

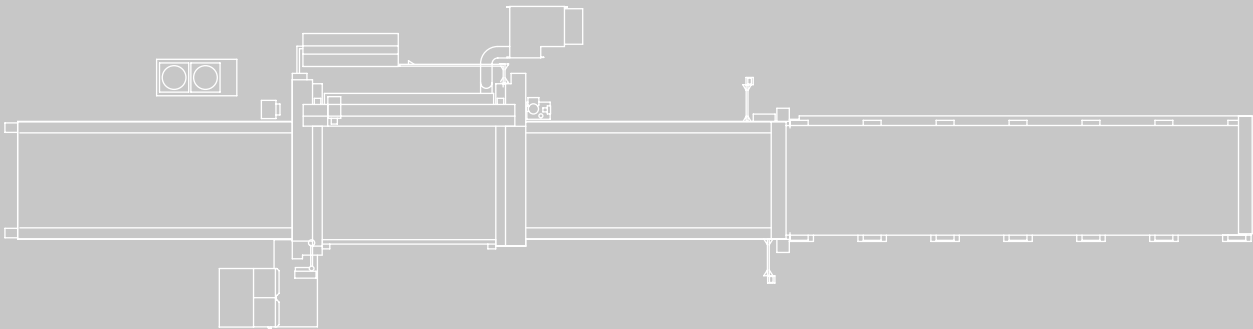
Bystronic



efficiency in laser cutting

Bystar L

Large format laser cutting machines
for metal sheets, tubes and profiles



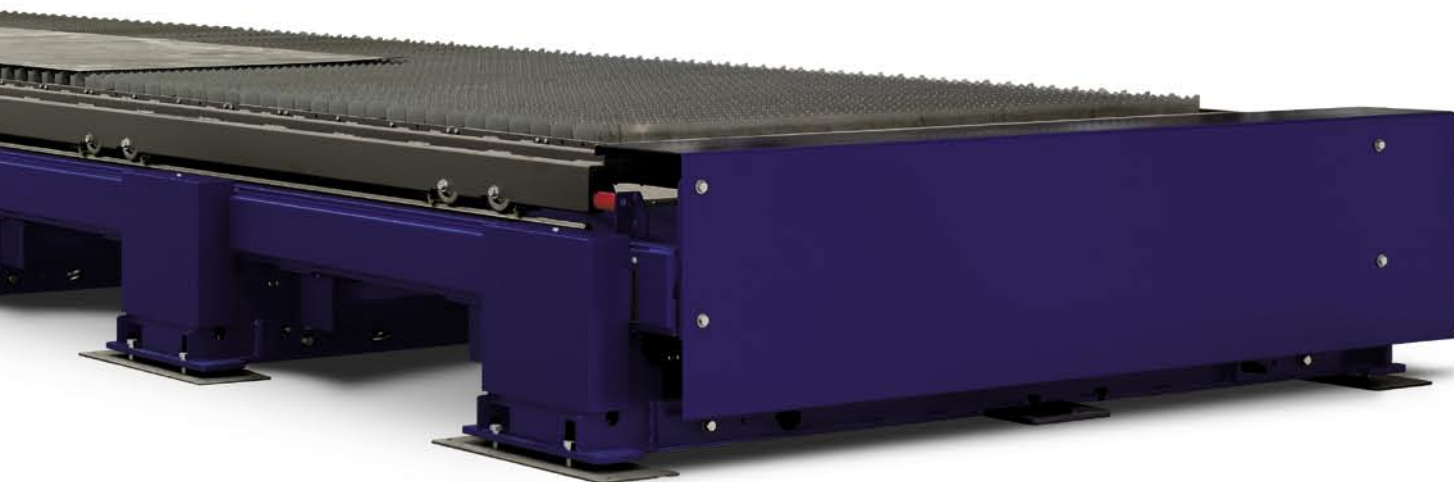
Bystar L – large, precise and autonomous

With respect to the size of the work area, the universal laser cutting machines of the Bystar L family go way beyond current boundaries. Large format sheets can be processed economically, easily, and with exceptional cutting precision. This is assured by repositioning, which allows the laser beam delivery to be kept short and highly accurate. In addition to the features that are related directly to the machine size, the Bystar L provides the same versatility as the base Bystar models, which take thick metals, tubes and profiles easily in stride. All of the important system components such as the laser source, control and drives are provided from a single source to guarantee high reliability.



