2	165.4			10	5.0B	-8	-0.315	0.3	0.012
	20	0.79	4	157.5			10	5.0B	-9	-0.354	0.3	0.012
	25	0.98	2.125	83.7			10	5.0B	-13	-0.512	0.3	0.012
	30	1.18	1.5	59.1			10	5.0B	-17	-0.669	0.3	0.012
	40	1.57	0.65	25.6			16	7.0B	-16	-0.63	0.3	0.012
	50	1.97	0.25	9.8			16	8.0B	-18	-0.709	0.3	0.012
	60	2.36	0.175	6.9			20	8.0B	-20	-0.787	0.3	0.012
	70	2.76	0.1125	4.4			20	8.0B	-25	-0.984	0.3	0.012
Aluminum alloy	1	0.04	57.5	2263.8	12000	N_2	8	2.0S	0	0	0.8	0.031
	2	0.08	42.5	1673.2			8	2.0S	-1	-0.039	0.5	0.02
	3	0.12	32.5	1279.5	20000		10	2.5S	-1	-0.039	0.5	0.02
	4	0.16	27.5	1082.7			12	2.5S	-2	-0.079	0.5	0.02
	5	0.2	19	748			14	3.0S	-3	-0.118	0.5	0.02
	6	0.24	17	669.3			14	3.0S	-3	-0.118	0.5	0.02
	8	0.31	11	433.1			14	3.5S	-4	-0.157	0.5	0.02
	10	0.39	9.5	374			14	3.5S	-5	-0.197	0.5	0.02
	12	0.47	5.5	216.5			16	5.0B	-6	-0.236	0.3	0.012
	14	0.55	4.5	177.2			16	5.0B	-7	-0.276	0.3	0.012
	16	0.63	3.5	137.8			16	5.0B	-7	-0.276	0.3	0.012
	18	0.71	2.5	98.4			16	5.0B	-7	-0.276	0.3	0.012
	20	0.79	1.75	68.9			18	6.0B	-7	-0.276	0.3	0.012
	25	0.98	1.1	43.3			18	6.0B	-7.5	-0.295	0.3	0.012
	30	1.18	0.9	35.4			20	7.0B	-7.5	-0.295	0.3	0.012
	40	1.57	0.65	25.6			20	7.0B	-9	-0.354	0.3	0.012
	50	1.97	0.5	19.7			20	8.0B	-9	-0.354	0.3	0.012
	60	2.36	0.25	9.8			20	8.0B	-9	-0.354	0.3	0.012
brass	1	0.04	42.5	1673.2	20000	N_2	12	2.0S	0	0	1	0.039
	2	0.08	37.5	1476.4			12	2.0S	0	0	0.5	0.02
	3	0.12	29	1141.7			12	2.0S	0	0	0.5	0.02
	4	0.16	20.5	807.1			12	2.5S	0	0	0.5	0.02
	5	0.2	18.5	728.3			14	2.5S	0	0	0.5	0.02
	6	0.24	13.5	531.5			14	3.0S	0	0	0.5	0.02
	8	0.31	9	354.3			14	3.0S	0	0	0.5	0.02
	10	0.39	7.5	295.3			14	5.0B	-1	-0.039	0.3	0.012
	12	0.47	3	118.1			14	5.0B	-2	-0.079	0.3	0.012
	14	0.55	2.25	88.6			16	5.0B	-3	-0.118	0.3	0.012
	16	0.63	1.75	68.9			18	5.0B	-3	-0.118	0.3	0.012
	18	0.71	1.35	53.1			18	5.0B	-4	-0.157	0.3	0.012
	20	0.79	0.9	35.4			18	6.0B	-5	-0.197	0.3	0.012
Copper	1	0.04	30	1181.1	20000	O_2	5	2.0S	0	0	1	0.039
	2	0.08	27.5	1082.7			5	2.0S	0	0	0.5	0.02
	3	0.12	22.5	885.8			6	2.0S	0	0	0.5	0.02
	4	0.16	17	669.3			8	2.5S	-1	-0.039	0.5	0.02
	5	0.2	11	433.1			8	2.5S	-1	-0.039	0.5	0.02
	6	0.24	9	354.3			8	3.0S	-2	-0.079	0.5	0.02
	8	0.31	5	196.9			10	3.0S	-3	-0.118	0.5	0.02
	10	0.39	3	118.1			12	3.5S	-4	-0.157	0.5	0.02
	12	0.47	2.25	88.6			12	3.5S	-5	-0.197	0.5	0.02

Note: The red marked parameters in the table are proofing parameters, which are greatly affected by various factors in actual processing, and are only suitable for small batch production, and are not recommended for mass production and processing, and higher power lasers are recommended.

