

Cutting

Cutting 1mm Thick Brass

This thickness of brass can be cut using a multi-pass method where the cut is created by ablating through the sheet thickness. With the single mode Laser the spot diameter is small (around 32 μ m in this instance) which enables a high material removal rate but creates a narrow kerf (cut width).

In order to cut 1mm thick sheet material, the beam is wobbled during the cutting process in order to widen the kerf. Initially a wider wobble diameter (typically 60 μ m) is used, changing to 40 μ m diameter during the middle of process and then to 20 μ m towards the end, always using a wobble frequency of 600Hz. This gives an overall cutting speed in the region of 60 to 80mm/min.

The workstation used a 75mm BEC which produced an 8.1mm (1/e²) diameter beam at the scanner entrance, allowing a 10mm aperture scanner to be used. The scanner was fitted with a 160mm focal length objective lens which gave a 100x100mm field size.

Alternatively, our redENERGY S-Type Laser can be used for cutting materials. Cutting speed is greatly dependent on output power.

Related Product



Visit our website to view the full product datasheet
redENERGY G4



Scale 0.3mm

Application Parameters

Type	G4 70W RM-Z
Power	70W
M ²	<1.3
Beam \varnothing	8mm
Scanner/Lens	10mm/160mm F - theta
Energy	WF0 @70kHz

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