Characteristics

- Problem-free processing, even with special oversized formats
- Repositioning ensures short beam control in spite of the large work area
- Fast processing of large-format cutting plans thanks to dynamic drive and flying optics
- High level of operating autonomy since even in the basic version, the machine design offers a high level of automation
- Division of the cutting table into work areas offers additional application possibilities
- Optimal access and a clear view of the cutting area
- Hand-held controller unit for setting up and adjusting, as well as for separation of the waste skeleton and for parameterization during test cuts



Repositioning – conventional and alternating

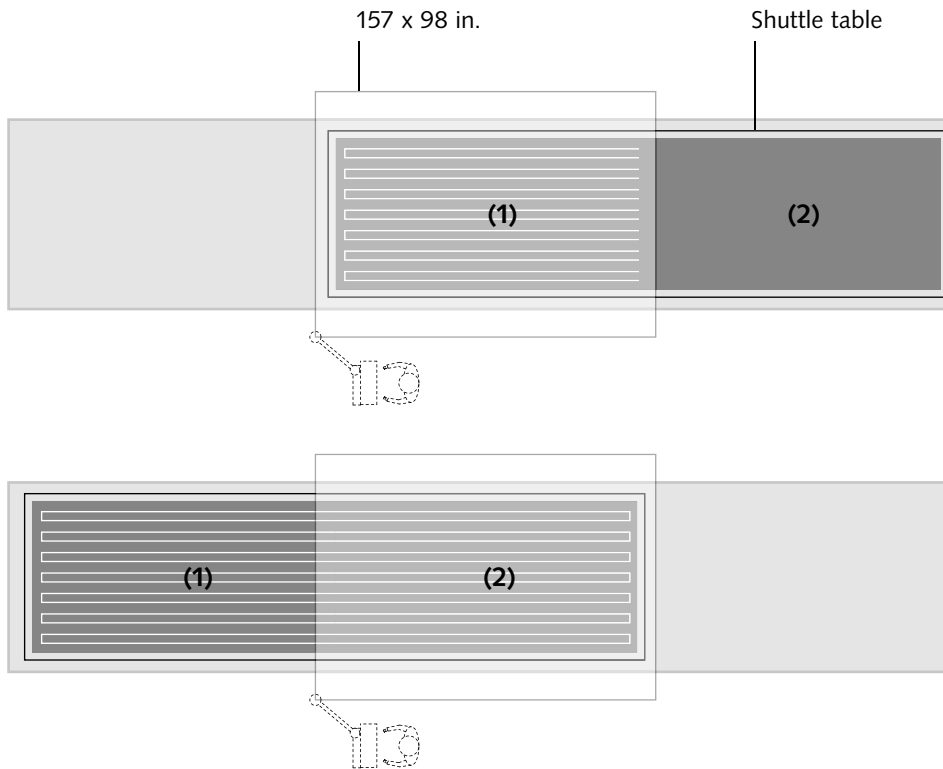


Figure 1

Conventional repositioning:

Figure 1 shows a cutting table on which a metal sheet with the dimensions 314 x 98 in. is mounted. The complete cutting plan is divided into two cutting areas of 157 x 98 in. apiece, of which the left-hand area is processed first (1). Subsequently the cutting table is repositioned, the laser carries on with the work and processes the complete right-hand cutting area (2). This method of processing has proven to be particularly valuable with thin metal sheets.