30kw Laser Cut Charts

material	Thickness [mm]	Thickness	Speed [m/min]	Speed	Power [W]	gas	pressure [bar]	Nozzle	Focus position [mm]	Focus position	Cutting height [mm]	Cutting height
carbon steel	5	0.2	28	1102.4	30000	N_2/Air	8	3.0S	0	0	0.5	0.02
	6	0.24	26.5	1043.3			8	3.0S	-0.5	-0.02	0.5	0.02
	8	0.31	20	787.4			8	3.0S	-1	-0.039	0.5	0.02
	10	0.39	15.5	610.2			8	3.5S	-1.5	-0.059	0.5	0.02
	12	0.47	12	472.4			8	3.5S	-2	-0.079	0.5	0.02
	14	0.55	9	354.3			8	4.0S	-3	-0.118	0.5	0.02
	16	0.63	8	315			8	5.0S	-4	-0.157	0.5	0.02
	18	0.71	6	236.2			10	6.0S	-6	-0.236	0.5	0.02
	20	0.79	5.25	206.7			10	6.0S	-8	-0.315	0.5	0.02
	25	0.98	3.25	128			10	6.0S	-12	-0.472	0.5	0.02
carbon steel	10	0.39	2.15	84.6	6000	O_2 positive focus	0.6	1.2E	8	0.315	0.8	0.031
	12	0.47	1.9	74.8	7500		0.6	1.2E	9	0.354	0.8	0.031
	14	0.55	1.7	66.9	8500		0.6	1.4E	10	0.394	0.8	0.031
	16	0.63	1.7	66.9	9500		0.6	1.4E	11	0.433	0.8	0.031
	20	0.79	1.55	61	12000		0.6	1.6E	12	0.472	0.8	0.031
	22	0.87	1.45	57.1	20000		0.7	1.4SP	13	0.512	0.5	0.02
	25	0.98	1.3	51.2			1	1.5SP	13	0.512	0.4	0.016
	30	1.18	1.25	49.2			1.2	1.5SP	13.5	0.531	0.4	0.016
	40	1.57	0.7	27.6			1.4	1.6SP	14	0.551	0.4	0.016
	50	1.97	0.7	27.6	30000		1.6	1.8SP	14	0.551	0.4	0.016
	60	2.36	0.225	8.9			1.6	1.8E	13.5	0.531	2	0.079
	70	2.76	0.19	7.5			1.7	1.8E	13.5	0.531	2	0.079
	80	3.15	0.135	5.3			1.8	1.8E	14	0.551	2	0.079
carbon steel	12	0.47	3.35	131.9	30000	O_2 Negative focus	1	1.6SP	-10	-0.394	1.5	0.059
	14	0.55	3.1	122			1	1.6SP	-10	-0.394	1.5	0.059
	16	0.63	3.05	120.1			1	1.6SP	-12	-0.472	1.5	0.059
	20	0.79	2.9	114.2			1.2	1.6SP	-12	-0.472	1.5	0.059
	25	0.98	2.7	106.3			1.3	1.8SP	-14	-0.551	1.5	0.059
	30	1.18	2.4	94.5			1.4	1.8SP	-14	-0.551	1.5	0.059
	35	1.38	1.5	59.1			1.4	2.0SP	-15	-0.591	1.5	0.059
	40	1.57	1.2	47.2			1.5	2.5S	-15	-0.591	1.5	0.059
	45	1.77	0.85	33.5			1.6	2.5S	-17	-0.669	1.5	0.059
stainless steel	1	0.04	60	2362.2	12000	N_2	8	2.0S	0	0	1	0.039
	2	0.08	55	2165.4			8	2.0S	0	0	0.5	0.02
	3	0.12	45	1771.7	30000		8	2.5S	0	0	0.5	0.02
	4	0.16	37.5	1476.4			8	2.5S	0	0	0.5	0.02
	5	0.2	27.5	1082.7			8	3.0S	0	0	0.5	0.02
	6	0.24	23.5	925.2			8	3.5B	0	0	0.5	0.02
	8	0.31	20	787.4			8	5.0B	-1	-0.039	0.5	0.02
	10	0.39	16	629.9			8	5.0B	-1.5	-0.059	0.3	0.012
	12	0.47	13	511.8			8	6.0B	-2	-0.079	0.5	0.02
	14	0.55	9	354.3			8	6.0B	-4	-0.157	0.3	0.012
	16	0.63	8	315			8	6.0B	-5	-0.197	0.3	0.012
	18	0.71	6.5	255.9			8	6.0B	-6	-0.236	0.3	0.012
	20	0.79	5.5	216.5			12	6.0B	-7.5	-0.295	0.3	0.012
	25	0.98	2.5	98.4			12	7.0B	-12	-0.472	0.3	0.012
	30	1.18	1.75	68.9			12	7.0B	-16	-0.63	0.3	0.012
	40	1.57	0.7	27.6			16	7.0B	-16	-0.63	0.3	0.012
	50	1.97	0.5	19.7			16	8.0B	-18	-0.709	0.3	0.012
	60	2.36	0.175	6.9			20	8.0B	11	0.433	0.3	0.012
	70	2.76	0.12	4.7			20	8.0B	11	0.433	0.3	0.012
	80	3.15	0.09	3.5			20	8.0B	11	0.433	0.3	0.012
	90	3.54	0.055	2.2			20	8.0B	11	0.433	0.3	0.012
	100	3.94	0.045	1.8			20	8.0B	11	0.433	0.3	0.012
