Laser welding thickness capability parameter table

Material	Thickness（mm)	Laser power								
		1000W	1500W	2000W	3000W	4000W	6000W	8000W	10000W	12000W
Stainless steel	1	√	√	√	√	√	√	√	√	√
	2	√	√	√	√	√	√	√	√	√
	3		√	√	√	√	√	√	√	√
	4			√	√	√	√	√	√	√
	5				√	√	√	√	√	√
	6					√	√	√	√	√
	8						√	√	√	√
	10							√	√	√
	12								√	√
	15									√
Carbon steel	1	√	√	√	√	√	√	√	√	√
	2		√	√	√	√	√	√	√	√
	3			√	√	√	√	√	√	√
	4				√	√	√	√	√	√
	5					√	√	√	√	√
	6						√	√	√	√
	8						√	√	√	√
	10							√	√	√
	12							√	√	√
	15								√	√
	20									√
Aluminum	1	√	√	√	√	√	√	√	√	√
	2		√	√	√	√	√	√	√	√
	3			√	√	√	√	√	√	√
	4				√	√	√	√	√	√
	5					√	√	√	√	√
	6						√	√	√	√
	8								√	√
	10									√
Remark	1. The welding thickness test is based on the limit welding penetration; 2. Different welding effect requirements will have an impact on the welding thickness; 3. Different configurations will have an impact on welding capabilities; 4. This table is for reference only, the actual welding thickness capacity is subject to actual measurement.									

Consumables table

Material	Recommended replacement cycle
Protective lenses	Once a week
Distilled water	Three months