Alternating repositioning:

Figure 2 also shows a cutting table, on which a metal sheet with the dimensions 314 x 98 in. is mounted. In this particular case, the complete cutting plan is subdivided into eight individual cutting areas. Initially cutting area 1 is completely processed, then the cutting table moves forward and cutting areas 2 and 3 are processed. The cutting table then moves back and the areas 4 and 5 are cut. This procedure is repeated until all cutting areas have been processed in the order shown. Depending on the machine, the cutting plan can be subdivided into up to 30 cutting areas, which are processed in the pattern shown.

Advantage: The transfer of heat is distributed evenly across the cutting table, and the tensions present in the material are only released in the individual areas. This means that the re-piercing after each repositioning is highly precise. The quality of the cut parts is optimal so that even extra-long and particularly thick parts can be produced with perfect quality.

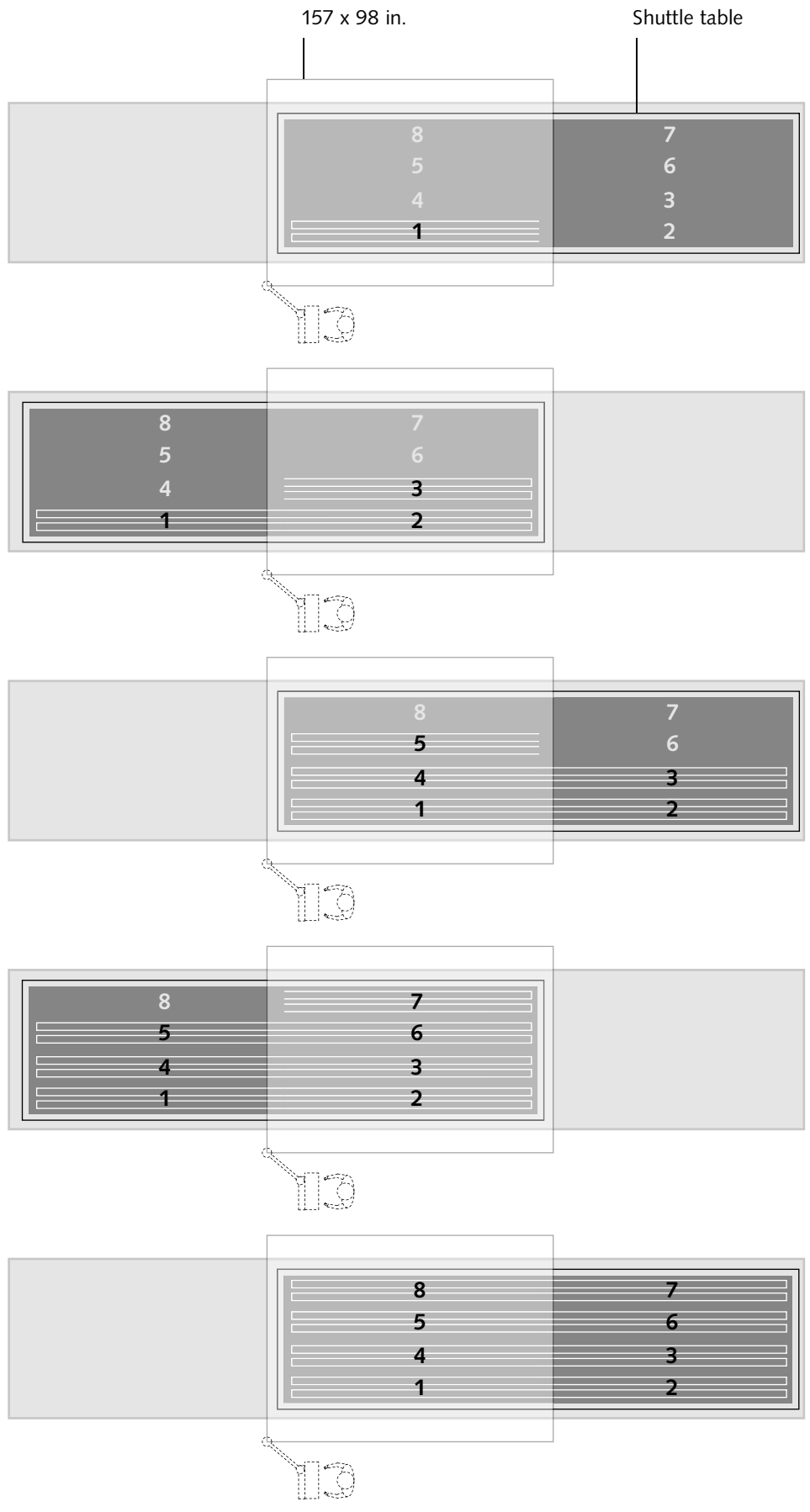


Figure 2

Areas of application

Where conventional systems with standard dimensions are no longer adequate, the Bystar L is used for the problem-free cutting of oversized, specialized formats.

The Bystar L can be used in a wide variety of market segments:

- Building machines
- Manufacturing of farm and construction vehicles
- Shipbuilding
- Steel service center (customer cutting jobs)
- Bridges and steel construction
- Subway car construction

Sheet metal thicknesses

Mild steel	0.020–1.000 in.
Stainless steel	0.020–0.787 in.
Aluminium	0.020–0.470 in.

Cross section of tubes

Fed using lathe chuck	0.600–6.100 in.
Direct feeding	0.600–12.400 in.

Prefabricated parts



Expansion possibilities

- Automation and handling upon request
- Rotary axis with tailstock
- Tactile sensing when cutting non-conducting materials

Customer benefits

- The Bystar L allows the user to acquire new orders and applications for large parts that are outside the range of competitors with their standard machines
- Thanks to simple and economic processing of large metal sheets, the construction of oversized parts is facilitated greatly and clearly becomes simpler and more cost-efficient
- Even in the basic version, the Bystar L offers the user a high degree of autonomy



Filter housing