stainless steel	1	0.04	60	2362.2	12000	Air	8	2.0S	0	0	1	0.039
	2	0.08	55	2165.4			8	2.5S	0	0	0.5	0.02
	3	0.12	45	1771.7	30000		8	2.5S	0	0	0.5	0.02
	4	0.16	37.5	1476.4			8	3.5B	0	0	0.5	0.02
	5	0.2	27.5	1082.7			8	3.5B	0	0	0.5	0.02
	6	0.24	23.5	925.2			8	3.5B	0	0	0.5	0.02
	8	0.31	20	787.4			10	3.5B	0	0	0.5	0.02
	10	0.39	16	629.9			10	3.5B	-1.5	-0.059	0.3	0.012
	12	0.47	13	511.8			10	5.0B	-4	-0.157	0.3	0.012
	14	0.55	11	433.1			10	5.0B	-6	-0.236	0.3	0.012
	16	0.63	8.5	334.6			10	5.0B	-7	-0.276	0.3	0.012
	18	0.71	6.5	255.9			10	5.0B	-8	-0.315	0.3	0.012
	20	0.79	5.5	216.5			10	5.0B	-9	-0.354	0.3	0.012
	25	0.98	2.75	108.3			10	5.0B	-13	-0.512	0.3	0.012
	30	1.18	1.75	68.9			10	5.0B	-17	-0.669	0.3	0.012
	40	1.57	1	39.4			16	7.0B	-16	-0.63	0.3	0.012
	50	1.97	0.7	27.6			16	8.0B	-18	-0.709	0.3	0.012
	60	2.36	0.175	6.9			20	8.0B	-20	-0.787	0.3	0.012
	70	2.76	0.12	4.7			20	8.0B	-25	-0.984	0.3	0.012
Aluminum alloy	1	0.04	57.5	2263.8	12000	N_2	8	2.0S	0	0	0.8	0.031
	2	0.08	42.5	1673.2			8	2.0S	-1	-0.039	0.5	0.02
	3	0.12	32.5	1279.5	30000		10	2.5S	-1	-0.039	0.5	0.02
	4	0.16	27.5	1082.7			12	2.5S	-2	-0.079	0.5	0.02
	5	0.2	22.5	885.8			14	3.0S	-3	-0.118	0.5	0.02
	6	0.24	19	748			14	3.0S	-3	-0.118	0.5	0.02
	8	0.31	16.5	649.6			14	3.5S	-4	-0.157	0.5	0.02
	10	0.39	13.5	531.5			14	3.5S	-5	-0.197	0.5	0.02
	12	0.47	11	433.1			16	5.0B	-6	-0.236	0.3	0.012
	14	0.55	9	354.3			16	5.0B	-7	-0.276	0.3	0.012
	16	0.63	7	275.6			16	5.0B	-7	-0.276	0.3	0.012
	18	0.71	3.5	137.8			16	5.0B	-7	-0.276	0.3	0.012
	20	0.79	2.5	98.4			18	6.0B	-7	-0.276	0.3	0.012
	25	0.98	1.75	68.9			18	6.0B	-7.5	-0.295	0.3	0.012
	30	1.18	0.9	35.4			20	7.0B	-7.5	-0.295	0.3	0.012
	40	1.57	0.65	25.6			20	7.0B	-9	-0.354	0.3	0.012
	50	1.97	0.5	19.7			20	8.0B	-9	-0.354	0.3	0.012
	60	2.36	0.25	9.8			20	8.0B	-9	-0.354	0.3	0.012
brass	1	0.04	42.5	1673.2	12000	N_2	12	2.0S	0	0	1	0.039
	2	0.08	37.5	1476.4	30000		12	2.0S	0	0	0.5	0.02
	3	0.12	29	1141.7			12	2.0S	0	0	0.5	0.02
	4	0.16	22.5	885.8			12	2.5S	0	0	0.5	0.02
	5	0.2	19	748			14	2.5S	0	0	0.5	0.02
	6	0.24	16.5	649.6			14	3.0S	0	0	0.5	0.02
	8	0.31	12.5	492.1			14	3.0S	0	0	0.5	0.02
	10	0.39	9	354.3			14	5.0B	-1	-0.039	0.3	0.012
	12	0.47	6.5	255.9			14	5.0B	-2	-0.079	0.3	0.012
	14	0.55	4	157.5			16	5.0B	-3	-0.118	0.3	0.012
	16	0.63	1.75	68.9			18	5.0B	-3	-0.118	0.3	0.012
	18	0.71	1.35	53.1			18	5.0B	-4	-0.157	0.3	0.012
	20	0.79	0.9	35.4			18	6.0B	-5	-0.197	0.3	0.012
Copper	1	0.04	30	1181.1	30000	O_2	5	2.0S	0	0	1	0.039
	2	0.08	27.5	1082.7			5	2.0S	0	0	0.5	0.02
	3	0.12	22.5	885.8			6	2.0S	0	0	0.5	0.02
	4	0.16	19	748			8	2.5S	-1	-0.039	0.5	0.02
	5	0.2	16.5	649.6			8	2.5S	-1	-0.039	0.5	0.02
	6	0.24	12.5	492.1			8	3.0S	-2	-0.079	0.5	0.02
	8	0.31	8	315			10	3.0S	-3	-0.118	0.5	0.02
	10	0.39	3	118.1			12	3.5S	-4	-0.157	0.5	0.02
	12	0.47	2.25	88.6			12	3.5S	-5	-0.197	0.5	0.02
	14	0.55	1.75	68.9			12	3.5S	-6	-0.236	0.5	0.02

