

# Drilling

## Drilling non-circular holes in Aluminium

Laser drilling is a widely used process across multiple industries including; aerospace, automotive, electronics and medical. Drilling with a Fiber Laser can be used across a wide range of materials including various metals (aluminium, copper, brass, etc), ceramics, and other industrial materials.

Our redENERGY G4 20W EP-Z Fiber Lasers are able to drill holes in thin aluminium foil sheets, producing holes with diameters as small as 40µm. There are several different techniques that can be used when drilling with a fiber laser including percussion and trepanning which are each suited to achieve a different size of hole. Due to the flexibility of the G4 Fiber Laser platform, our Lasers are able to create more complex shapes such as squares, ovals and even heart and star shapes without any reduction in quality.

To produce the highest quality holes and reduce process time, our G4 Fiber Lasers use multi-waveform process technology to optimise pulse durations at each stage of the drilling process.

For the highest quality results, our redENERGY G4 20W EP-Z is the optimal choice. However if speed is of greater importance to your process, the G4 50W EP-Z Fiber Laser can also be used and produce a similar high quality hole at a reduced process time.

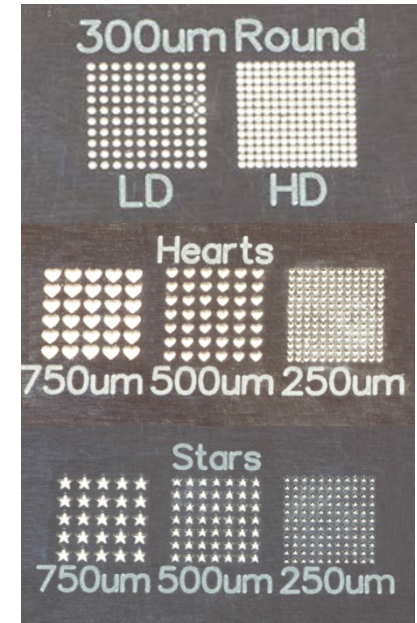
### Application Parameters

Type	redENERGY G4 20W EP-Z
Power	20W
M <sup>2</sup>	<1.6
Beam Ø	8mm
Scanner/Lens	F75 / 163mm BEC
Energy	WF32-37 / 20kHz @ 400mm/s

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