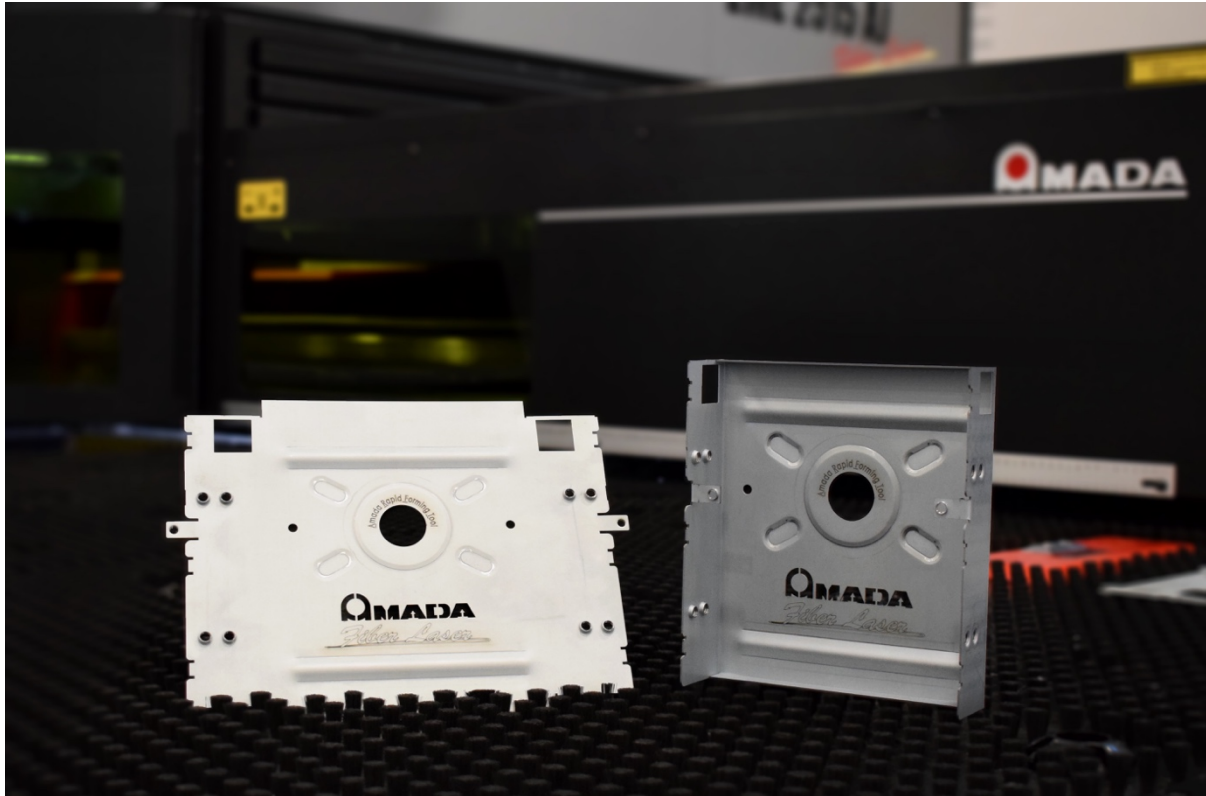


PRESS RELEASE: EML-AJ Fibre Laser/Punch Combination Machine Helps Reduce Cost Per Part



AMADA has developed a new fibre laser/punch combination machine that is capable of delivering the ultimate in production flexibility to any subcontractor or OEM faced with manufacturing a high mix of sheet metal components. The EML-AJ slots neatly between AMADA's existing entry level and premium machines in this category, helping fabrication shops to reduce their labour requirements and cost-per-part, and ultimately improve profitability.

Among the new features of the EML-AJ are a number of innovations that help to minimise operator input. For instance, as standard the machine comes with an automatic nozzle changer, an automated scrap conveyor that prevents any possibility of overflowing, and an automatic laser cutting plate cleaner to remove any spatter created by the laser profiling process. In addition, an optional punch-die changer (PDC) can be supplied that increases the tool capacity from 44 tool stations, to 220 punches and 440 dies.

Stable production is a key attribute of the EML-AJ, thanks largely to single bank 3kW fibre laser source, which is sufficient for cutting material up to 6 mm thick. Further aiding stability during cutting is the patented bridge frame.

On the punching side, an air-blow system supplies the tooling with air and self-lubricating oil mist to prevent deposition and slug pulling. The avoidance of slug pulling is also aided by a vacuum suction system creating negative pressure beneath the turret. Punching slugs are therefore prevented from being pulled up. In this way, improved quality is also achieved, along with maximised output.

The inclusion of punching introduces the ability to produce forms as part of a single set-up operation. Here, a stand-out feature unique to AMADA is P&F (Punching and Forming). P&F means that, in addition to 30 tonnes of force from the high-speed ram, the EML-AJ can deliver 16 tonnes from a ram underneath the turret and form upwards. AMADA's P&F forming is a standard feature on EML-AJ, allowing the production of forms up to 22 mm high with no sheet distortion.

Ultimately, the new fibre laser/punch combination machine is designed to reduce cost per part, particularly in comparison with previous generation CO₂ laser-punch combination models. The new EML-AJ not only offers faster cutting compared with its CO₂ counterparts, but adds the ability to cut more challenging materials, such as brass, copper and titanium.

On the subject of automation, many bolt-on sheet load/unload options are available, including very flexible part-picking systems. If preferred, however, the EML-AJ can simply be used as a stand-alone production centre. The unique table cover design allows a fully automated EML-AJ cell to be easily loaded as a manual machine. Vice versa, a stand-alone machine can be retrofitted with automation without the need for additional guarding. Another feature that is unique to AMADA.

Automated operation is further exemplified by the use of AMADA's Z turret (offset upper/lower turret), which facilitates extremely fast tool changes. As a point of note, AMADA'S ID tooling system provides full digital tool control for ease of maintenance. In fact, there are many aspects of the EML-AJ that help to minimise maintenance costs. For instance, simplified beam delivery means there are no internal mirrors or turbo blowers.

Last but not least, the running costs of the EML-AJ are extremely low. Indeed, the machine's 3kW fibre laser is up to 58% more efficient than a CO₂ equivalent. Moreover, the EML-AJ offers higher quality beam with higher absorption rates for faster cutting.

As with all AMADA laser/punch combination machines, inherent advantages include reduced secondary operations and enhanced product design potential.

The EML-AJ was unveiled in Europe, for the first time, at EuroBLECH 2018.

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