Material: Mild steel
 Steel sheet size: 268 x 96 in.
 Material thickness: 0.125 in.



Filter body
Material: Mild steel
Steel sheet size: 276 x 98 in.
Material thickness: 0.250 in.

Service & Support

Bystronic's proven technology and extensive expertise produce systems that are extremely reliable. With its global network of specialized service and training experts and comprehensive spare parts inventories in the local markets, Bystronic guarantees that it will support what it sells. In addition to maintenance, spare parts delivery, and repair services, customers are also offered training programs as well as hardware, software, and operational support so that they are in a position to get the most from their machine investment.

Filter Assembly
Material: Mild steel
Steel sheet size: 315 x 98 in.
Material thickness: 0.250 in.



This brochure may show parts that are not included in the standard equipment, but rather are available as options. To get a better view of machine details, some safety equipment has been opened or removed for the pictures. The right to make changes to measurements, construction, and equipment is reserved. For technical data, see separate data sheet.

Certified in accordance with ISO 9001

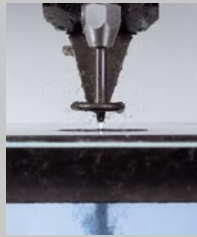
Bystronic is a worldwide active supplier of application-oriented systems and services for the laser and waterjet cutting processes, as well as bending: economical, high-performance, reliable.



Laser cutting
Laser cutting systems for the innovative processing of a wide variety of materials and geometries



Bending
3-point and air bending machines for high-precision working of sheet metals



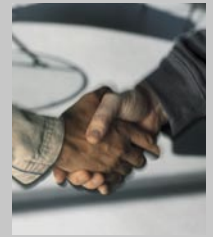
Waterjet cutting
Waterjet cutting systems for cutting metals, glass, synthetics, ceramic, and many other materials



Automation
High-performance handling and automation solutions from simple loading systems to fully automated laser production cell with integrated storage system



Software & Control
User-friendly programming and operation with requirement-oriented applications programs and interfaces to CAD and ERP systems



Service & Support
Competence and customer proximity with after-sales support available worldwide: local contact persons, prompt delivery of spare parts and professional training courses

Your contact

www.bystronic.com