Note: The red marked parameters in the table are proofing parameters, which are greatly affected by various factors in actual processing, and are only suitable for small batch production, and are not recommended for mass production and processing, and higher power lasers are recommended.

40kw Laser Cut Charts

material	Thickness [mm]	Thickness	Speed [m/min]	Speed	Power [W]	gas	pressure [bar]	Nozzle [mm]	Focus position [mm]	Focus position	Cutting height [mm]	Cutting height
carbon steel	5	0.2	30	1181.1	40000	N_2/Air	8	3.0B	0	0	0.3	0.012
	6	0.24	26.5	1043.305			8	3.0B	0	0	0.3	0.012
	8	0.31	23	905.51			8	3.0B	0	0	0.3	0.012
	10	0.39	18	708.66			8	3.5B	-0.5	-0.02	0.3	0.012
	12	0.47	15.5	610.235			8	3.5B	-0.5	-0.02	0.3	0.012
	14	0.55	12	472.44			8	5.0B	-1	-0.039	0.3	0.012
	16	0.63	8.75	344.4875			8	5.0B	-1	-0.039	0.3	0.012
	18	0.71	8	314.96			8	6.0B	-2	-0.079	0.3	0.012
	20	0.79	7.5	295.275			8	6.0B	-3	-0.118	0.3	0.012
	25	0.98	5.25	206.6925			6	8.0B	-5	-0.197	0.3	0.012
	30	1.18	3.5	137.795			6	8.0B	-7	-0.276	0.3	0.012
	40	1.57	1.75	68.8975			4	10.0ECU	-13	-0.512	0.3	0.012
	50	1.97	0.85	33.4645			4	10.0ECU	-20	-0.787	0.3	0.012
carbon steel	10	0.39	2.15	84.6455	6000	O_2 positive focus	0.6	1.2E	11	0.433	0.8	0.031
	12	0.47	1.9	74.803	7500		0.6	1.2E	12	0.472	0.8	0.031
	14	0.55	1.7	66.929	8500		0.6	1.4E	13	0.512	0.8	0.031
	16	0.63	1.7	66.929	9500		0.6	1.4E	14	0.551	0.8	0.031
	20	0.79	1.55	61.0235	12000		0.6	1.6E	15	0.591	0.8	0.031
	22	0.87	1.45	57.0865	18000		0.7	1.4SP	17	0.669	0.5	0.02
	25	0.98	1.3	51.181	18000		0.65	1.6SP	19	0.748	0.3	0.012
	30	1.18	1.25	49.2125	18000		0.6	1.8SP	23	0.906	0.3	0.012
	40	1.57	1	39.37	26000		0.8	2.2SP	25	0.984	0.3	0.012
	50	1.97	0.8	31.496	40000		1.2	2.2SP	25	0.984	0.3	0.012
	60	2.36	0.7	27.559			1.5	2.4SP	25	0.984	0.3	0.012
	70	2.76	0.6	23.622			1.5	2.4SP	25	0.984	0.3	0.012
	80	3.15	0.5	19.685			1.6	2.5SP	27	1.063	0.3	0.012
	90	3.54	0.35	13.7795			1.6	2.5SP	28	1.102	0.3	0.012
	100	3.94	0.25	9.8425			1.6	2.5SP	29	1.142	0.3	0.012
carbon steel	12	0.47	3.35	131.8895	20000	O_2 Negative focus	1	1.6SP	-9	-0.354	1.5	0.059
	14	0.55	3.1	122.047			1	1.6SP	-10	-0.394	1.5	0.059
	16	0.63	3.05	120.0785			1	1.6SP	-10	-0.394	1.5	0.059
	20	0.79	3	118.11			1	1.8SP	-11	-0.433	1.5	0.059
	25	0.98	2.6	102.362	40000		1	2.5SP	-17	-0.669	2.5	0.098
	30	1.18	2.5	98.425			1.2	2.5SP	-18	-0.709	1.5	0.059
	35	1.38	2.45	96.4565			1.3	2.5SP	-20	-0.787	1.5	0.059
	40	1.57	2.15	84.6455			1.5	3.0SS	-23	-0.906	1.5	0.059
	50	1.97	1.4	55.118			1.6	3.0SS	-25	-0.984	1.5	0.059
	60	2.36	1.15	45.2755			1.8	3.0SS	-27	-1.063	3	0.118
	70	2.76	0.7	27.559			2	3.0SS	-34	-1.339	3	0.118
stainless steel	5	0.2	27.5	1082.675	40000	N_2	8	3.0S	0	0	0.3	0.012
	6	0.24	23.5	925.195			8	3.5B	0	0	0.3	0.012
	8	0.31	21.5	846.455			8	5.0B	-0.5	-0.02	0.3	0.012
	10	0.39	19	748.03			8	5.0B	-0.5	-0.02	0.3	0.012
	12	0.47	13	511.81			8	6.0B	-1	-0.039	0.3	0.012
	14	0.55	11	433.07			8	6.0B	-1	-0.039	0.3	0.012
	16	0.63	10	393.7			8	6.0B	-2	-0.079	0.3	0.012
	18	0.71	8.75	344.4875			8	6.0B	-3	-0.118	0.3	0.012
	20	0.79	7.5	295.275			8	6.0B	-5	-0.197	0.3	0.012
	25	0.98	5	196.85			8	7.0B	-7	-0.276	0.3	0.012
	30	1.18	3.5	137.795			8	7.0B	-13	-0.512	0.3	0.012
	40	1.57	1.75	68.8975			8	7.0B	-20	-0.787	0.3	0.012
