

# FIXING ON FIBRE

A UK fabricator has doubled its growth rate with fibre laser cutting, and now employs a new 10kW ByStar fibre laser cutting system.

### ISMR SAYS:

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**E**stablished in 2010 by Dave Mawer and Mike Barratt, D & M Design & Fabrication in the UK has seen dramatic progress since the joint owners started running the business from the former's bedroom and the latter's garage. At the time, neither thought that seven years later they would buy one of the most advanced fibre laser cutting centres on the market, a Bystronic 10kW ByStar Fiber with automated sheet handling.

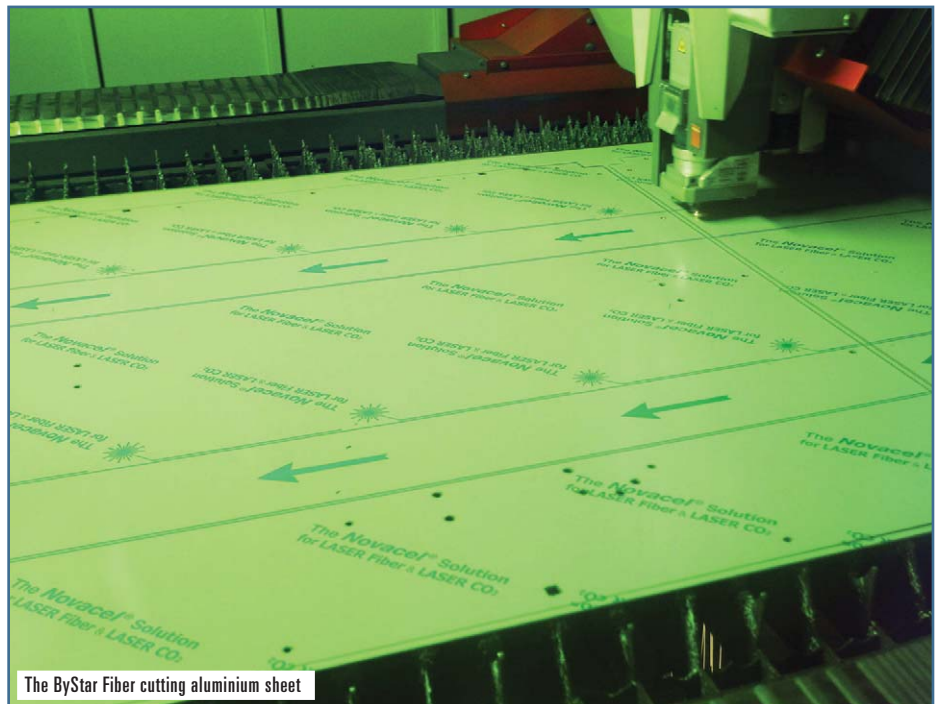
In May 2017, the machine was installed in one of the firm's factory units in Kirkby Malzeard, in the Yorkshire Dales near Ripon. Capable of processing 3 metre x 1.5 metre sheet, it employs the highest power fibre laser currently available on a cutting machine. According to Mr Barratt, it is about ten times faster at processing 10mm thick material than D&M's previous Bystronic 3.3 kW CO<sub>2</sub> fibre laser machine bought five years earlier. A sheet can be completed typically in less than 40 minutes, rather than six hours.

### An eye on speed

Mr Barratt said: "We were previously struggling to keep up with laser profiling our material, despite running the CO<sub>2</sub> machine around the clock, six days per week. With the speed of fibre technology, we are easily processing more material per day in a single shift and now only work five days per week. The fibre machine stands idle for some of the time at present, as it finishes all the work going through the shop so quickly."

Mr Mawer added: "With an eye on the future, we specified the machine with an inline ByTrans Extended handling system to automate supply of material to the machine and return of laser-cut sheets. We have proved the cell's reliability during lights-out running a few times. It is not needed at the moment, but will be invaluable as volumes build in the future."

Between 2014 and 2016, annual growth in company turnover was 10 per cent. This jumped to 20 per cent in 2017 due to the efficiency of fibre laser cutting and this rate of increase continued through 2018. Work is flowing in from a broad spread of sectors including automotive, construction and food and involves cutting mainly stainless steel, mild steel and aluminium.



The ByStar Fiber cutting aluminium sheet

Additionally, fibre laser technology allows reflective materials, such as copper and brass, to be cut without damaging the optics (unlike CO<sub>2</sub> laser cutting) which expands the range of work that D&M can take on. For the same reason, fibre also helps when cutting aluminium.

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### Taking the plunge

The two company directors accessed a lot of advice before they bought their first laser cutting machine in May 2012 as, up to then, they had been putting this work out to subcontractors. Visits to their factories revealed the brands of laser cutting equipment

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commonly in use and one of the most popular was that supplied by Swiss manufacturer, Bystronic. At the time, there was not much to choose technically between the different CO<sub>2</sub> offerings. However, confirmed D & M Design & Fabrication, Bystronic was selected due to the UK subsidiary's "more personal sales approach and the level of service offered."

This was also the case when the ByStar Fiber 3015 was purchased. Dave Mawer had witnessed its launch during the EuroBLECH 2016 exhibition in Germany and subsequently visited the Bystronic factory in Niederönz to see the machines being built. Impressed by what he saw, he was finally convinced by the 10kW laser source, capable of cutting material of up to 30mm thick.



The ByTrans Extended carriage on its way back to its docking position after delivering a fresh sheet to the shuttle table of the ByStar Fiber



Mike Barratt (left) and Dave Mawer in front of the Bystronic fibre laser cutting cell at D&M Design & Fabrication



Another view of the Bystronic 10kW ByStar Fiber 3015 at D&M Design

## Making the grade

Both D&M partners regard the on-site training provided by the supplier as comprehensive. They also think the BySoft 7 software is efficient for nesting and easy to use, especially when transferring designs from their SolidWorks CAD/CAM seat into the Bystronic

control to create the cutting routines. Cut pieces are invariably folded on D&M's six press brakes and powder coated on-site before delivery to customers.

Such is the success that D&M is enjoying that expansion plans are already underway. The unit housing the fibre laser machine is

being extended and includes a deburring facility. The shop containing the company's press brakes will also be enlarged to accommodate a new powder coating plant. Overall, the factory area will increase from 20,000 to 28,000 sq. ft. ■

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## CONTACT

For further details, see [www.bystronic.com](http://www.bystronic.com)