

## am.CO.za FastCUT Fibre Laser Performance Sheet

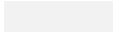
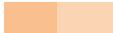

### Cutting Speed Sheet

FIBRE LASER WATTAGE		500W	1000W	1500W	2000W	3000W	4000W	6000W	8000W	10000W	12000W
MATERIAL	Thickness	Cutting Speed (Metre/Min)									
MILD STEEL	1 mm	7.0 - 9.0	8.0 - 10	15 - 26	24 - 30	30 - 40	33 - 42	35 - 42	35 - 42	35 - 42	35 - 42
	2 mm	3.0 - 4.5	4.0 - 6.5	4.5 - 7.0	4.7 - 6.0	4.8 - 7.5	5.2 - 8.0	6.0 - 8.0	6.2 - 10	7.0 - 12	10 - 13
	3 mm	1.8 - 3.0	2.4 - 3.0	2.6 - 4.0	3.0 - 4.8	3.3 - 5.0	3.5 - 5.5	3.8 - 6.5	4.0 - 7.0	4.2 - 7.5	4.5 - 8.0
	4 mm	1.3 - 1.5	2.0 - 2.4	2.5 - 3.0	2.8 - 3.5	3.0 - 4.2	3.1 - 4.8	3.5 - 5.0	3.5 - 5.5	3.5 - 5.5	3.5 - 5.5
	5 mm	0.9 - 1.1	1.5 - 2.0	2.0 - 2.5	2.2 - 3.0	2.6 - 3.5	2.7 - 3.6	3.3 - 4.2	3.3 - 4.5	3.3 - 4.5	3.3 - 4.8
	6 mm	0.6 - 0.9	1.4 - 1.6	1.6 - 2.2	1.8 - 2.6	2.3 - 3.2	2.5 - 3.4	2.8 - 4.0	3.0 - 4.2	3.0 - 4.2	3.0 - 4.2
	8 mm		0.8 - 1.2	1.0 - 1.4	1.2 - 1.8	1.8 - 2.6	2.0 - 3.0	2.2 - 3.2	2.5 - 3.5	2.5 - 3.5	2.5 - 3.5
	10 mm		0.6 - 1.0	0.8 - 1.1	1.1 - 1.3	1.2 - 2.0	1.5 - 2.0	1.8 - 2.5	2.2 - 2.7	2.2 - 2.7	2.2 - 2.7
	12 mm		0.5 - 0.8	0.7 - 1.0	0.9 - 1.2	1.0 - 1.6	1.2 - 1.8	1.2 - 2.0	1.2 - 2.1	1.2 - 2.1	1.2 - 2.1
	14 mm			0.5 - 0.7	0.7 - 0.8	0.9 - 1.4	0.9 - 1.2	1.5 - 1.8	1.7 - 1.9	1.7 - 1.9	1.7 - 1.9
	16 mm				0.6 - 0.7	0.7 - 1.0	0.8 - 1.0	0.8 - 1.5	0.9 - 1.7	0.9 - 1.7	0.9 - 1.7
	18 mm				0.4 - 0.6	0.6 - 0.8	0.65 - 0.9	0.65 - 0.9	0.65 - 0.9	0.65 - 0.9	0.65 - 0.9
	20 mm					0.5 - 0.8	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9
	22 mm						0.4 - 0.6	0.5 - 0.8	0.5 - 0.8	0.5 - 0.8	0.5 - 0.8
25 mm							0.3 - 0.5	0.3 - 0.5	0.3 - 0.7	0.3 - 0.7	
STAINLESS STEEL (e.g. 3CR12)	1 mm	8.0 - 13	18 - 25	20 - 27	24 - 30	30 - 35	32 - 40	45 - 55	50 - 66	60 - 75	70 - 85
	2 mm	2.4 - 5.0	7.0 - 12	8.0 - 13	9.0 - 14	13 - 21	16 - 28	20 - 35	30 - 42	40 - 55	50 - 66
	3 mm	0.6 - 0.8	1.8 - 2.5	3.0 - 5.0	4.0 - 6.5	6.0 - 10	7.0 - 15	15 - 24	20 - 30	27 - 38	33 - 45
	4 mm		1.2 - 1.3	1.5 - 2.4	3.0 - 4.5	4.0 - 6.0	5.0 - 8.0	10 - 16	14 - 21	18 - 25	22 - 32
	5 mm		0.6 - 0.7	0.7 - 1.3	1.8 - 2.5	3.0 - 5.0	4.0 - 5.5	8.0 - 12	12 - 17	15 - 22	18 - 25
GALVANIZED STEEL	6 mm			0.7 - 1.0	1.2 - 2.0	2.0 - 4.0	2.5 - 4.5	6.0 - 9.0	8.0 - 14.0	12 - 15	15 - 21
	8 mm				0.7 - 1.0	1.5 - 2.0	1.6 - 3.0	4.0 - 5.0	6.0 - 8.0	8.0 - 12.0	10 - 16
	10 mm					0.6 - 0.8	0.8 - 1.2	1.8 - 2.5	3.0 - 5.0	6.0 - 8.0	8.0 - 12
	12 mm					0.4 - 0.6	0.5 - 0.8	1.2 - 1.8	1.8 - 3.0	3.0 - 5.0	6.0 - 8.0