	50	1.97	6.5	255.905			6	8.0B	-38	-1.496	0.3	0.012
	60	2.36	0.5	19.685			6	8.0B	-38	-1.496	0.3	0.012
	70	2.76	0.25	9.8425			6	8.0B	-40	-1.575	0.3	0.012
	80	3.15	0.2125	8.366125			20	10.0ECU	11	0.433	0.3	0.012
	90	3.54	0.16	6.2992			20	10.0ECU	12	0.472	0.3	0.012
	100	3.94	0.1	3.937			20	10.0ECU	12	0.472	0.3	0.012
stainless steel	5	0.2	32	1259.84	40000	Air	8	3.5B	0	0	0.5	0.02
	6	0.24	27.5	1082.675			8	3.5B	0	0	0.5	0.02
	8	0.31	23.5	925.195			8	3.5B	0	0	0.5	0.02
	10	0.39	20	787.4			8	3.5B	-1.5	-0.059	0.3	0.012
	12	0.47	14.5	570.865			8	5.0B	-4	-0.157	0.3	0.012
	14	0.55	13	511.81			8	5.0B	-6	-0.236	0.3	0.012
	16	0.63	10	393.7			8	5.0B	-7	-0.276	0.3	0.012
	18	0.71	9	354.33			8	5.0B	-8	-0.315	0.3	0.012
	20	0.79	8	314.96			8	5.0B	-9	-0.354	0.3	0.012
	25	0.98	5.25	206.6925			8	5.0B	-13	-0.512	0.3	0.012
	30	1.18	4	157.48			8	5.0B	-15	-0.591	0.3	0.012
	40	1.57	2	78.74			6	7.0B	-22	-0.866	0.3	0.012
	50	1.97	0.85	33.4645			6	8.0B	-38	-1.496	0.3	0.012
	60	2.36	0.5	19.685			5	8.0B	-38	-1.496	0.3	0.012
	70	2.76	0.35	13.7795			5	8.0B	-44	-1.732	0.3	0.012
	80	3.15	0.275	10.82675			5	10.0ECU	-44	-1.732	0.3	0.012
	90	3.54	0.225	8.85825			5	10.0ECU	-44	-1.732	0.3	0.012
	100	3.94	0.175	6.88975			5	10.0ECU	-47	-1.85	0.3	0.012
Aluminum alloy	5	0.2	27.5	1082.675	40000	N_2	8	3.0S	0	0	0.3	0.012
	6	0.24	22.5	885.825			8	3.5B	0	0	0.3	0.012
	8	0.31	20	787.4			10	5.0B	0	0	0.3	0.012
	10	0.39	15.5	610.235			12	5.0B	0	0	0.3	0.012
	12	0.47	12	472.44			14	6.0B	-1	-0.039	0.3	0.012
	14	0.55	10	393.7			14	6.0B	-1	-0.039	0.3	0.012
	16	0.63	8	314.96			14	6.0B	-2	-0.079	0.3	0.012
	18	0.71	6	236.22			14	6.0B	-3	-0.118	0.3	0.012
	20	0.79	4.5	177.165			16	6.0B	-5	-0.197	0.3	0.012
	25	0.98	3.25	127.9525			16	7.0B	-7	-0.276	0.3	0.012
	30	1.18	2.5	98.425			16	7.0B	-9	-0.354	0.3	0.012
	40	1.57	1.25	49.2125			16	7.0B	-9	-0.354	0.3	0.012
	50	1.97	0.5	19.685			18	8.0B	-11	-0.433	0.3	0.012
	60	2.36	0.25	9.8425			18	8.0B	-11	-0.433	0.3	0.012
	70	2.76	0.225	8.85825			20	8.0B	-11	-0.433	0.3	0.012
	80	3.15	0.175	6.88975			20	10.0ECU	11	0.433	0.3	0.012
	90	3.54	0.135	5.31495			20	10.0ECU	12	0.472	0.3	0.012
	100	3.94	0.09	3.5433			20	10.0ECU	12	0.472	0.3	0.012
brass	5	0.2	27.5	1082.675	40000	N_2	14	2.5S	0	0	0.5	0.02
	6	0.24	22.5	885.825			14	3.0S	0	0	0.5	0.02
	8	0.31	20	787.4			14	3.0S	0	0	0.5	0.02
	10	0.39	12	472.44			14	5.0B	-1	-0.039	0.3	0.012
	12	0.47	10	393.7			14	5.0B	-2	-0.079	0.3	0.012
	14	0.55	9	354.33			16	5.0B	-3	-0.118	0.3	0.012
	16	0.63	6	236.22			18	5.0B	-3	-0.118	0.3	0.012
	18	0.71	4.5	177.165			18	5.0B	-4	-0.157	0.3	0.012
	20	0.79	3.5	137.795			18	6.0B	-5	-0.197	0.3	0.012
	25	0.98	2.75	108.2675			18	6.0B	-7	-0.276	0.3	0.012
	30	1.18	2.25	88.5825			18	6.0B	-7	-0.276	0.3	0.012
Copper	3	0.12	22.5	885.825	40000	O_2	6	2.0S	0	0	0.5	0.02
	4	0.16	19	748.03			8	2.5S	-1	-0.039	0.5	0.02
	5	0.2	16.5	649.605			8	2.5S	-1	-0.039	0.5	0.02
	6	0.24	12.5	492.125			8	3.0S	-2	-0.079	0.5	0.02
	8	0.31	8	314.96			10	3.0S	-3	-0.118	0.5	0.02
	10	0.39	3	118.11			12	3.5S	-4	-0.157	0.5	0.02
	12	0.47	2.25	88.5825			12	3.5S	-5	-0.197	0.5	0.02
	14	0.55	1.75	68.8975			12	3.5S	-6	-0.236	0.5	0.02
	16	0.63	1.25	49.2125			12	4.0S	-6	-0.236	0.5	0.02
	20	0.79	0.8	31.496			12	4.0S	-8	-0.315	0.5	0.02

