



LARGE INSIDE. GENEROUS IN PERFORMANCE.
HIGHLY CONFIGURABLE.

LT-FREE 4020

Result of BLM GROUP's extensive experience in the production of laser cutting equipment for tubes, sheets and three-dimensional parts, the LT-FREE 4020 is the Group's new laser cutting cell, specifically designed for large components, typical for sectors such as automotive, industrial vehicles and aerospace.

Large inside

**4.100 mm x
2.100 mm x
1.000 mm**



Generous in performance

- **Acceleration 1 g**
- **Active Tools**
- **5 axes + 1**
- **Laser source up to 4 kW**

One of the largest working areas on the market

Within a compact and attractive layout, the LT-FREE 4020 conceals one of the largest workspaces available on the market (it is 4,100 mm wide, 2,100 mm deep and 1,000 mm high). Designed to make the most of workshop space, its generous work area can comprise up to 23% of the total footprint of the machine. This is particularly interesting when compared to the market average whose value does not exceed 15%. The cutting area is almost one-fourth of the area occupied by the machine.

The size and weight of the workpieces that the LT-FREE 4020 can cut may require the use of special lifting devices to handle processed material and the supporting fixtures. This is why the LT-FREE 4020 cutting tables can be equipped with extractable pallets that allow workpieces and equipment to be moved outside the footprint of the cabin so that they can be easily replaced with the help of an overhead crane or forklift. Table rails that can cause hindrance for operators are no longer required and therefore no excavation or other work on the customer's floor is needed.

Extreme performance, ideal for large stamped parts

The LT-FREE 4020 offers extremely high work dynamics with accelerations of up to 1 g during machining for machining large stamped parts. The cutting head has an additional local axis that moves the nozzle closer and further away from the workpiece, according to the distance detected by the capacitive sensor. This allows the head to easily overcome any surface defects on the workpiece, optimizing the cycle for the best performance in terms of cycle time and productivity. In terms of performance, the aforesaid features are supplemented by Active Tools technology, which, as in the Group's other laser cutting machines, optimizes the entire work cycle. The ultra-fast moving doors can open and close in less than 2 seconds, and a laser source of up to 4 kW increases productivity considerably, especially on thicker materials.

Furthermore, the LT-FREE 4020 can be integrated into any complex production system and is ideal for working 24/7. More in detail, the machine is ready to be connected to a robot for automatic loading and unloading of parts and can dialogue with the company's management system and other machines through various communication protocols, including OPC-UA.



Robot handling and double cutting zones: the strengths of BLM GROUP laser cutting cells

Like the smaller version, the LT-FREE 4020 is available in 4 different configurations, with single or double work areas and with either one or two 6-axis robots for in-process workpiece handling.

The use of a robot, which has always been one of the hallmarks of BLM GROUP laser cutting cells, is particularly effective in laser cutting of bent or hydroformed tubes and eliminates manual repositioning to the benefit of precision and a shorter cycle time.

Double work area configuration. The split cabin allows loading and unloading operations to overlap with laser cutting operations, consequently increasing machine uptime. Additionally, on the LT-FREE 4020, this configuration features a patented solution with no market equivalents in which the absence of the shutter (the device that opens and closes letting the head through the partition) creates a central space where the cutting head can position itself freely.

To be able to retain a large working area even when it is divided into two, the partition can be arranged asymmetrically so that one of the two areas can be larger than the other. This patented solution makes it possible to maintain one large cutting area for large stamped or pre-welded parts and dedicate the other to smaller parts.

Superior quality, as expected from BLM GROUP's more than 35 years of laser cutting experience

The LT-FREE 4020 is a top-of-the-range machine that offers first-class results for users in terms of cutting quality, repeatability and precision of the workpiece produced and also in terms of reliability, retaining its characteristics of excellence over time.

In this respect, the skillful design and care for materials are echoed by Dual Drive technology, which eliminates any inversion micro-gaps, ensuring consistent cutting-edge quality throughout the life of the machine.

Equally effective on small or large batches

The LT-FREE 4020 also fully meets the requirement for production flexibility, which has always been one of the strengths of BLM GROUP's 3D laser cutting cells.

Like the LT-FREE and LT360, the LT-FREE 4020 can be programmed using ArtCut, the powerful CAM software allows the upload of highly complex three-dimensional profiles and the rapid off-line programming of the entire work cycle. With ArtCut it is possible to simulate the part cutting cycle perfectly true to reality, resolve any collisions and kick off production safely.

Compact on the outside, big on the inside and generous in performance, equally effective on batches of all sizes, the LT-FREE 4020 is the ideal machine for laser cutting parts of all shapes and sizes with superior quality and speed.

LS is more.



LS7

More in everything.

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