	14 mm						0.4 - 0.6	0.6 - 0.8	1.2 - 1.8	1.8 - 3.0	3.0 - 5.0	
	20 mm							0.4 - 0.6	0.6 - 0.7	1.2 - 1.8	1.8 - 3.0	
	25 mm								0.5 - 0.6	0.6 - 0.7	1.2 - 1.8	
	30 mm								0.4 - 0.5	0.5 - 0.6	0.6 - 0.7	
	40 mm									0.4 - 0.5	0.5 - 0.6	
<b>FIBRE LASER WATTAGE</b>		500w	1000W	1500W	2000W	3000W	4000W	6000W	8000W	10000W	12000W	
<b>ALUMINIUM</b>	1 mm	4.0 - 5.5	6.0 - 10	10 - 20	15 - 25	25 - 38	35 - 40	45 - 55	50 - 65	60 - 75	70 - 85	
	2 mm	0.7 - 1.5	2.8 - 3.6	5.0 - 7.0	7 - 10	10 - 18	13 - 25	20 - 30	25 - 38	33 - 45	38 - 50	
	3 mm		0.7 - 1.5	2.0 - 4.0	4.0 - 6.0	6.5 - 8.0	7.0 - 13	13 - 18	20 - 30	25 - 35	30 - 40	
	4 mm			1.0 - 1.5	2.0 - 3.0	3.5 - 5.0	4.0 - 5.5	10 - 12	13 - 18	21 - 30	25 - 38	
	5 mm			0.7 - 1.0	1.2 - 1.8	2.5 - 3.5	3.0 - 4.5	5.0 - 8.0	9.0 - 12	13 - 20	15 - 25	
	6 mm				0.7 - 1.0	1.5 - 2.5	2.0 - 3.5	4.0 - 6.0	4.5 - 8.0	9.0 - 12	13 - 18	
	8 mm				0.6 - 0.8	0.7 - 1.0	0.9 - 1.6	2.0 - 3.0	4.0 - 6.0	4.5 - 8.0	9.0 - 12	
	10 mm					0.4 - 0.7	0.6 - 1.5	1.0 - 2.0	2.2 - 3.0	4.0 - 6.0	4.5 - 8.0	
	12 mm						0.3-0.45	0.4 - 0.6	0.8 - 1.4	1.5 - 2.0	2.2 - 3.0	4.0 - 6.0
	16 mm							0.3 - 0.4	0.6 - 0.8	1.0 - 1.6	1.5 - 2.0	2.2 - 3.0
	20 mm								0.5 - 0.7	0.7 - 1.0	1.0 - 1.6	1.5 - 2.0
	25 mm									0.5 - 0.7	0.7 - 1.0	1.0 - 1.6
	35 mm									0.5 - 0.7	0.7 - 1.0	
<b>BRASS - COPPER</b>	1 mm	4.0 - 5.5	6.0 - 10	8.0 - 13	10 - 16	20 - 35	25 - 30	45 - 55	55 - 65	65 - 75	75 - 85	
	2 mm	0.5 - 1.0	2.8 - 3.6	3.0 - 4.5	4.5 - 7.5	6.0 - 10	8.0 - 12	25 - 30	30 - 40	33 - 45	38 - 50	
	3 mm		0.5 - 1.0	1.5 - 2.5	2.5 - 4.0	4.0 - 6.0	5.0 - 6.5	12 - 18	20 - 30	25 - 40	30 - 50	
	4 mm			1.0 - 1.6	1.5 - 2.0	3.0-5.0	3.2 - 5.5	8.0 - 10	10 - 18	15 - 24	25 - 33	
	5 mm			0.5 - 0.7	0.9 - 1.2	1.5 - 2.0	2.0 - 3.0	4.5 - 6.0	7.0 - 9.0	9.0 - 15	15 - 24	
	6 mm				0.4 - 0.7	1.0 - 1.8	1.4 - 2.0	3.0 - 4.5	4.5 - 6.5	7.0 - 9.0	9.0 - 15	
	8 mm					0.5 - 0.7	0.7 - 1.0	1.6 - 2.2	2.4 - 4.0	4.5 - 6.5	7.0 - 9.0	
	10 mm						0.2 - 0.4	0.8 - 1.2	1.5 - 2.2	2.4 - 4.0	4.5 - 6.5	
	12 mm							0.2 - 0.4	0.8 - 1.5	1.5 - 2.2	2.4 - 4.0	
	14 mm								0.4 - 0.6	0.6 - 0.8	0.8 - 1.5	

Aluminium and Brass/Copper reflect Laser. Long-time cutting of such material is not recommended because may result damaged of machine.

## Auxiliary Gas

	Compressed Dried Air, $\geq 10$ Bar	Suitable for Aluminium $\leq 2\text{mm}$ , Can Use for Other Metal ( $\leq 2\text{mm}$ ) but Cutting Edge Won't be Smooth
	N <sub>2</sub> , Nitrogen $\geq 99.5\%$ Purity, $\geq 10$ Bar, $\sim 80\text{L / Hour}$	Suitable for Metal with Shining Surface, Result Smooth Cutting Edge and Shininess Thicker Metal Steel, Higher Oxygen Pressure, Otherwise No Shininess Because of Oxidize by Air
	O <sub>2</sub> , Oxygen $\geq 99.5\%$ Purity, $\leq 10$ Bar, $\leq 60\text{L / Hour}$	Suitable for Mild Steel but Cutting Edge will be Oxidized Thicker Mild Steel, Lower Oxygen Pressure, Otherwise Result Wider Area of Oxidized Edge

## Minimum Requirements

Electricity:	380V Three Phase
Footprint:	Additional 5 Metres on Width/Length of Machine Working Area
Temperature:	Air-Conditioned, within 18°C to 24°C
Humidity:	$\leq 75\%$