Note: The red marked parameters in the table are proofing parameters, which are greatly affected by various factors in actual processing, and are only suitable for small batch production, and are not recommended for mass production and processing, and higher power lasers are recommended.

50kw Laser Cut Charts

material	Thickness [mm]	Thickness	Speed [m/min]	Speed	Power [W]	gas	pressure [bar]	Nozzle [mm]	Focus position [mm]	Focus position	Cutting height [mm]	Cutting height
carbon steel	16	0.63	13.5	531.495	50000	(N_2&O_2) /Air	4	6.0B	-4	-0.157	0.3	0.012
	18	0.71	11.5	452.755			4	6.0B	-5	-0.197	0.3	0.012
	20	0.79	7.5	295.275			4	6.0B	-6	-0.236	0.3	0.012
	25	0.98	5.5	216.535			4	6.0B	-9	-0.354	0.3	0.012
	30	1.18	4.1	161.417			4	6.0B	-12	-0.472	0.3	0.012
	35	1.38	3.75	147.6375			3	6.0B	-17.5	-0.689	0.3	0.012
	40	1.57	2.75	108.2675			3	10.0B	-19	-0.748	0.3	0.012
	45	1.77	1.75	68.8975			3	10.0B	-27	-1.063	0.3	0.012
	50	1.97	1.25	49.2125			3	10.0B	-30	-1.181	0.3	0.012
carbon steel	16	0.63	1.7	66.929	12000	O_2 positive focus	0.5	1.4SP	15	0.591	0.3	0.012
	18	0.71	1.65	64.9605			0.55	1.4SP	16	0.63	0.3	0.012
	20	0.79	1.55	61.0235			0.6	1.6SP	18	0.709	0.3	0.012
	25	0.98	1.3	51.181	20000		0.6	1.6SP	18	0.709	0.3	0.012
	30	1.18	1.25	49.2125			0.65	1.8SP	21	0.827	0.3	0.012
	35	1.38	1.11	43.7007			0.8	1.8SP	21	0.827	0.3	0.012
	40	1.57	1	39.37	25000		0.9	1.8SP	21	0.827	0.3	0.012
	45	1.77	0.9	35.433			1.1	1.8SP	21	0.827	0.3	0.012
	50	1.97	0.8	31.496	30000		0.85	2.3SP	26	1.024	0.3	0.012
	60	2.36	0.75	29.5275	50000		0.8	3.0S	30	1.181	0.3	0.012
	70	2.76	0.5	19.685			1.2	3.0S	35	1.378	0.3	0.012
	80	3.15	0.35	13.7795			1	3.5S	39	1.535	0.3	0.012
	100	3.94	0.25	9.8425			1	4.0S	45	1.772	0.3	0.012
	160	6.3	0.15	5.9055			1.5	4.0S	45	1.772	5	0.197
carbon steel	20	0.79	2.7	106.299	15000	O_2 Negative focus	1.5	1.8SP	-14	-0.551	1.5	0.059
	25	0.98	2.45	96.4565	30000		1.3	2.0SP	-16	-0.63	1.5	0.059
	30	1.18	2.2	86.614			1.5	2.0SP	-17	-0.669	1.5	0.059
	35	1.38	2.1	82.677	35000		1.8	2.0SP	-17	-0.669	1.5	0.059
	40	1.57	1.8	70.866			1.4	2.5SP	-19	-0.748	3	0.118
	45	1.77	1.6	62.992	40000		1	2.5SP	-22	-0.866	3	0.118
	50	1.97	1.4	55.118			1	3.0S	-28	-1.102	2.5	0.098
	60	2.36	1.1	43.307	50000		1	3.0S	-30	-1.181	3.5	0.138
	70	2.76	1	39.37			1	3.0S	-30	-1.181	3.5	0.138
	80	3.15	0.7	27.559			1	3.0S	-33	-1.299	4	0.157
	100	3.94	0.45	17.7165			1.1	3.5S	-40	-1.575	4	0.157
stainless steel	16	0.63	11	433.07	50000	N_2	8	6.0B	-6	-0.236	0.3	0.012
	18	0.71	9.2	362.204			8	6.0B	-7	-0.276	0.3	0.012
	20	0.79	8.5	334.645			8	6.0B	-8	-0.315	0.3	0.012
	25	0.98	5.5	216.535			3	8.0B	-11	-0.433	0.3	0.012
	30	1.18	4.2	165.354			3	8.0B	-13	-0.512	0.3	0.012
	35	1.38	3.8	149.606			3	8.0B	-18	-0.709	0.3	0.012
	40	1.57	2.75	108.2675			4	8.0B	-18	-0.709	0.3	0.012
	50	1.97	1.75	68.8975			4	10.0B	-28	-1.102	0.3	0.012
	60	2.36	0.9	35.433			3	10.0B	-33	-1.299	0.3	0.012
	70	2.76	1.1	43.307			3	10.0B	-39	-1.535	0.3	0.012
	80	3.15	0.5	19.685			3	10.0B	-42	-1.654	0.3	0.012
	100	3.94	0.175	6.88975			3	10.0B	-37	-1.457	0.3	0.012
	120	4.72	0.075	2.95275			3	10.0B	-45	-1.772	0.3	0.012
stainless steel	16	0.63	11.75	462.5975	50000	Air	8	6.0B	-6	-0.236	0.3	0.012
	18	0.71	9.75	383.8575			8	6.0B	-8	-0.315	0.3	0.012
	20	0.79	8.75	344.4875			8	6.0B	-10	-0.394	0.3	0.012
	25	0.98	6	236.22			3	8.0B	-12	-0.472	0.3	0.012
	30	1.18	4.5	177.165			3	8.0B	-15	-0.591	0.3	0.012
	35	1.38	3.3	129.921			3	10.0B	-17	-0.669	0.3	0.012
	40	1.57	3	118.11			3	10.0B	-17	-0.669	0.3	0.012
	50	1.97	1.9	74.803			3	10.0B	-19	-0.748	0.3	0.012
	60	2.36	0.9	35.433			3	10.0B	-25	-0.984	0.3	0.012
	70	2.76	0.7	27.559			3	10.0B	-33	-1.299	0.3	0.012
	80	3.15	0.45	17.7165			3	10.0B	-36	-1.417	0.3	0.012
	90	3.54	0.275	10.82675			3	10.0B	-39	-1.535	0.3	0.012
	100	3.94	0.15	5.9055			3	10.0B	-40	-1.575	0.3	0.012
	150	5.91	0.075	2.95275			3	10.0B	-50	-1.969	0.3	0.012

Note: The red marked parameters in the table are proofing parameters, which are greatly affected by various factors in actual processing, and are only suitable for small batch production, and are not recommended for mass production and processing, and higher power lasers are recommended.

