

6000W Sheet Cutting Parameter

Material	Thickness	Assisted Gas	Speed(m/min)
Carbon Steel	1.0	Nitrogen	38.0-50.0
	2.0		18.0-32.0
	3.0		13.0-19.0
	4.0		8.5-12.0
	5.0		7.0-8.0
	6.0		5.0-6.0
	8.0		2.5-3.8
	1.0	Oxygen	8.0-12.0
	2.0		6.0-7.5
	3.0		4.0-5.0
	4.0		3.5-4.5
	5.0		3.0-3.8
	6.0		2.6-3.2
	8.0		2.0-2.6
10.0	1.8-2.1		
12.0	1.0-1.5		
14.0	0.8-1.1		
16.0	0.7-0.85		
20.0	0.6-0.75		
22.0	0.55-0.65		
25.0	0.4-0.6		
Stainless steel	1.0	Nitrogen	45.0-60.0
	2.0		20.0-35.0
	3.0		15.0-20.0
	4.0		10.0-14.0
	5.0		8.0-12.0
	6.0		6.0-8.0
	8.0		3.5-4.0
	10.0		1.8-2.2



	12.0 14.0 16.0 20.0		1.2-1.5 0.8-1.2 0.6-0.8 0.3-0.4
Brass	1.0 2.0 3.0 4.0 5.0 6.0 8.0		45.0-55.0 25.0-35.0 12.0-18.0 8.0-10.0 4.5-6.0 3.0-4.0 1.6-2.2
Aluminum	1.0 2.0 3.0 4.0 5.0 6.0 8.0 10.0		45.0-55.0 20.0-30.0 13.0-18.0 10.0-12.0 5.0-8.0 4.0-6.0 2.0-3.0 1.0-1.9
Copper	1.0 2.0 3.0 4.0 5.0 6.0	Nitrogen	30.0-40.0 9.0-11.0 7.0-9.8 4.0-6.0 1.3-2.0 0.8-1.3

(Above parameter is for reference only. The quality of materials, pressure during cutting, and profile designing, etc. will affect cutting speed.)



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Cost Analysis

Items	Cutting of stainless steel (1mm)	Cutting of carbon steel (5mm)
Electricity expenses	RMB40/h	RMB 40/h
Expenses of cutting auxiliary gas	RMB 16/h(N2)	RMB 10/h(O2)
Expenses of protective lens and nozzle	RMB 0.4/h	RMB 0.5/h
Total expenses	RMB 56.4/h	RMB 50.5/h

If the assisted cutting gas is the dried compressed air, expenses are the actual operation expenses of the air compressor plus expenses of electricity consumed by the machine tool and consumables like protective mirror and nozzle).

Notes:

- 1.The electricity expense and gas expense in the table above are based on the price in Foshan, China and prices in different areas will be various;
- 2.When the machine is cutting other thickness or different metal sheet, consumption of the assisted gas may be different.



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