

## Reci 1000W fiber laser cutting data

material type	thickness (mm)	speed (m/min)	gas	power (%)	focus length (mm)	gas pressure (bar)	nozzle diameter(mm)
carbon steel	1	12	O <sub>2</sub>	100	2	4.5	1.5double
	2	7			2	4	1.5double
	3	4			3	3	1.5double
	4	2.7			3	0.8	2.0double
	5	2.2			3	0.8	2.0double
	6	1.8			3	0.8	2.0double
	8	1.2			3	0.6	2.0double
	10	1			3	0.6	2.0double
	12	0.7			3	0.6	2.5double
	14	0.6			3	0.6	3.0double
stainless steel	1	36	N <sub>2</sub>	100	-2	20	1.5single
	2	9.5			-2	20	2.0single
	3	4			-3	20	2.0single
	4	2			-3	20	2.5single
	5	1.3			-3	20	3.0single
	6	1			-4	20	4.0single
aluminum	1	18	N <sub>2</sub>	100	-1	20	2.0single
	2	9.5			-1.5	20	2.0single
	3	3.5			-2	20	2.5single
	4	0.9			-2	20	2.5single
	5	0.6			-2.5	20	3.0single
brass	1	15	N <sub>2</sub>	100	-1	20	2.0single
	2	7			-1	20	2.0single
	3	2			-2	20	2.0single
	4	0.9			-2	20	2.0single
	5	0.4			-2	20	3.0single
copper	1	11	O <sub>2</sub>	100	1	20	2.0single
	2	5			-1	20	2.0single
	3	1.5			-1.5	20	2.0single
	4	0.7			-2.5	20	2.0single

**Notes:**

- 1) The fiber laser output core diameter of the above test is 20um ;
- 2) The test uses a cutting head with a collimation focusing ratio of 100:125;
- 3) Differences in field conditions may result in slightly different data.