60kw Laser Cut Charts

material	Thickness [mm]	Thickness	Speed [m/min]	Speed	Power [W]	gas	pressure [bar]	Nozzle [mm]	Focus position [mm]	Focus position	Cutting height [mm]	Cutting height
carbon steel	16	0.63	13.5	531.5	60000	(N_2&O_2) /Air	4	6.0B	-4	-0.157	0.3	0.012
	18	0.71	11.5	452.8			4	6.0B	-5	-0.197	0.3	0.012
	20	0.79	9.5	374			4	6.0B	-6	-0.236	0.3	0.012
	25	0.98	7	275.6			4	6.0B	-9	-0.354	0.3	0.012
	30	1.18	5	196.9			4	6.0B	-12	-0.472	0.3	0.012
	35	1.38	4	157.5			3	6.0B	-17.5	-0.689	0.3	0.012
	40	1.57	3.1	122			3	10.0B	-19	-0.748	0.3	0.012
	45	1.77	2.25	88.6			3	10.0B	-27	-1.063	0.3	0.012
	50	1.97	1.75	68.9			3	10.0B	-30	-1.181	0.3	0.012
	60	2.36	1.2	47.2			3	10.0B	-32	-1.26	0.3	0.012
carbon steel	16	0.63	1.7	66.9	12000	O_2 positive focus	0.5	1.4SP	15	0.591	0.3	0.012
	18	0.71	1.65	65			0.55	1.4SP	16	0.63	0.3	0.012
	20	0.79	1.55	61			0.6	1.6SP	18	0.709	0.3	0.012
	25	0.98	1.3	51.2	20000		0.6	1.6SP	18	0.709	0.3	0.012
	30	1.18	1.25	49.2			0.65	1.8SP	21	0.827	0.3	0.012
	35	1.38	1.125	44.3			0.8	1.8SP	21	0.827	0.3	0.012
	40	1.57	1	39.4	25000		0.9	1.8SP	21	0.827	0.3	0.012
	45	1.77	0.9	35.4			1.1	1.8SP	21	0.827	0.3	0.012
	50	1.97	0.81	31.9	30000		0.85	2.3SP	26	1.024	0.3	0.012
	60	2.36	0.75	29.5	50000		0.8	3.0S	30	1.181	0.3	0.012
	70	2.76	0.75	29.5	60000		1.2	3.0S	35	1.378	0.3	0.012
	80	3.15	0.65	25.6			1	3.5S	39	1.535	0.3	0.012
	100	3.94	0.55	21.7			1	4.0S	45	1.772	0.3	0.012
	160	6.3	0.2	7.9			1.5	4.0S	45	1.772	5	0.197
	200	7.87	0.175	6.9			1.5	4.0S	45	1.772	3	0.118
carbon steel	20	0.79	2.8	110.2	15000	O_2 Negative focus	1.5	1.8SP	-14	-0.551	1.5	0.059
	25	0.98	2.4	94.5	30000		1.3	2.0SP	-16	-0.63	1.5	0.059
	30	1.18	2.2	86.6			1.5	2.0SP	-17	-0.669	1.5	0.059
	35	1.38	2.1	82.7	35000		1.8	2.0SP	-17	-0.669	1.5	0.059
	40	1.57	1.8	70.9			1.4	2.5SP	-19	-0.748	3	0.118
	45	1.77	1.6	63	40000		1	2.5SP	-22	-0.866	3	0.118
	50	1.97	1.4	55.1			1	3.0S	-28	-1.102	2.5	0.098
	60	2.36	1.15	45.3	60000		1	3.0S	-30	-1.181	3.5	0.138
	70	2.76	1.1	43.3			1	3.0S	-30	-1.181	3.5	0.138
	80	3.15	0.9	35.4			1	3.0S	-33	-1.299	4	0.157
	100	3.94	0.575	22.6			1.1	3.5S	-40	-1.575	4	0.157
stainless steel	16	0.63	13.5	531.5	60000	N_2	8	6.0B	-6	-0.236	0.3	0.012
	18	0.71	11.5	452.8			8	6.0B	-7	-0.276	0.3	0.012
	20	0.79	9.5	374			8	6.0B	-8	-0.315	0.3	0.012
	25	0.98	7	275.6			3	8.0B	-11	-0.433	0.3	0.012
	30	1.18	5.5	216.5			3	8.0B	-13	-0.512	0.3	0.012
	35	1.38	4	157.5			3	8.0B	-18	-0.709	0.3	0.012
	40	1.57	3.25	128			4	8.0B	-18	-0.709	0.3	0.012
	50	1.97	2	78.7			4	10.0B	-28	-1.102	0.3	0.012
	60	2.36	1.45	57.1			3	10.0B	-33	-1.299	0.3	0.012
	70	2.76	1.1	43.3			3	10.0B	-39	-1.535	0.3	0.012
	80	3.15	0.7	27.6			3	10.0B	-42	-1.654	0.3	0.012
	90	3.54	0.5	19.7			3	10.0B	-40	-1.575	0.3	0.012
	100	3.94	0.4	15.7			3	10.0B	-50	-1.969	0.3	0.012
	120	4.72	0.125	4.9			3	10.0B	-45	-1.772	0.3	0.012
stainless steel	16	0.63	13.75	541.3	60000	Air	8	6.0B	-6	-0.236	0.3	0.012
	18	0.71	11.75	462.6			8	6.0B	-8	-0.315	0.3	0.012
	20	0.79	9.75	383.9			8	6.0B	-10	-0.394	0.3	0.012
	25	0.98	7.4	291.3			3	8.0B	-12	-0.472	0.3	0.012
	30	1.18	5.5	216.5			3	8.0B	-15	-0.591	0.3	0.012
	35	1.38	4.25	167.3			3	10.0B	-17	-0.669	0.3	0.012
	40	1.57	3.6	141.7			3	10.0B	-17	-0.669	0.3	0.012
	50	1.97	3.25	128			3	10.0B	-19	-0.748	0.3	0.012
	60	2.36	2	78.7			3	10.0B	-25	-0.984	0.3	0.012
	70	2.76	1.1	3.9			3	10.0B	-33	-1.299	0.3	0.012
	80	3.15	0.75	29.5			3	10.0B	-36	-1.417	0.3	0.012
	90	3.54	0.55	21.7			3	10.0B	-39	-1.535	0.3	0.012
	100	3.94	0.45	17.7			3	10.0B	-40	-1.575	0.3	0.012
	120	4.72	0.3	11.8			3	10.0B	-50	-1.969	0.3	0.012
	150	5.91	0.175	6.9			3	10.0B	-50	-1.969	0.3	0.012
	200	7.87	0.075	3			5	10.0B	-50	-1.969	0.3	0.012

Note: The red marked parameters in the table are proofing parameters, which are greatly affected by various factors in actual processing, and are only suitable for small batch production, and are not recommended for mass production and processing, and higher power lasers are recommended.

80kW Laser Cut Charts

material	Thickness [mm]	Thickness	Speed [m/min]	Speed	Power [W]	gas	pressure [bar]	Nozzle [mm]	Focus position [mm]	Focus position	Cutting height [mm]	Cutting height
carbon steel	16	0.63	15	590.55	80000	(N_2&O_2) /Air	4	6.0B	-4	-0.157	0.3	0.012
	18	0.71	13	511.81			4	6.0B	-5	-0.197	0.3	0.012
	20	0.79	11	433.07			4	6.0B	-6	-0.236	0.3	0.012
	25	0.98	8.5	334.645			4	6.0B	-9	-0.354	0.3	0.012
	30	1.18	7.5	295.275			4	6.0B	-12	-0.472	0.3	0.012
	35	1.38	5.5	216.535			3	6.0B	-17.5	-0.689	0.3	0.012
	40	1.57	4.5	177.165			3	10.0B	-19	-0.748	0.3	0.012
	45	1.77	4.25	167.3225			3	10.0B	-27	-1.063	0.3	0.012
	50	1.97	3.5	137.795			3	10.0B	-30	-1.181	0.3	0.012
	60	2.36	2.25	88.5825			3	10.0B	-32	-1.26	0.3	0.012
carbon steel	16	0.63	1.7	66.929	12000	O_2 positive focus	0.5	1.4SP	15	0.591	0.3	0.012
	18	0.71	1.65	64.9605			0.55	1.4SP	16	0.63	0.3	0.012
	20	0.79	1.55	61.0235			0.6	1.6SP	18	0.709	0.3	0.012
	25	0.98	1.3	51.181	20000		0.6	1.6SP	18	0.709	0.3	0.012
	30	1.18	1.25	49.2125			0.65	1.8SP	21	0.827	0.3	0.012
	35	1.38	1.125	44.29125			0.8	1.8SP	21	0.827	0.3	0.012
	40	1.57	1	39.37	25000		0.9	1.8SP	21	0.827	0.3	0.012
	45	1.77	0.9	35.433			1.1	1.8SP	21	0.827	0.3	0.012
	50	1.97	0.825	32.48025	30000		0.85	2.3SP	26	1.024	0.3	0.012
	60	2.36	0.75	29.5275	50000		0.8	3.0S	30	1.181	0.3	0.012
	70	2.76	0.75	29.5275	56000		1.2	3.0S	35	1.378	0.3	0.012
	80	3.15	0.65	25.5905	64000		1	3.5S	39	1.535	0.3	0.012
	100	3.94	0.55	21.6535	80000		1	4.0S	45	1.772	0.3	0.012
	160	6.3	0.2	7.874	80000		1.5	4.0S	45	1.772	5	0.197
	200	7.87	0.175	6.88975	80000		1.5	4.0S	45	1.772	3	0.118
carbon steel	20	0.79	2.7	106.299	15000	O_2 Negative focus	1.5	1.8SP	-14	-0.551	1.5	0.059
	25	0.98	2.45	96.4565	30000		1.3	2.0SP	-16	-0.63	1.5	0.059
	30	1.18	2.2	86.614			1.5	2.0SP	-17	-0.669	1.5	0.059
	35	1.38	2.1	82.677	35000		1.8	2.0SP	-17	-0.669	1.5	0.059
	40	1.57	1.8	70.866			1.4	2.5SP	-19	-0.748	3	0.118
	45	1.77	1.6	62.992	40000		1	2.5SP	-22	-0.866	3	0.118
	50	1.97	1.4	55.118			1	3.0S	-28	-1.102	2.5	0.098
	60	2.36	1.5	59.055	60000		1	3.0S	-30	-1.181	3.5	0.138
	70	2.76	1.3	51.181	64000		1	3.0S	-30	-1.181	3.5	0.138
	80	3.15	1.1	43.307	70000		1	3.0S	-33	-1.299	4	0.157
	90	3.54	0.9	35.433	73000		1	3.5S	-35	-1.378	4	0.157
	100	3.94	0.8	31.496	80000		1.2	3.5S	-40	-1.575	4	0.157
	120	4.72	0.525	20.66925	80000		1.3	3.5S	-45	-1.772	4	0.157
	160	6.3	0.325	12.79525	80000		1.3	4.0S	-52	-2.047	4	0.157
	200	7.87	0.175	6.88975	80000		1.4	4.0S	-60	-2.362	4	0.157
stainless steel	16	0.63	14.5	570.865	80000	N_2	8	6.0B	-6	-0.236	0.3	0.012
	18	0.71	12.5	492.125			8	6.0B	-7	-0.276	0.3	0.012
	20	0.79	11.5	452.755			8	6.0B	-8	-0.315	0.3	0.012
	25	0.98	9.5	374.015			3	8.0B	-11	-0.433	0.3	0.012
	30	1.18	7.5	295.275			3	8.0B	-13	-0.512	0.3	0.012
	35	1.38	5	196.85			3	8.0B	-18	-0.709	0.3	0.012
	40	1.57	4.25	167.3225			4	8.0B	-18	-0.709	0.3	0.012
	50	1.97	2.75	108.2675			4	10.0B	-28	-1.102	0.3	0.012
	60	2.36	1.8	70.866			3	10.0B	-33	-1.299	0.3	0.012
	70	2.76	1.25	49.2125			3	10.0B	-39	-1.535	0.3	0.012
	80	3.15	0.9	35.433			3	10.0B	-42	-1.654	0.3	0.012
	90	3.54	0.75	29.5275			3	10.0B	-40	-1.575	0.3	0.012
	100	3.94	0.6	23.622			3	10.0B	-50	-1.969	0.3	0.012
	120	4.72	0.175	6.88975			3	10.0B	-45	-1.772	0.3	0.012
stainless steel	16	0.63	15	590.55	80000	Air	8	6.0B	-6	-0.236	0.3	0.012
	18	0.71	13.5	531.495			8	6.0B	-8	-0.315	0.3	0.012
	20	0.79	12.5	492.125			8	6.0B	-10	-0.394	0.3	0.012
	25	0.98	9.75	383.8575			3	8.0B	-12	-0.472	0.3	0.012
	30	1.18	7.5	295.275			3	8.0B	-15	-0.591	0.3	0.012
	35	1.38	5	196.85			3	10.0B	-17	-0.669	0.3	0.012
	40	1.57	4.25	167.3225			3	10.0B	-17	-0.669	0.3	0.012
	50	1.97	3.25	127.9525			3	10.0B	-19	-0.748	0.3	0.012
	60	2.36	2	78.74			3	10.0B	-25	-0.984	0.3	0.012
	70	2.76	1.25	49.2125			3	10.0B	-33	-1.299	0.3	0.012
	80	3.15	0.9	35.433			3	10.0B	-36	-1.417	0.3	0.012
	90	3.54	0.8	31.496			3	10.0B	-39	-1.535	0.3	0.012
	100	3.94	0.65	25.5905			3	10.0B	-40	-1.575	0.3	0.012
	120	4.72	0.45	17.7165			3	10.0B	-50	-1.969	0.3	0.012
	150	5.91	0.25	9.8425			3	10.0B	-50	-1.969	0.3	0.012
	200	7.87	0.125	4.92125			5	10.0B	-50	-1.969	0.3	0.012

Note: The red marked parameters in the table are proofing parameters, which are greatly affected by various factors in actual processing, and are only suitable for small batch production, and are not recommended for mass production and processing, and higher power lasers are recommended.